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This document has been reissued due to modifications in software.

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For details on office parameters added or deleted in BCS36, see sections “BCS36 new office parameters” and “BCS36 deleted office parameters”.

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Contents

Volume 1 of 2

About this document xxiii
  When to use this document xxiii
  How to identify the software in your office xxiii
  References in this document xxiv
How this document is organized xxv
  BCS36 new office parameters xxv
  BCS36 deleted office parameters xxv
  Cross-reference tables xxv
  The NORESTARTSWACT utility xxv
  Office parameter administration guide xxv
  Format of parameter descriptions xxv
What precautionary messages mean xxvii
How commands, parameters, and responses are represented xxviii

BCS36 new office parameters 1-1

BCS36 deleted office parameters 2-1

Table to parameter cross-reference 3-1

Parameter to table cross-reference 4-1

The NORESTARTSWACT utility 5-1
  Description 5-1
  Summary of the procedure 5-3
  Procedure 5-4

Office parameter administration guide 6-1

OFCENG parameters 1
  ACCS_NUM_RU 2
  ACCSDB_RESPONSE_DELAY 3
  ACD_MIS_OUT_EVENT_BUFFER_SIZE 5
  ACD_OVERFLOW_BLOCKS 7
  ACD_TOLL_DELAYED_BILLING 9
  ACT_MAX_DURATION 11
  ACTIVE_DN_SYSTEM 13
  AIN_ACTIVE 15
### Contents

<table>
<thead>
<tr>
<th>Feature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA_TAB_CICSIZE4_OBSOLETE</td>
<td>233</td>
</tr>
<tr>
<td>EA_WITH_CD</td>
<td>234</td>
</tr>
<tr>
<td>EADAS24H_BUFFER_SIZE</td>
<td>236</td>
</tr>
<tr>
<td>EADAS30M_BUFFER_SIZE</td>
<td>239</td>
</tr>
<tr>
<td>EADAS60M_BUFFER_SIZE</td>
<td>242</td>
</tr>
<tr>
<td>EAEO_FOUR_DIGIT_CIC_STATUS</td>
<td>244</td>
</tr>
<tr>
<td>EBS_BUZZ_SPLASH_ON</td>
<td>246</td>
</tr>
<tr>
<td>EBS_TO_TRUNK_TRD_TIME</td>
<td>247</td>
</tr>
<tr>
<td>ESAENTRY</td>
<td>248</td>
</tr>
<tr>
<td>ENHANCED_DEAD_SYSTEM_ALARM</td>
<td>249</td>
</tr>
<tr>
<td>ESAEXIT</td>
<td>250</td>
</tr>
<tr>
<td>EXPIRED_PASSWORD_GRACE</td>
<td>251</td>
</tr>
<tr>
<td>FEATURE_ADMIN_CHARGE</td>
<td>252</td>
</tr>
<tr>
<td>FLOW_CONTROL_TIMEOUT</td>
<td>254</td>
</tr>
<tr>
<td>FRR_ROUTING_RULES_OVERRIDE</td>
<td>256</td>
</tr>
<tr>
<td>FTRQWAREAS</td>
<td>258</td>
</tr>
<tr>
<td>FTRWPERSMS</td>
<td>260</td>
</tr>
<tr>
<td>FTRQ16WAREAS</td>
<td>262</td>
</tr>
<tr>
<td>FTRQ16WPERMS</td>
<td>266</td>
</tr>
<tr>
<td>FTRQ2WAREAS</td>
<td>268</td>
</tr>
<tr>
<td>FTRQ2WPERMS</td>
<td>271</td>
</tr>
<tr>
<td>FTRQ32WAREAS</td>
<td>273</td>
</tr>
<tr>
<td>FTRQ32WPERMS</td>
<td>275</td>
</tr>
<tr>
<td>FTRQ4WAREAS</td>
<td>277</td>
</tr>
<tr>
<td>FTRQ4WPERMS</td>
<td>280</td>
</tr>
<tr>
<td>FTRQ8WAREAS</td>
<td>282</td>
</tr>
<tr>
<td>FTRQ8WPERMS</td>
<td>287</td>
</tr>
<tr>
<td>FTRQAGENTS</td>
<td>290</td>
</tr>
<tr>
<td>FTRQAUDIT</td>
<td>295</td>
</tr>
<tr>
<td>FXOGS_REMBSY_BITS</td>
<td>296</td>
</tr>
<tr>
<td>GLOBAL_CUTOFF_ON_DISCONNECT</td>
<td>298</td>
</tr>
<tr>
<td>GOS_NUM_RU</td>
<td>300</td>
</tr>
<tr>
<td>GROUND_START_DELAY</td>
<td>302</td>
</tr>
<tr>
<td>GUARANTEED_TERMINAL_CPU_SHARE</td>
<td>303</td>
</tr>
<tr>
<td>IMMEDIATE_RING_ENABLE</td>
<td>305</td>
</tr>
<tr>
<td>IMP_DELAY</td>
<td>307</td>
</tr>
<tr>
<td>INTL_GATEWAY_OFFICE</td>
<td>308</td>
</tr>
<tr>
<td>INTL_LOCAL_OFFICE</td>
<td>309</td>
</tr>
<tr>
<td>INTRALATA_DEFAULT_USE_TRKLATA</td>
<td>310</td>
</tr>
<tr>
<td>INWATS_CCIS_OSO_ENABLE</td>
<td>311</td>
</tr>
<tr>
<td>INWATS_LOCAL_TERMINATION</td>
<td>312</td>
</tr>
<tr>
<td>INWATS_ON_AMA</td>
<td>314</td>
</tr>
<tr>
<td>ISDN_DPN_PH_GENERIC</td>
<td>315</td>
</tr>
<tr>
<td>ISDN_NET_1A_INTERWORKING</td>
<td>317</td>
</tr>
<tr>
<td>ISGBDOM_BLKSIZE</td>
<td>319</td>
</tr>
<tr>
<td>ITOPS_ACCOUNT_CODES</td>
<td>321</td>
</tr>
<tr>
<td>ITOPS_ENHANCED_ACD</td>
<td>323</td>
</tr>
<tr>
<td>ITOPS_HIGH_TRAFFIC_START_TIME</td>
<td>324</td>
</tr>
<tr>
<td>ITOPS_LOW_TRAFFIC_START_TIME</td>
<td>326</td>
</tr>
<tr>
<td>ITS_NUM_CONCURRENT_SESSIONS</td>
<td>328</td>
</tr>
<tr>
<td>KSET_INTER_GRP_DISP</td>
<td>330</td>
</tr>
</tbody>
</table>

---

297-1001-455  Standard 22.02  March 1994
Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up

KSHUNT_EXT_BLOCKS  332
LCIDI_SYNC_BURST  334
LCIDI_SYNC_DELAY  336
LCDR_SEC_ANI_TEST  338
LCML_SYNC_BURST  339
LCML_SYNC_DELAY  340
LN_LONG_PARTIAL_DIAL_TIME  341
LN_PERM_SIG_TIME  343
LN_SHORT_PARTIAL_DIAL_TIME  344
LOG_PRIORITIZATION  346
LONG_TIMED_RELEASE_DISC_TIME  348
LOWSPR_ALARM_ON_CARD_SPR_BASIS  350
LSCM_SYNC_BURST  352
LSCM_SYNC_DELAY  354
MARKET_OF_OFFICE  356
MAX_CMAP_SESSIONS  360
MAX_DTA_ON_SWITCH  361
MAX_LINES  362
MAX_MADN_MEMBERS_PER_LSG  363
MAX_NO_OF_3_PORTS_IN_CHAIN  364
MAX_NO_OF_ALT_TEST_PROCS  365
MAX_NO_OF_TRANS_ID  366
MAX_NUM_WIDEBAND_CALLS  367
MAX_PROGRAMMERS  368
MAX_ROUTE_QUEUE_PER_TRKGRP  370
MAX_SDPOOL_NO  372
MAX_SUBSCRIBERS_IN_VLR  374
MAX_TRUNK_METER_BLOCKS  375
MAX_TRUNKS_IN_ACB_SCAN  377
MAXNUCS  379
MAXSTS  381
METER_AUDIT  383
MF_LAST_DIGIT_DELAY  384
MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP  385
MIN_PASSWORD_LENGTH  386
MINIMUM_CHARGE_DURATION  387
MINIMUM_CLI_LENGTH  389
N5_CLB_TIMER  391
N5_USING_UTR  392
N6_CLB_TIMER  393
NACD_BROADCAST_INTERVAL  394
NACD_RI_DELTA_PARM  396
NATIONAL_COUNTRY_CODE  398
NCBS  400
NETWORK_ELEMENT_ID  403
NFA_ANSWER_DETECT_TIME  404
NFA_IMPLCT_BYPASS_UTR  406
NFA_INVERTED_WINK_DURATION  408
NFA_PRE_DIAL_DELAY_TIME  410
NMULTIBLKS  412
NMS_ACKNOWLEDGEMENT_TIMEOUT  414
NO_ANS_CALLS_ONTAPE 416
NO_LOCAL_COIN_EXT_BLK 417
NO_OCCTS_OM_REGISTERS 419
NO_OF.Clone_TIDS 421
NO_OF_CRITICAL_FTR_DATA_BLK 422
NO_OF_FTR_CONTROL_BLK 424
NO_OF_FTR_XLA_BLK 426
NO_OF_HIS_CONTROL_BLK 428
NO_OF_HIS_DATA_BLK 431
NO_OF_LARGE_EXT_BLK 438
NO_OF_LARGE_FTR_DATA_BLK 441
NO_OF_MEDIUM_EXT_BLK 443
NO_OF_MEDIUM_FTR_DATA_BLK 445
NO_OF_PVN_EXTBLK 447
NO_OF_PVN_TERM_EXTBLK 450
NO_OF_SC_EXT_BLK 452
NO_OF_SMALL_EXT_BLK 454
NO_OF_SMALL_FTR_DATA_BLK 457
NO_OF_VCDR_REC_UNITS 459
NO_OF_XLARGE_EXT_BLK 461
NO_RING_ON_TIP_FOR_LM 464
NO_TFAN_OM_REGISTERS 466
NODE 467
NOP_DNA_DEFAULT_ACCESS 468
NOP_USERID_SECURITY_ACCESS 470
NOS_QUANTITY_OF_SVCS 471
NRS_AUD_DELAY 473
NSS_RDD_REPLDIGS_LENGTH_A 474
NSS_RDD_REPLDIGS_LENGTH_B 476
NTC_RNGBACK_TIME 478
NUM_CALLREC_STREAMS 480
NUM_DCR_EXT_BLK 481
NUM_DCR_NP_ACCESS 483
NUM_ENGR_NWM_TRKGRP_CTRLS 484
NUM_IBN_IPLA_EXT_BLOCKS 485
NUM_ICAMA_RECORDING_UNITS 487
NUM_IXL_EXT_BLK 489
NUM_INTL_RECORDING_UNITS 491
NUM_ISUP_EXT_BLK 493
NUM_MTR_EXT_BLOCKS 494
NUM_OF_CCIS_INWATS_BLOCKS 496
NUM_OF_INWATS_EXT_BLOCKS 498
NUM_OF_NSC_EXT_BLK 500
NUM_OF_NT_RECORDING_UNITS 503
NUM_OF_RTEB_EXTBLKS 505
NUM_RC_EXT_BLK 507
NUM_SME_CONTROL_BLOCKS 509
NUM_SME_DATA_BLOCKS 512
NUMBER_OF_CDR_UNITS 514
NUMBER_OF_DIGITS_PER_DN 516
NUMCALLPROCESSES 518
NUMCPWAKE 520
NUMECCBS 524
NUMIBNCQEXTBLK 525
NUMLONGBUFFERS 527
NUMOHCBQTRANSBLKS 530
NUMPERMEXT 531
NUMTLBS 533
NWMTGBLU 535
NX25_RR_Each 536
OAM_HW_PRESENT 537
OCCTS_ENHANCED_FEATURE 539
OCCTS_IN_MAX_NUMBER 541
OCCTS_OUT_MAX_NUMBER 543
OFFICE_CLLI_NAME 545
OFFICE_DS_FUNCTION_NUMBER 546
OFFICE_DS_SQD_SAMPLING_RATE 547
OFFICE_ID_ON_AMA_TAPE 548
OFFICE_ID_ON_CDR_TAPE 549
OFFICE_LANGUAGE 550
OMPRTFORMAT 552
OMTAPESUPPRESSION 553
OMTELCOLABEL 554
OMXFR 555
ORIGS_TO_BLEED 556
ORIGTHRES 559
OS_CALLS_WAITING_Q_SIZE 561
OS_CT_SEARCH_DEPTH 562
OS_NUM_CALL_QUEUES 563
OS_NUM_POSITIONS 564
PASSWORD_LIFETIME 565
PATCH_BUNDLE 566
PHINFO_AUDIT_TIME 568
PLUS48V_OVERTIME_COIN_TEST 569
PM_PCM_PROTOCOL_SELECTION 570
PPMBUFFS 573
PREEMPTABLE_CONF6_THRESHOLD 575
PRINT_NET102_LOGS 576
PSTN_GT_SIZE 577
QMSFM_NUM_QUEUES 578
QMSFM_NUM_SERVICES 579
QMSFM_NUM_STUDY_REG 580
R2_AN_ANSWER_FLTR_TIME 581
R2_AN_BLK_FLTR_TIME 582
R2_AN_CLR_BCK_FLTR_TIME 583
R2_AN_CLR_FWD_FLTR_TIME 584
R2_AN_IDLE_FLTR_TIME 585
R2_AN_OG_CSM_FLTR_TIME 586
R2_AN_RE_ANS_FLTR_TIME 587
R2_AN_RLS_ACK_FLTR_TIME 588
R2_AN_RTS_GUARD_TIME 589
R2_AN_SEIZE_FLTR_TIME 590
R2_AN_WAIT_BEFORE_CF  591
R2_AN_WAIT_FOR_ANSWER  592
R2_AN_WAIT_FOR_IDLE  593
R2_AN_WAIT_FOR_RLS_ACK  594
R2DIG_ABNRML_DURING_IDLE  595
R2DIG_ABNRML_DURING_OPLS  596
R2DIG_ANSWER_FLTR_TIME  597
R2DIG_BLK_FLTR_TIME  598
R2DIG_CD_BITS  599
R2DIG_CLR_BCK_FLTR_TIME  600
R2DIG_CLR_FWD_FLTR_TIME  601
R2DIG_HOLD_SZ_IN_GLARE  602
R2DIG_IDELE_AFTER_GLARE  603
R2DIG_IDELE_FLTR_TIME  604
R2DIG_OG_CSM_FLTR_TIME  605
R2DIG_RE_ANS_FLTR_TIME  606
R2DIG_SEIZE_ACK_FLTR_TIME  607
R2DIG_SEIZE_FAILURE_TIME  608
R2DIG_SEIZE_FLTR_TIME  609
R2DIG_WAIT_FOR_ANSWER  610
R2DIG_WAIT_FOR_SEIZE_ACK  611
R2SM_TIMEOUT  612
R2T3_WAIT_FOR_ANSWER_AUTO  613
R2T3_WAIT_FOR_ANSWER_SEMAUTO  614
RECOVERY_INTERVAL_AFTER_RELOAD  615
RECOVERY_INTERVAL_AFTER_WARMCOLD  617
REMTERMEOQP  619
REVERSE_EC_EQUIP  620
REVRING  622
RING_NO_ANSWER_TMO  625
RLCM_ESA_NOTIFY_TONE  627
RLCM_ESAENTRY_BADCSIDE  628
RLCM_ESAENTRY_BADLINK  629
RLCM_ESASDUPD_BOOL  630
RLCM_ESASDUPD_HOUR  631
RLCM_XPMESAEXIT  633
RNG_TIMEOUT_NO_OF_SECS  634
RNG_TIMEOUT_TKLN_SECS  635
ROTI_OUT_OF_SERVICE_LEVEL  637
ROTI_TIME_IN_20MIN  638
ROUTE_ON_FOT  639
RSC_ESA_NOTIFY_TONE  640
RSC_ESAENTRY_BADCSIDE  642
RSC_ESAENTRY_BADLINK  643
RSC_ESASDUPD_BOOL  644
RSC_ESASDUPD_HOUR  645
RSC_XPMESAEXIT  646
SAPARMS  647
SC_OP_ANI_REQ_TIME  649
SCREEN_AC_LOGIDS  650
SDB_QUERY_TIMEOUT  652
SEAS_BUFFER_VOL 653
SEAS_MSG_BLK_NUM 656
SEAS_MSG_BLK_VOL 658
SEAS_SEG_SIZE 660
SEAS_TIME_ZONE 662
SEAS_UAL_RETRY_COUNT 664
SEAS_UAL_SEAC_NODE_NAME 666
SEAS_UAL_SITE_TO_SITE_TIMER 668
SEAS_UAL_STP_NODE_NAME 670
SEP_EQUIPPED 672
SET_TO_UNBALANCE 674
SILENT_SWITCHMAN_TIMEOUT 675
SLE_ITEMS_IN_SEGMENT 677
SLE_MAX_PROGRAMMERS 679
SLE_MAX_SEGMENT_COUNT 681
SLE_TCAP_RESPONSE_TIME 683
SLE_TRANSACTION_THRESHOLD 685
SLE_WAKEUP_TIME 687
SOUTHBOUND 688
SPANISH_OUTGOING_RINGING_TIMEOUT 690
SPCCLTIMEOUT 691
SPDD_DIGIT 693
SPILLANI9 695
SPMS_START_OF_MONTH 696
SPP_MAX_PROGRAMMERS 698
SRDBUPD_SWITCH_ID 700
SS7_CONGESTION_CONTROL_TIME 701
SSP_EA_ACKWINK_DELAY_TIME 703
SSP_NSC_CARRIER_ID 704
ST_AUDIT_START_TIME 706
STINV_BLOCK_SIZE 707
SUPPRESS_ANI_TO_CLID_DISPLAY 709
SWCT_AMA_PREBILLING 710
T108ISDN_TIMEOUT_IN_MINUTES 711
TABLE_ADJNODE_INUSE 712
TAPEXLATE 714
TCM_SYNC_LINES 716
TCM_SYNC_MONITOR_PERIOD 718
TCM_SYNC_THRESHOLD 720
TFAN_DEFAULT_REG_LOG 722
TFAN_IN_MAX_NUMBER 724
TFAN_OUT_MAX_NUMBER 726
TLINK_DELAY 728
TLINK_DET_TIMEOUT 730
TLINK_EST_TIMEOUT 732
TOLL_OFFICE_DELAYED_BILLING 734
TOPS_OPLUS_LOCAL 735
TOPS_ACCS_ACG 737
TOPS_ACCS_ACG_SIZE 739
TOPS_ACTS 741
TOPS_ACCS_MANUAL_VALIDATION 743
TOPS_ASST_POS 745
TOPS_BRAND_DISPLAY 746
TOPS_BRAND_INWARDS 747
TOPS_BRAND_OFFICE 748
TOPS_CALLS_WAITING_Q_SIZE 750
TOPS_EA_INTERLATA_NONOPR_AMA 751
TOPS_EQUAL_ACCESS_OFFICE 753
TOPS_EXPANDED_OPRNUM 755
TOPS_GEN_AMA_SET 757
TOPS_MAX_OPERATOR_NUM 760
TOPS_MAX_ORIG_RATE_CENTER 762
TOPS_MAX_TERM_RATE_CENTER 763
TOPS_MFADS_PERIOD 765
TOPS_NIGHT_ALARM_ON_POS_BUSY 767
TOPS_NUM_CAMA RU 769
TOPS_NUM_OC_EXT 771
TOPS_NUM_RU 773
TOPS_NUM_STUDY_REG 775
TOPS_NUM_TRAFFIC_OFFICES 776
TOPS_NUMBER_OF_MEMO_PADS 778
TOPS_OC_ENVIRONMENT 780
TOPS_OC_REMOTE_BVC 781
TOPS_OCCUPANCY_CALC_METHOD 783
TOPS_PASSWORD_ENABLE 785
TOPS_PEG_MODE 787
TOPS_QMS_MAX_ACTIVE_CALL_QUEUES 789
TOPS_SDB_CCV_QUERY_BLK 790
TOPS_STATSPAC_PERIOD 792
TOPS_THRESHOLD 794
TOPS_TRANSFER_TYPES 796
TOTAL_ROUTE_QUEUED_CALLS 799
TOPS_MIS_MPC_BUFFS 801
TRBQ_EBS_LINE_AFTER_MISDIALS 803
TRIDDIG_NUM_DGLTR_POOLS 804
TRK_MEMSEL_AUDIT_TIME 806
TYPE_OF_ACCS 807
TYPE_OF_NETWORK 809
UK_OP_DELAY 811
UNIQUE_BY_SITE_NUMBERING 813
UNIVERSAL_AMA_BILLING 815
USE_ZEROMPOS_FOR_CAMA 817
USP_ENABLED 819
VALIDATE_CCITT_LUHN_DIGIT 821
VAR_ON 822
VCDR_OFFICE_FORMAT 823
VPN_PREFIX_DIGS 824
VSN_SIMULATOR_ON 825
WAKEUP_REREREQUEST_DELAY 826
WAKEUP_RINGING_TMO 828
WUCR_RINGING_TIMEOUT 830
ZERO_MINUS_TO_CARRIER 832
Volume 2 of 2

**OFCOPT parameters**

- ACOU_DATAFILLED 2
- ADSI_RAM_BASED_TONE 3
- AMA_EBCDIC_CONVERT_ENABLE 4
- AMREP_ACTIVE 6
- AQ_CLD_NUM_ON_NC 8
- CALL_TRF 9
- CASUAL_FEATURES_OFF 10
- CCS7_HOH1_RCP 11
- CCTO_COMB_BILL 13
- CCW_ACTIVE 14
- CKT_LOC 17
- CND_ON_SMS_REQD 18
- DIALBACKPW_ENCRYPTED 19
- DIS_LKD_CKT 20
- DSR_OFFICE 21
- EA_LATANAME_IN_SERVORD 24
- EADAS_SHORT_XFER_ALLOWED 25
- ENABLE_DT_IM_FOR_IBN 27
- ENET_AVAILABLE 29
- ENET_MAX_CHANNEL_GROUP 30
- ENHANCED_COMMAND_SCREENING 32
- ERL_SPT 33
- ENHANCED_PASSWORD_CONTROL 34
- EXPANDED_INBAND_PERMITTED 35
- FIVMIN_SNAPSHOT_ENABLED 36
- FLEXIBLE_DIGIT_ANALYSIS 38
- FRB_RINGING_TIME 40
- FREE_NUMBER_DENIAL 42
- FRIU_BILLING_COUNT_FORMAT 44
- GATEWAY_CDR_RECORD_ID 46
- GRP_NUM_FEAT_CTRL 49
- HNT_SO_SIMPLIFICATION 51
- IBN_CFW 52
- IBN_DATA_LINE_SPLIT 53
- ILR_OPTIONS 55
- INTERCOM 57
- INTL_INTRASWITCHING 58
- ISDN_INFO_EXT_REC 59
- ISUP_SUBGRP_GLARE_AVAILABLE 60
- KEYSET_SRT 62
- LAMA_OFFICE 63
- LCM_PM_MSG_CNT 64
- LOCAL_COIN_OVERTIME_FEATURE 65
- LOOP_BACK 66
- MAX_ACDMIS_SESSIONS 67
- MAX_BCLID_DATA_LINKS 69

ZONE_OF_ORIGIN 833
MAX_BRA_LINES 70
MAX_CCS7_LINKS 71
MAX_DATA_LINES 73
MAX_IBN_LINES 75
MAX_LAPB_TERMINALS 78
MAX_LAPD_TERMINALS 79
MAX_MBG_LINES 80
MAX_NUM_ACD_AGENTS_PER_SWITCH 81
MAX_NUM_ECMB_EVT 82
MAX_NUM_ECM_CTX_EVT 84
MAX_NUM_ECM_RES 86
MAX_NUM_ECM_ROUT 88
MAX_NUM_ECM_SVC 90
MAX_NUM_ECM_TPAC 92
MAX_NUM_ECM_TPCC 94
MAX_PDATA_LINES 96
MAX_PRI_LINKS 98
MAX_RCUS_PER_SMU 99
MAX_RES_LINES 100
MAX_TRKMEM_PER_SWITCH 102
MODEM_DIALBACK_CONTROL 103
MONITOR_TABLE_ACCESS 105
NS_ANSWER_PROP_DELAY 106
NETWORK_ACTIVE 108
NOISE_MEAS 109
NRS_MP 110
NRTEST 111
NWM_STR_CTRL 112
OMHISTORYON 113
OMINERLANGS 114
OPTIONAL_SLU_FEATURE 115
PASSWORD_ENCRYPTED 116
PI_CALL_TOPO 117
POTS_CFW 119
PRI_LINK_PRICING 120
QCUST_CMD 121
RASL_PROTOCOL 122
RLM_INTRA_OPT 123
SCC2_LOGS 124
SDOC3_ENABLE 125
SDMR_OFFICE 126
SO_BULK_DMO 127
SO_DID 128
SO_ECHO 129
SO_RCF 130
SPEED_CALL_ACCESS_DIGITS 131
SUPPRESS_USERNAME 132
TFAN_ENHANCED_FEATURE 133
TIE_ROUTE_INFO_EXT_REC 135
TOPS_DA_PARS_ENABLE 136
TOPS_FIXED_DURATION 137
OFCSTD parameters

AC_AUDIT_INTERVAL 2
AC_MAX_NUM_ERRORS 3
AC_TPB_BSY_RCV 4
AC_TPB_BSY_SND 5
ACD_AGENTQ_AUDIT_INTERVAL 6
ACD_CALL_QUEUE_AUDIT_INTERVAL 8
ATT_NOSTART_DIALS 10
AUDHIGHFREQ 11
AUDIT_INTERVAL 12
AUDLOWFREQ 13
AUDMEDFREQ 14
BCS_NUMBER 15
CARD_X53 16
CHANNEL_UNIT_601_PRESENT 17
CHECK_FIELD_NAME 20
CONSOLE_SILO_CHARS 21
CONSOLE_SILO_RECORDS 22
CPSTACKSIZE 23
CUG_REGION 25
DCM_PARITY_FILTER 27
DIGIT_COL_OFFICE_CODE 29
DIRPKILL_IN_EFFECT 33
DPREC_INTER_DGT_TIMING 34
DUMP_RESTORE_IN_PROGRESS 35
E911_PSAP_REC_PRE_WK_TIME 36
E911_PSAPS_USING_1_INFO_DIGIT 38
EA_REC_1ST_PRE_WK_TIME 40
EA_REC_MAX_WK_TIME 41
EA_REC_SUB_PRE_WK_TIME 42
EAEO_REC_1ST_PRE_WK_TIME 43
EAEO_REC_2ND_PRE_WK_TIME 44
FREEZE_ON_REINIT  45
HM_INTERPULSE_TIME  47
HM_PULSE_TIME  48
IMMED_PRE_DIAL_DELAY  49
ISDD_OM_THRESHOLD  50
MAX_COLDS  52
MAX_EMERG_ICI  53
MAX_LOCKED_TRAPS  54
MAX_SANITY_TIMEOUTS  55
MAX_WARMS  56
MAXIMUM_ONHK_FLASH  57
MIN_REC_DP_PULSE_WD  59
MINIMUM_ONHK_FLASH  60
MK_BRK_DP_OUTPULSING  62
MTCBASE_EXTRAMSG  63
MTCBASE_SCPC  64
NEW_CF6P_CCT  66
NEW_PS_PIPE  67
NO_ESB_RINGBACK_CYCLES_IDENT  68
NO_ESB_RINGBACK_CYCLES_NONIDENT  69
NUMOUTBUFFS  70
OFFICETYPE  72
OPM_CHARGE_DURATION  74
OPM_CHARGE_START_TIME  75
OPM_DISCHARGE_TIME  76
OPM_MIN_CHG_VOLT  77
OPM_VOLT_TST_CHG  78
OPM_VOLT_TST_DIS  79
OPM_VOLT_TST_LTU_ADJUSTMENT  81
OPM_VOLT_TST_OCC  82
PM180  84
PRE_ANI_SPILL_DELAY  86
PRE_SND_WK_DD_TIME  87
RATE_PERIOD_SPECIFIC_BILLING  89
REC_MAX_DD_TIME  90
REC_MAX_WK_TIME  91
REC_MIN_DD_TIME  92
REC_MIN_WK_TIME  93
REC_PRE_DD_TIME  94
REC_PRE_WK_TIME  95
RONIXFR  96
RP_INTER_SELECTION_TIMER  97
RP_INTRA_SELECTION_TIMER  98
RP_OVERALL_TIMER  99
SHORT_TIMED_RELEASE_DISC_TIME  100
SND_DD_TIME  102
SND_DP_WK_TIME  103
SND_MF_WK_TIME  104
SWHK_FLTR_TIME_400MS_ENABLED  105
SWHK_FLTR_TIME_640MS_ENABLED  107
TERM_REV_FREQ Annunci  109
TRAP_THRESHOLD 110
UCD_QSL_AUDIT_INTERVAL 112
WK_DD_PRE.Dial_DELAY 113
XPM_PARITY_THRESHOLD 115

OFCVAR parameters
AC_MOREDIGIT_WAIT 2
ACCS_CCV_QUERY_BLK 3
ACCS_INTERDIGIT_TIMEOUT 4
ACCS_MAX_REJECTS 5
ACCS_OPER_SERV_ACCESS_CODE 6
ACCS_SEQ_CALL_LIM 7
ACCS_SEQ_QUERY 8
ACMS_NOC_LOG_ON 9
ACQS_AUDIT_ON 10
AIN_OFFICE_TRGGRP 11
AMA_FAILURE_ROUTE_POSITION 13
ANI_IN_SMDR 15
APS_REPORT_ALL_CALLS 17
ARI_CDR_VALUE 19
ASCS_DISABLE_LEVEL 21
ASCS_MONITOR_DELAY 23
ASCS_NOALARM_THRESHOLD 24
ASCS_NOSEND_THRESHOLD 25
ASCS_ROUTE_INDEX 26
ASCS_TRUNK_TIMEOUT 27
ASR_AUDIT_TIME 28
ASR_CUSTGRP 29
AUTO_ASSIGN_DNH_GRPNUM 31
AUTO_ASSIGN_DNH_RANGE 32
BICRELAY_NUM_SIMUL_TESTS 33
BICRELAY_XLCM_TEST_SCHEDULE 35
BLOCK_0_INF_INW_CALLS 37
BT_MCI_TIMER 39
BTUP_EMERG_ANNC 41
BUFFER_THRESHOLDED_REPORTS 43
C7_CHG_OVER_SLMPR_THRESHOLD 44
C7_NACK_ERROR_SLMPR_THRESHOLD 45
C7_SLMPR_ALARM_ON 46
C7_SU_ERROR_SLMPR_THRESHOLD 47
C7UP_RSC_LOG_THRESHOLD 48
CALL_CONTROL_DEFAULTS 50
CALL_REPORT_FORMAT 51
CAM Susp.Call_ALLOWED 52
CCW_AS_LINE_OPTION 54
CDIV SDN_XLA 56
CDO_ROUTE 58
CDS_DN_CHECK 60
CHECK_FOR_TMEM 61
CHIPS_RETRY 62
CHIPS_TIMEOUT 63
CIRCUIT_TEST_NUMBER_MESSAGES 64
CLF_ACCESS_CODE 66
CMAJALARM 67
CMINALARM 69
CNDP_ON_POTS 70
COIN_DTF_TOTALIZER_RESET 71
COIN_OPERATOR_RELEASED_ON_OA 72
COIN_RETAIN_ON_OA 73
CONTINUOUS_RETRY_TIMERS 74
CREATE_PARTIAL_800_AMA 76
CUSTOMER_DATA_CHANGE_LOGS 77
CUTOFF_ON_DISC_TIME 78
CWT_TIMEOUT 79
CWT_TONE_LENGTH 80
DAILY_ISDN_LAYER2_PEG_AUDIT_TIME 81
DATA_CALL_SMDR 83
DCT_TEST_CALL_SPILL 85
DIAGALARM 86
DISKLOGMEMORY 87
DIST_CWT_TONE 89
DND_ROUTE 90
DTULDINFO 92
E911_CHECK_DEFAULT_ESN 93
E911_PSAP_DISCONNECT_TIME 94
E911_PSAP_OFFHК_ALARM_TIME 95
EA_TEST_CALL_SPILL 97
EADAS_ENABLED 98
EADAS_GENERIC_ID 100
EADAS_MPC_AND_LINK 101
ECORE_FORMAT 103
ENG640M1_SCAN_RATE 105
ESG_ALARM 106
ENHANCED_TRUNK_PREROUTE_ABANDON 107
ESG_RERING_TIME 109
FACALARM 111
FGD_ANI_SMDR_REQD 112
FGD_TEST_CALL_ACK_OFFHOOK 114
FOT_DIGITS 116
GEN_CDR300_ISDN_LOGS 117
GEN_CDR300_MIDNT_LOGS 118
GEN_CDR300_SYNC_LOGS 119
GENERATE_CALL_RECORDING_LOGS 120
GENERATE_ICAMA_LOG_ENTRY 121
GENERATE_ITOPS_LOG_ENTRY 122
IAA_REQUESTED 123
ICAMA_ANI_FAILURE_ACTION 125
ICAMA_REQUESTED 126
ICT_DN_CHECK 128
IMAJALARM 130
IMINALARM 132
INTL_ICR_REQUESTED 133
INTL_RU_OVFL_ACTION 135
INTL_SILENT_SWITCHMAN_TMO 137
ISDN_LOSS_OF_SIG DGASP_ALARM 138
ISDN_LOSS_OF_SIG_NO DGASP_ALARM 139
ISDN_LOSS_OF_SYNC_WORD_ALARM 140
ISDN_NT1_TEST_MODE_ALARM 141
ISDN_PERFORMANCE_MON_ALARM 142
ISDN_T_SYNC_LOST_ALARM 144
ITOPS_CHG_DISPLAY_DECIMAL 145
ITS_TEST_SESSION_TIMEOUT 146
JPNI_ACM_ALWAYS_EXPECTED 148
KT_SELECTION_OPTION 150
LAYER2_PEGS_THRESHOLD_LEVEL 152
LAYER2_SAPI_ABNNPETS_THLD 153
LAYER2_SAPI16_ABPNPEGS_THLD 155
LAYER2_SERVICE_DSRPT_THLD 157
LCARDALARM 159
LCDREX_CONTROL 161
LINE_CARD_MONITOR 164
LINE_WITH_CWT_CAN_FLASH 165
LOCAL_COIN_INIT_TIME 167
LOCAL_COIN_OVER_TIME 168
LOG_CENTRAL_BUFFER_SIZE 169
LOG_DEVICE_BUFFER_SIZE 170
LOG_OFFICE_ID 171
LOOP_AROUND_TIMEOUT_IN_MIN 172
LSETALARM 173
MAX_RMAP_SESSIONS 175
MCARDALARM 176
MCCS_SEQ_CALL_LIM 177
MCCS_SEQ_QUERY 178
MCT_TONE 179
MCTIMER 181
METER_PULSE_MISMATCH_THRESHOLD 182
METER_PULSE_MONETARY_RATE 183
MSETALARM 184
MTA_MB_COUNT 185
MTA_RLM_TIME 186
MTA_RMM_TIME 187
MTULDINFO 188
NDIAGALARM 189
NETFAB_DAILY_DURATION 190
NETFAB_SCHEDULE_ENABLED 192
NETFAB_SCHEDULE_TIME 194
NODEREXCONTROL 195
NON_DMS_NAME_LOOKUP 200
NSS_DBCP_TCNS_BLOCK_CALL 202
NSS_DBCP_TCN_RESP_TIMEOUT 203
NTC_CALL_DURATION_ADJ 204
NTC_CONN_REALTEMENTS 206
NTC_REALTEMENTS 207

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
NTC_TIME_BTW_CONN_REATTEMPTS 208
NTC_TIME_BTW_REATTEMPTS 209
NTC_XLATIONS 210
OCCTS_DEFAULT_REG_LOG 212
ORIG_ARTER_FREQUENCY 213
ORIG_ARTER_LEVEL 215
ORIG_INCREASE_SPM 217
PER_CALL_GND_LOOP_TEST 218
PER_OPC_LOGDEV_BUFFER_SIZE 219
PERFORMANCE 220
PMSTAT_OM_CONTROL 222
POTS_SIMULATE_1A 223
PRE_ROUTE_ABANDON_TRK116_LOG 224
PRINTOUT_OF_CALLS 226
PROMPT_HUNT_MEM_LCC 227
PSPDALARM 228
QDIAGALARM 229
R2_ANI_DENY 230
RAG_QUEUE_LEN 231
RAG_RECALL_TIMEOUT 233
RATING_SMALLEST_COIN 234
RECORD_CLG_NPA_NXX 235
RECORD_UNANSWERED_CALLS 237
RES_SO_SIMPLIFICATION 239
SCAI_CONTINUITY_AUDIT_INTERVAL 241
SDIAGALARM 242
SEAS_LRF_GTT_OCC 243
SEAS_LRF_GTT_PER 245
SEAS_LRF_MTP_OCC 247
SEAS_LRF_MTP_PER 249
SIG_TST 251
SLE_LANGUAGE 252
SLE_VOICEBACK_PUBLIC_ICM 254
SLNETWORK_NAME 255
SLVP_RCHD_TIMER 256
SMDR_LOG_RPT 258
SO_PROMPT_FOR_CABLE_PAIR 260
SO_PROMPT_FOR_LTG 261
SPCL_SECURITY_A_DR 262
SPECIAL_AMA_REPORT 263
SPILL_SPB_ON_ES_TRKS 265
SRCF_FILE_VOLNAME 266
SYSLOG_ACCESS 268
TABLE_ACCESS_CONTROL 270
TASINTVL 271
TBI_CONNECT_OPR_A 272
TBI_FORCE_RELEASE 273
TBI_OFFER 275
TBI_OPR_TIMEOUT 277
TCAPNM_BLK_QUERY_PRIV_DNS 279
TCAPNM_INTERLATA_QUERY 281
TCMALARM 283
TERM_ARTER_FREQUENCY 284
TERM_ARTER_LEVEL 286
TEST_CALL_AMR_SPILL 288
TEST_CALL_IL_SPILL 289
TEST_CALL_SPILL 290
THRESHOLD_IS_SAMPLING 291
TOLL_DIVERSION_SIGNAL 292
TOPS_411_RECORD_NPA_IN_AMA 293
TOPS_AGS 295
TOPS_CALLS_WAITING_SEARCH_DEPTH 296
TOPS_CLD_TIME_AND_CHG_NO_ACTS 297
TOPS_CROSS_TEAM_ROUTING 299
TOPS_DISPLAY_AWT 300
TOPS_DISPLAY_MON 301
TOPS_DISPLAY_ST 302
TOPS_DUMP_STUDY_REG 303
TOPS_EA_DNPC_LOG_GENERATION 305
TOPS_EA_PROCESS_T_SEL 306
TOPS_FGB_CC134 308
TOPS_HOLD_LOCAL 310
TOPS_MAN_DATABASE_ORIG_DISPLAY 311
TOPS_MANUAL_DATABASE_ORIG 312
TOPS_MFADS_OUTPUT_XFR_NUMBER 314
TOPS_MFADS_POLLING_ID 316
TOPS_OTC_CARRIER_NUMBER 317
TOPS_PARS_TONE_LENGTH 318
TOPS_START_OF_DAY 320
TOPS_STATSPAC_POLLING_ID 321
TOPS_TAC_RECALL 322
TOPS_TANDEMED_411_CC009 323
TOPS_THIRD_BILL_ACC_REQD_SET 325
TOPS_VERIFICATION_BARGE_IN 327
TOPS_ZERO_FB_REG 329
TRA125M1_SCAN_RATE 330
TRA125M2_SCAN_RATE 331
TRA250M1_SCAN_RATE 332
TRK_OOS_CHK_ON 333
TRKLPBK_TIMEOUT_IN_MINUTES 334
TRUNK_QUERY_AUDIT_START_TIME 336
TSO_FIRST_STAGE_TIMEOUT 337
TSTLN_OP_DELAY 339
TTR_SELECTION_OPTION 340
UDIAGALARM 342
VARIABLE_STUTTER_DIALTONE_TIMING 343
WLC_OV_REPORTING 344
WLN_DEFAULT_TIMEOUT 346
WML_ACCESS_CODE 347
XBAR_OVERFLOW_ON 348
XBARCAB1 349
XBARCAB2 350
| XBARSAT1     | 351      |
| XBARSAT2     | 352      |
About this document

The *Office Parameters Reference Manual* describes office parameters that are used to set the software limits for a DMS switch. Operating company personnel and Northern Telecom system application engineers datafill these values to specify criteria such as memory requirements, telephony standards, and feature availability.

When to use this document

Northern Telecom (NT) software releases are referred to as batch change supplements (BCS) and are identified by a number, for example, BCS29. This document is written for DMS-100 Family offices that have BCS36 and up.

More than one version of this document may exist. The version and issue are indicated throughout the document, for example, 01.01. The first two digits increase by one each time the document content is changed to support new BCS-related developments. For example, the first release of a document is 01.01, and the next release of the document in a subsequent BCS is 02.01. The second two digits increase by one each time a document is revised and rereleased for the same BCS.

To determine which version of this document applies to the BCS in your office, check the release information in *DMS-100 Family Guide to Northern Telecom Publications, 297-1001-001*.

How to identify the software in your office

The *Office Feature Record (D190)* lists your current BCS and the NT feature packages in it. You can view similar information on a MAP (maintenance and administration position) terminal by typing

```
>PATCHER;INFORM LIST identifier
```

and pressing the Enter key.

where

*identifier* is the number of the feature package or patch ID
You can identify your current BCS level and print a list of all the feature packages and patches in your switch by performing the following steps. First, direct the terminal response to the desired printer by typing

>`SEND printer_id`

and pressing the Enter key.

*where*

`printer_id` is the number of the printer where you want to print the data.

Then, print the desired information by typing

>`PATCHER;INFORM LIST;LEAVE`

and pressing the Enter key.

Finally, redirect the display back to the terminal by typing

>`SEND PREVIOUS`

and pressing the Enter key.

**References in this document**

The following documents are referred to in this document.

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>297-1001-451</td>
<td><em>Common Customer Data Schema</em></td>
</tr>
<tr>
<td>297-1001-814</td>
<td><em>Operational Measurements Reference Manual</em></td>
</tr>
</tbody>
</table>
How this document is organized

This manual is divided into the sections described below:

**BCS36 new office parameters**
Office parameters added in BCS36 are listed here.

**BCS36 deleted office parameters**
Office parameters deleted in BCS36 are listed here.

**Cross-reference tables**
This document also includes tables to assist you in cross-referencing individual parameters and the tables that contain them:
- Table to parameter cross-reference
- Parameter to table cross-reference

**The NORESTARTSWACT utility**
This procedure can be used to update the values of certain office parameters. The total system outage time for a NORESTARTSWACT is 30 seconds.

**Office parameter administration guide**
This guide explains how to determine the best long-term values for office parameters in table OFCENG.

**Format of parameter descriptions**
The office parameters described in this document are presented alphabetically by table (OFCENG, OFCOPT, OFCSTD, OFCVAR) and, then, alphabetically by parameter name within each table.

The individual office parameter descriptions in this document include the following information:

- **Functional description**
  - a brief description of the parameter

- **Provisioning rules**
  - the provisioning rules required to determine the value to which the parameter must be set

- **Range information**
  - the range of values (minimum, maximum, and default)

- **Activation**
  - the method required to activate a change to the value of a parameter

- **Dependencies**
  - any other parameters or data schema tables that are affected by the function of the described parameter
Consequences
- the consequences of incorrectly setting the value of the parameter

Verification
- the method of verifying that the parameter is properly provisioned and functioning

Memory requirements
- the amount of memory that is used by the parameter

Dump and restore rules
- the dump and restore rules required for retrofitting the software by BCS number

Parameter history
- the history of changes made to the parameter documentation (introduced in BCS36)
What precautionary messages mean

Danger, warning, and caution messages in this document indicate potential risks. These messages and their meanings are listed in the following chart.

<table>
<thead>
<tr>
<th>Message</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANGER</td>
<td>Possibility of personal injury</td>
</tr>
<tr>
<td>WARNING</td>
<td>Possibility of equipment damage</td>
</tr>
<tr>
<td>CAUTION</td>
<td>Possibility of service interruption or degradation</td>
</tr>
</tbody>
</table>

Examples of the precautionary messages follow.

**DANGER**
Risk of electrocution
The inverter contains high voltage lines. Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed first. Until these fuses are removed, the high voltage lines inside the inverter are active, and you risk being electrocuted.

**WARNING**
Damage to backplane connector pins
Use light thumb pressure to align the card with the connectors. Next, use the levers to seat the card into the connectors. Failure to align the card first may result in bending of the backplane connector pins.

**CAUTION**
Loss of service
Subscriber service will be lost if you accidentally remove a card from the active unit of the peripheral module (PM). Before continuing, confirm that you are removing the card from the inactive unit of the PM.
About this document

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows it is a command:

>BSY

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP are shown in uppercase letters:

>BSY LINK

Variables

Variables are shown in lowercase letters:

>BSY LINK ps_link

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

Any active calls may be lost
Please confirm ("YES" or "NO":)

The following example illustrates the command syntax used in this document.

<table>
<thead>
<tr>
<th>Step number</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Busy the P-side link of the SMU by typing &gt;BSY LINK ps_link and pressing the Enter key.</td>
</tr>
<tr>
<td>Parameters list</td>
<td>where ps_link is the number of the P-side link (0 through 19)</td>
</tr>
<tr>
<td>Example input</td>
<td>Example input: &gt;BSY LINK 7</td>
</tr>
<tr>
<td>Example output</td>
<td>Example of a MAP response: Any active calls may be lost Please confirm (&quot;YES&quot; or &quot;NO&quot;:)</td>
</tr>
</tbody>
</table>
# BCS36 new office parameters

The following office parameters have been added in BCS36:

<table>
<thead>
<tr>
<th>Table</th>
<th>Parameter Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFCENG</td>
<td>AIN_ACTIVE</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AIN_MAX_SERIAL_TRIGGERS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AIN_NUM_EXT_BLKS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AIN_NUM_PROCESSING_EXT_BLKS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AIN_T1_TIMER</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AR_BLOCK_PRIVATE_RES</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AR_BLOCK_PRIVTAE_CTX</td>
</tr>
<tr>
<td>OFCENG</td>
<td>DCND_TIMERS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>DCT_MEM_LIMIT</td>
</tr>
<tr>
<td>OFCENG</td>
<td>MAX_NO_OF_TRANS_ID</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NETWORK_ELEMENT_ID</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NFA_ANSWER_DETECT_TIME</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NFA_INVERTED_WINK_DURATION</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NFA_PRE.Dial_DELAY_TIME</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NOP.DNA_DEFAULT_ACCESS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NTC_RINGBACK_TIME</td>
</tr>
<tr>
<td>OFCENG</td>
<td>NUM_DCR/NP_ACCESS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>RNG_TIMEOUT_TKLN_SECS</td>
</tr>
<tr>
<td>OFCENG</td>
<td>TABLE_ADJNODE_INUSE</td>
</tr>
<tr>
<td>OFCENG</td>
<td>TRIGDIG_NUM_DGLTR_POOLS</td>
</tr>
<tr>
<td>OFCOPT</td>
<td>ENABLE_DT.IM.FOR_IBN</td>
</tr>
<tr>
<td>OFCOPT</td>
<td>MAX_NUM_ECM_TPAC</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>AIN_OFFICE_TRIGGRP</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>CDS_DN_CHECK</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>CONTINUOUS_RETRY_TIMERS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>DCT_TEST_CALL_SPILL</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_CALL_DURATION_ADJ</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_CONN_REATEMPTS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_REATTEMPTS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_TIME_BTW_CONN_REATTEMPTS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_TIME_BTW_REALTEMPTS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>NTC_XLATIONS</td>
</tr>
<tr>
<td>OFCVAR</td>
<td>Parameter</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>PER_OPC_LOGDEV_BUFFER_SIZE</td>
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<tr>
<td>TCAPNM_BLK_QUERY_PRIV_DNS</td>
<td></td>
</tr>
<tr>
<td>TCAPNM_INTERLATA_QUERY</td>
<td></td>
</tr>
<tr>
<td>TSTLN_OP_DELAY</td>
<td></td>
</tr>
<tr>
<td>VARIABLE_STUTTER_DIALTONE_TIMING</td>
<td></td>
</tr>
<tr>
<td>WLC_OV_REPORTING</td>
<td></td>
</tr>
</tbody>
</table>
# BCS36 deleted office parameters

The following office parameters have been deleted in BCS36:

<table>
<thead>
<tr>
<th>Table</th>
<th>Parameter name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFCENG</td>
<td>AOSS_CALL_WAITING_Q_SIZE</td>
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<tr>
<td>OFCENG</td>
<td>AOSS_MAX_OPERATOR_NUM</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AOSS_MFADS_PERIOD</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AOSS_NUM_RECORDING_UNITS</td>
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<tr>
<td>OFCENG</td>
<td>AOSS_NUM_STUDY_REG</td>
</tr>
<tr>
<td>OFCENG</td>
<td>AOSS_NUM_TRAFFIC_OFFICES</td>
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<tr>
<td>OFCENG</td>
<td>AOSS_NUM_TRANSFER_TYPES</td>
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<tr>
<td>OFCENG</td>
<td>AOSS_VR_SWITCH_ID</td>
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<td>OFCENG</td>
<td>CSDDS_RINGING_TIMEOUT</td>
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<tr>
<td>OFCENG</td>
<td>ENHANCED_METERING_HARDWARE</td>
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<tr>
<td>OFCENG</td>
<td>NUMCPLETTERS</td>
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<td>OFCENG</td>
<td>NUMCSDDSPERMEXT</td>
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<tr>
<td>OFCENG</td>
<td>NUM_CALL_REF_DATA_BLKS</td>
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<tr>
<td>OFCENG</td>
<td>OOC_ASST_POS</td>
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<td>OFCENG</td>
<td>OOC_CALLS_WAITING_Q_SIZE</td>
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<td>OFCENG</td>
<td>OOC_CALLS_WAITING_SEARCH_DEPTH</td>
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<tr>
<td>OFCENG</td>
<td>OOC_CROSS_TEAM_ROUTING</td>
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<tr>
<td>OFCENG</td>
<td>OOC_DISPLAY_AWT</td>
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<td>OFCENG</td>
<td>OOC_DISPLAY_MON</td>
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<tr>
<td>OFCENG</td>
<td>OOC_DISPLAY_ST</td>
</tr>
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<td>OFCENG</td>
<td>OOC_DUMP_STUDY_REG</td>
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<tr>
<td>OFCENG</td>
<td>OOC_MAX_OPERATOR_NUM</td>
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<td>OFCENG</td>
<td>OOC_MAX_ORIG_RATE_CENTER</td>
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<tr>
<td>OFCENG</td>
<td>OOC_MAX_TERM_RATE_CENTER</td>
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<td>OFCENG</td>
<td>OOC_MCCS_BNS</td>
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<tr>
<td>OFCENG</td>
<td>OOC_MCCS_CCV</td>
</tr>
<tr>
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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
<table>
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## Table to parameter cross-reference

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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
<table>
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<th>OFCENG</th>
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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
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<td>R2DIG_CLR_FWD_FLTR_TIME</td>
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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
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297-1001-455 Standard 22.02 March 1994
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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
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<td>BRI_CLIP_GENERALY_AVAILABLE</td>
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<td>BUFFER_THRESHOLDED_REPORTS</td>
<td>OFCVAR</td>
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<td>C11_OUTG_EXPANSION</td>
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</tr>
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<td>C12_PLUS_OUTG_EXPANSION</td>
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<tr>
<td>C7UP_RSC_LOG_THRESHOLD</td>
<td>OFCVAR</td>
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<td>C7_CNGOVER_SLMPR_THRESHOLD</td>
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<td>C7_NACK_ERROR_SLMPR_THRESHOLD</td>
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<td>C7_SLMPR_ALARM_ON</td>
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<tr>
<td>C7_SU_ERROR_SLMPR_THRESHOLD</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>CABLE_LOCATE_TIMEOUT</td>
<td>OFCENG</td>
</tr>
<tr>
<td>CABLE_SHORT_TIMEOUT</td>
<td>OFCENG</td>
</tr>
<tr>
<td>CALL_CONTROL_DEFAULTS</td>
<td>OFCVAR</td>
</tr>
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<td>CALL_TRF</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>CALL_REPORT_FORMAT</td>
<td>OFCVAR</td>
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<td>CAMA_SUSP_CALL_ALLOWED</td>
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<td>CARD_X53</td>
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<td>CASUAL_FEATURES_OFF</td>
<td>OFCOPT</td>
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<td>CCMTR_FAILURE_FREE_CALL</td>
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<td>CCW_ACTIVE</td>
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<td>CCW_AS_LINE_OPTION</td>
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<td>CC_REX_SCHEDULED_HR</td>
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<td>CDC_RESTRICTION_ACTIVE</td>
<td>OFCENG</td>
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<td>CDR_100_BYTE_FORMAT</td>
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<td>OFCVAR</td>
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<td>OFCENG</td>
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<td>CIRCUIT_TEST_NUMBER_MESSAGES</td>
<td>OFCVAR</td>
</tr>
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<td>OFCOPT</td>
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<td>CMAJALARM</td>
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<td>CNDB_ON_POTS</td>
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<td>COIN_OPERATOR_RELEASED_ON_OA</td>
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<td>COIN RETAIN ON_OA</td>
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<td>CUG_REGION</td>
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<td>CUSTOMER_DATA_CHANGE_LOGS</td>
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CUTOFF_ON_DISC_TIME  OFCVAR
CWT_TIMEOUT  OFCVAR
CWT_TONE_LENGTH  OFCVAR
DAILY_ISDN_LAYER2_PEG_AUDIT_TIME  OFCVAR
DATA_CALL_SMDR  OFCVAR
DATA_COS  OFCENG
DB_MAX_SIZE  OFCENG
DCH_BD_STATMUX_RATIO  OFCENG
DCM_PARITY_FILTER  OFCSTD
DCO.Timer  OFCENG
DCT_MEM_LIMIT  OFCENG
DCT_TEST_CALL_SPILL  OFCVAR
DEBUG_HUNT_SWERRS  OFCENG
DEFAULTLANGUAGE  OFCENG
DEFAULT_BEARER_CAPABILITY  OFCENG
DEFAULT_CARRIER_OR_TREAT  OFCENG
DEFAULT_COMMANDCLASS  OFCENG
DEF_AMR3_CAT_CODE  OFCENG
DEPREC_INTER_DIGIT_TIMING  OFCSTD
DIAGALARM  OFCVAR
DIGIT_COL_OFFICE_CODE  OFCSTD
DIRPFILE_AUDIT  OFCENG
DISC_TIMEOUT_VALUE  OFCENG
DISC_TIME_BILLED  OFCENG
DISKLOGMEMORY  OFCVAR
DIST_CWT_TONE  OFCVAR
DIS_LKD_CKT  OFCOPT
DMSBUS_POLL_FREQUENCY  OFCENG
DM_HIT_TIME  OFCENG
DM_PCM_ENCODING  OFCENG
DND_ROUTE  OFCENG
DNLPIC_MAX_NUM_DN_TUPLES  OFCENG
DNPIC_MAX_NUM_DN_TUPLES  OFCENG
DRAM_BARGE_IN  OFCENG
DSR_OFFICE  OFCOPT
DTSR_AUTO_DEACTIVATION_ENABLE  OFCENG
DTULDINFO  OFCVAR
DUMP_RESTORE_IN_PROGRESS  OFCSTD
E2ALINEQP  OFCVAR
E911_AUD_RING_FROM_PSAP  OFCENG
E911_CHECK_DEFAULT_ESN  OFCVAR
E911_LDT_PSAP_SW_STATUS  OFCENG
E911_LOCAL_ACCESS_ROH_TONE_TIME  OFCENG
E911_NUMBER_OF_FDBS  OFCENG
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Comment</th>
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<tbody>
<tr>
<td>E911_PSAPS_USING_1_INFO_DIGIT</td>
<td>OFCSTD</td>
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<td>E911_PSAP_DISCONNECT_TIME</td>
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<td>E911_PSAP_OFFHK_ALARM_TIME</td>
<td>OFCVAR</td>
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<td>E911_PSAP_REC_PRE_WK_TIME</td>
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<td>EADAS_MPC_AND_LINK</td>
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<td>EAEO_FOUR_DIGIT_CIC_STATUS</td>
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<td>EA_OCS_AND_DP_OVLP_NEEDED</td>
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<td>EA_OSS_HOLD_TIMEOUT_MINS</td>
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<td>EA_OVERLAP_CARRIER_SELECTION</td>
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<td>EA_TEST_CALL_SPILL</td>
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<td>EBS_BUZZ_SPLASH_ON</td>
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<td>EBS_TO_TRUNK_TRD_TIME</td>
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<td>ENHANCED_PASSWORD_CONTROL</td>
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<td>ENHANCED_TRUNK_PREROUTE_ABANDON</td>
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<td>ESG_ALARM</td>
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<td>ESG_RERING_TIME</td>
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<td>EXPIRED_PASSWORD_GRACE</td>
<td>OFCENG</td>
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<td>FACALARM</td>
<td>OFCVAR</td>
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FEATURE_ADMIN_CHARGE	OFCENG
FGD_ANI_SMDR_REQD	OFCVAR
FGD_TEST_CALL_ACK_OFFHOOK	OFCVAR
FIVMIN_SNAPSHOT_ENABLED	OFCOPT
FLEXIBLE_DIGIT_ANALYSIS	OFCOPT
FLOW_CONTROL_TIMEOUT	OFCENG
FOT_DIGITS	OFCVAR
FRB_RINGING_TIME	OFCOPT
FREEZE_ON_REINIT	OFCSTD
FREE_NUMBER_DENIAL	OFCOPT
FRIU_BILLING_COUNT_FORMAT	OFCOPT
FRR_ROUTING_RULES_OVERRIDE	OFCENG
FTRQ0WAREAS	OFCENG
FTRQ0WPERMS	OFCENG
FTRQ16WAREAS	OFCENG
FTRQ16WPERMS	OFCENG
FTRQ2WAREAS	OFCENG
FTRQ2WPERMS	OFCENG
FTRQ32WAREAS	OFCENG
FTRQ32WPERMS	OFCENG
FTRQ4WAREAS	OFCENG
FTRQ4WPERMS	OFCENG
FTRQ8WAREAS	OFCENG
FTRQ8WPERMS	OFCENG
FTRQAGENTS	OFCENG
FTRQAUDIT	OFCENG
FXOGS_REMBSY_BITS	OFCENG
GATEWAY_CDR_RECORD_ID	OFCOPT
GENERATE_CALL_RECORDING_LOGS	OFCVAR
GENERATE_ICAMA_LOG_ENTRY	OFCVAR
GENERATE_ITOPS_LOG_ENTRY	OFCVAR
GEN_CDR300_ISDN_LOGS	OFCVAR
GEN_CDR300_MIDNT_LOGS	OFCVAR
GEN_CDR300_SYNC_LOGS	OFCVAR
GLOBAL_CUTOFF_ON_DISCONNECT	OFCENG
GOS_NUM_RU	OFCENG
GROUND_START_DELAY	OFCENG
GRP_NUM_FEAT_CTRL	OFCOPT
GUARANTEED_TERMINAL_CPU_SHARE	OFCENG
HM_INTERPULSE_TIME	OFCSTD
HM_PULSE_TIME	OFCSTD
HNT_SO_SIMPLIFICATION	OFCOPT
IAA_REQUESTED	OFCVAR
IBN_CFW	OFCOPT
IBN_DATA_LINE_SPLIT	OFCOPT
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
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<tr>
<td>ICAMA_ANI_FAILURE_ACTION</td>
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<td>ILR_OPTIONS</td>
<td>OFCOPT</td>
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<td>IMAJALARM</td>
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<td>INTL_GATEWAY_OFFICE</td>
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</tr>
<tr>
<td>INTL_ICR_REQUESTED</td>
<td>OFCVAR</td>
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<td>INTL_INTRASWITCHING</td>
<td>OFCOPT</td>
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<td>INTL_LOCAL_OFFICE</td>
<td>OFCENG</td>
</tr>
<tr>
<td>INTL_RU_OVFL_ACTION</td>
<td>OFCVAR</td>
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<td>INTL_SILENT_SWITCHMAN_TMO</td>
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<td>OFCSTD</td>
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<td>OFCENG</td>
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<td>ISDN_NT1_TEST_MODE_ALARM</td>
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Parameter to table cross-reference

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SEAS_UAL_RETRY_COUNT
SEAS_UAL_SEAC_NODE_NAME
SEAS_UAL_SITE_TO_SITE_TIMER
SEAS_UAL_STP_NODE_NAME
SEP_EQUIPPED
SET_TO_UNBALANCE
SHORT_TIMED_RELEASE_DISC_TIME
SIG_TST
SILENT_SWITCHMAN_TIMEOUT
SLE_ITEMS_IN_SEGMENT
SLE_LANGUAGE
SLE_MAX_PROGRAMMERS
SLE_MAX_SEGMENT_COUNT
SLE_TCAP_RESPONSE_TIME
SLE_TRANSACTION_THRESHOLD
SLE_VOICEBACK_PUBLIC_ICM
SLE_WAKEUP_TIME
SLNETWORK_NAME
SLVP_RCHD_TIMER
SMDR_LOG_RPT
SMDR_OFFICE
SND_DD_TIME
SND_DP_WK_TIME
SND_MF_WK_TIME
SOUTHBOUND
SO_BULK_DMO
SO_DID
SO_ECHO
SO_PROMPT_FOR_CABLE_PAIR
SO_PROMPT_FOR_LTG
SO_RCF
SPANISH_OUTGOING_RINGING_TIMEOUT
SPCCLITIMEOUT
SPCL_SECURITY_A_DR
SPDD_DIGIT
SPECIAL_AMA_REPORT
SPEED_CALL_ACCESS_DIGITS
SPILL_ANI_9
SPILL_SPB_ON_ES_TRKS
SPMS_START_OF_MONTH
SPP_MAX_PROGRAMMERS
SRCF_FILE_VOLNAME

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Vendor</th>
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<td>OFCENG</td>
</tr>
<tr>
<td>TLINK_DET_TIMEOUT</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TLINK_EST_TIMEOUT</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOLL_DIVERSION_SIGNAL</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOLL_OFFICE_DELAYED_BILLING</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_OPLUS_LOCAL</td>
<td>OFCENG</td>
</tr>
</tbody>
</table>
TOPS_411_RECORD_NPA_IN_AMA  OFCVAR
TOPS_ACCS_ACG  OFCENG
TOPS_ACCS_ACG_SIZE  OFCENG
TOPS_ACCS_manual_VALIDATION  OFCENG
TOPS_ACTS  OFCENG
TOPS_AGS  OFCENG
TOPS_ASSST_POS  OFCENG
TOPS_BRAND_DISPLAY  OFCENG
TOPS_BRAND_INWARDS  OFCENG
TOPS_BRAND_OFFICE  OFCENG
TOPS_CALLS_WAITING_Q_SIZE  OFCENG
TOPS_CALLS_WAITING_SEARCH_DEPTH  OFCVAR
TOPS_CLD_TIME_AND_CHG_NO_ACTS  OFCVAR
TOPS_CROSS_TEAM_ROUTING  OFCVAR
TOPS_DA_PARS_ENABLE  OFCOPT
TOPS_DISPLAY_AWT  OFCVAR
TOPS_DISPLAY_MON  OFCVAR
TOPS_DISPLAY_ST  OFCVAR
TOPS_DUMP_STUDY_REG  OFCVAR
TOPS_EA_DNPC_LOG_GENERATION  OFCVAR
TOPS_EA_INTERLATA_NONOPR_AMA  OFCENG
TOPS_EA_PROCESS_T_SEL  OFCVAR
TOPS_EQUAL_ACCESS_OFFICE  OFCENG
TOPS_EXPANDED_OPRNUM  OFCENG
TOPS_FGB_CC134  OFCVAR
TOPS_FIXED_DURATION  OFCENG
TOPS_GEN_AMA_SET  OFCENG
TOPS_HOLD_LOCAL  OFCVAR
TOPS_INTRUSION_TONE  OFCOPT
TOPS_MANUAL_DATABASE_ORIG  OFCVAR
TOPS_MAN_DATABASE_ORIG_DISPLAY  OFCVAR
TOPS_MAX_OPERATOR_NUM  OFCENG
TOPS_MAX_ORIG_RATE_CENTER  OFCENG
TOPS_MAX_TERM_RATE_CENTER  OFCENG
TOPS_MCCS_BNS  OFCOPT
TOPS_MCCS_CCV  OFCOPT
TOPS_MFADS_OUTPUT_XFR_NUMBER  OFCVAR
TOPS_MFADS_PERIOD  OFCENG
TOPS_MFADS_POLLING_ID  OFCVAR
TOPS_NIGHT_ALARM_ON_POS_BUSY  OFCENG
TOPS_NUMBER_OF_MEMO_PADS  OFCENG
TOPS_NUM_CAMA_RU  OFCENG
TOPS_NUM_OC_EXT  OFCENG
TOPS_NUM_RU  OFCENG
TOPS_NUM_STUDY_REG  OFCENG
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOPS_NUM_TRAFFIC_OFFICES</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_OCCUPANCY_CALC_METHOD</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_OC_ENVIRONMENT</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_OC_REMOTE_BVC</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_OTC_CARRIER_NUMBER</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_PARS_TONE_LENGTH</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_PASSWORD_ENABLE</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_PEG_MODE</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_PO_PB_CHARS</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TOPS_QMS_MAX_ACTIVE_CALL_QUEUES</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_SDB_CCV_QUERY_BLK</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_SEL_XFR_OPR_TRK</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TOPS_START_OF_DAY</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_STATSPAC_PERIOD</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_STATSPAC_POLLING_ID</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_SUPPRESS_CW</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TOPS_TAC_RECALL</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_TANDEMIZED_411_CC009</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_THIRD_BILL_ACC_REQD_SET</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPS_THRESHOLD</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPSTRANSFER_TYPES</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TOPS_VERIFICATION_BARGE_IN</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOPSZERO_FB_REG</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TOTAL_ROUTE_QUEUED_CALLS</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TQMS_MIS_MPC_BUFFS</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TRA125M1_SCAN_RATE</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TRA125M2_SCAN_RATE</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TRA250M1_SCAN_RATE</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TRAFFIC_INFO_EXT_REC</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TRAP_THRESHOLD</td>
<td>OFCSTD</td>
</tr>
<tr>
<td>TRBQ_EBS_LINE_AFT_MISDIALS</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TRIGDIG_NUM_DGLTR_POOLS</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TRKLPBK_TIMEOUT_IN_MINUTES</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TRK_MEMSEL_AUDIT_TIME</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TRK_OOS_CHK_ON</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TRUNK_QUERY_AUDIT_START_TIME</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TSO_FIRST_STAGE_TIMEOUT</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TSTLN_OP_DELAY</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TTR_SELECTION_OPTION</td>
<td>OFCVAR</td>
</tr>
<tr>
<td>TWO_WAY_FOR_AMR5</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TWO_WAY_FOR_OC</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TWO_WAY_FOR_OP</td>
<td>OFCOPT</td>
</tr>
<tr>
<td>TYPE_OF_ACCS</td>
<td>OFCENG</td>
</tr>
<tr>
<td>TYPE_OF_NETWORK</td>
<td>OFCENG</td>
</tr>
<tr>
<td>UCD_QSL_AUDIT_INTERVAL</td>
<td>OFCSTD</td>
</tr>
</tbody>
</table>
UDIAGALARM
UK_OP_DELAY
UNIQUE_BY_SITE_NUMBERING
UNIVERSAL_AMA_BILLING
USE_ZEROMPOS_FOR_CAMA
USINGSITE
USP_ENABLED
US_CUG_ENABLED
VALIDATE_CCITT_LUHN_DIGIT
VARIABLE_STUTTER_DIALTONE_TIMING
VAR_DN
VCDR_OFFICE
VCDR_OFFICE_FORMAT
VPN_PREFIX_DIGS
VSLE_PRESENT
VSN_SIMULATOR_ON
WAKEUP_REREQUEST_DELAY
WAKEUP_RINGING_TMO
WK_DD_PRE_DIAL_DELAY
WLC_OV_REPORTING
WLN_DEFAULT_TIMEOUT
WML_ACCESS_CODE
WUCR_RINGING_TIMEOUT
XBARCAB1
XBARCAB2
XBARSAT1
XBARSAT2
XBAR_OVERFLOW_ON
XID_DESTINATION_ID
XPM_CSIDE_DMSX
XPM_MATE_DIAGNOSTICS_AVAILABLE
XPM_PARITY_THRESHOLD
ZERO_MINUS_TO_CARRIER
ZERO_PLUS_FEATURE
ZONE_OF_ORIGIN

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
The NORESTARTSWACT utility

Description

The no-restart-switch-of-activity (NORESTARTSWACT) utility enables you to activate changes to the values of certain office parameters or to data in certain tables. The total system outage during a NORESTARTSWACT is less than 30 seconds.

The NORESTARTSWACT utility is available only in offices with BCS36 or higher software. It is not available for NT40 offices.

While using this utility, if an error occurs that cannot be corrected by local maintenance personnel, contact the next level of support.

Following a change to the value of an office parameter or to the modification of data in certain tables, one of the following messages may appear:

WARNING: A WARM RESTART MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING: A COLD RESTART MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING: A RELOAD RESTART MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING: ANY TYPE OF RESTART MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.

NOTE: A RELOAD RESTART IS NECESSARY TO ACTIVATE A CHANGE OF FORMAT FOR THE AMA STREAM.

If one of these messages or a similar message appears, and you want to activate changes to office parameters or tables in the following three lists, the NORESTARTSWACT utility can be used instead of the restart specified in the message.
The NORESTARTSWACT utility can be used with the following office parameters that require a restart to increase or decrease their values:

- CCW_ACTIVE
- CONSOLE_SILO_CHARS
- CONSOLE_SILO_RECORDS
- CPSTACKSIZE
- CUSTOMER_GROUP_IBNGRP_OM_COUNT
- EADAS_24H_BUFFER_SIZE
- EADAS_30M_BUFFER_SIZE
- EADAS_60M_BUFFER_SIZE
- EADAS_SHORT_XFER_ALLOWED
- IBN_CFW
- MAX_ACDMIS_SESSIONS
- MAXNUCS
- MAXSTS
- OFFICETYPE
- OMHISTORYON
- PPMBUFFS

The NORESTARTSWACT utility can be used with the following office parameters that require a restart to decrease their values:

- FTRQAGENTS
- FTRQ0WAREAS
- FTRQ2WAREAS
- FTRQ4WAREAS
- FTRQ8WAREAS
- FTRQ16WAREAS
- FTRQ32WAREAS
- FTRQ0WPERMS
- FTRQ2WPERMS
- FTRQ4WPERMS
- FTRQ8WPERMS
- FTRQ16WPERMS
- FTRQ32WPERMS
The NORESTARTSWACT utility can be used with the following tables:
- CLLI
- CONF3PR
- CRSFMT
- CRSMAP
- DIRPSSYS
- NWMSC
- SCGRP
- SDGRP
- TCAPTRID
- TRKGRP
- TFANIT

Summary of the procedure
The following table summarizes the procedure to modify a parameter or table data using NORESTARTSWACT and the approximate time, in minutes, needed to do each step. The times given for specific steps are elapsed times and not actual run times. Ranges are listed to accommodate different switch configurations, sizes, and problems that may be encountered during the execution of the step.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Approximate time in minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify availability of the NORESTARTSWACT utility on the switch</td>
<td>(unspecified)</td>
</tr>
<tr>
<td>2</td>
<td>Make changes to parameter values or table data</td>
<td>(unspecified)</td>
</tr>
<tr>
<td>3</td>
<td>Drop sync on the computing module (CM)</td>
<td>2 to 3</td>
</tr>
<tr>
<td>4</td>
<td>Restart on the mate of the active switch to activate changes</td>
<td>3 to 5</td>
</tr>
<tr>
<td>5</td>
<td>Perform the LIMITED_PRESWACT procedure</td>
<td>15 to 60</td>
</tr>
<tr>
<td>6</td>
<td>Perform the NORESTARTSWACT procedure</td>
<td>(unspecified)</td>
</tr>
<tr>
<td>7</td>
<td>Perform the POSTSWACT procedure</td>
<td>15 to 60</td>
</tr>
<tr>
<td>8</td>
<td>Sync the CM</td>
<td>3 to 5</td>
</tr>
<tr>
<td></td>
<td>Total time range in minutes</td>
<td>38 to 133</td>
</tr>
</tbody>
</table>
# Procedure

Use this procedure to perform a NORESTARTSWACT.

## Using the NORESTARTSWACT utility

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the MAP</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1 | Ensure that you are at the CI level of the MAP display by pressing the return key two times.  
*Example of a MAP response:*  
CI: | |
| 2 | Verify the NORESTARTSWACT availability by typing  
>BCSUPDATE;SWACTCI;QUERYSWACT  
and pressing the Enter key.  
*Example of a MAP response:*  
NORESTARTSWACT is recommended for initiating a CC Warm SWACT. Further checking will be done when SWACT is invoked.  
**If the NORESTARTSWACT is supported** | Do step 3  
**If the NORESTARTSWACT is not supported** | Do step 31 |
| 3 | Make a parameter value change or table change.  
*Example of a MAP response:*  
WARNING: A RESTART MUST BE PERFORMED TO ACTIVATE THE CHANGE MADE TO THIS PARAMETER.  
*Note:* Any change that is made while the switch is INSYNC remains in effect on the inactive side even after the drop sync and restart are complete. It is not necessary to log in to the mate central processing unit (CPU) to verify the change. | |
| 4 | Access the CM level of the MAP display by typing  
>MAPCI;MTC;CM  
and pressing the Enter key. | —continued— |
Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Determine if the inactive CPU is jammed.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The word yes under the Jam header indicates that the CPU is jammed. The area appears blank if the CPU is not jammed.</td>
</tr>
<tr>
<td></td>
<td>If the inactive CPU is</td>
</tr>
<tr>
<td></td>
<td>jammed</td>
</tr>
<tr>
<td></td>
<td>not jammed</td>
</tr>
</tbody>
</table>

**At the CM reset terminal for the inactive CPU**

| 6    | Jam the inactive CPU by typing        |
|      | >JAM                                  |
|      | and pressing the Enter key.          |
|      | *RTIF response:*                     |
|      | Please confirm (YES/NO)              |

| 7    | Confirm the command by typing         |
|      | >YES                                  |
|      | and pressing the Enter key.          |
|      | *RTIF response:*                     |
|      | JAM DONE                              |

**At the MAP**

| 8    | Determine if the CM is in sync.       |
|      | **Note:** A dot or EccOn displayed under the Sync header indicates that the CM is in sync. The word no indicates that the CM is not in sync. |
|      | If the CM is                        | Do                        |
|      | in sync                              | step 9                    |
|      | not in sync                          | step 14                   |
### Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9</strong></td>
<td>Drop synchronization by typing <strong>DPSYNC</strong> and pressing the Enter key.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If the response is</th>
<th>Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>About to drop sync with CPUn active the inactive CPU is jammed. Do you want to continue? Please confirm (&quot;YES&quot;, &quot;Y&quot;, &quot;NO&quot;, &quot;N&quot;):</td>
<td>step 12</td>
</tr>
<tr>
<td>Drop synchronization failed</td>
<td>step 33</td>
</tr>
<tr>
<td>Aborted. Active CPUn has a faulty processor clock.</td>
<td></td>
</tr>
</tbody>
</table>

| 10 | The DPSYNC command is disallowed because the active clock on the CPU is faulty. Refer to the procedure Clearing a CM CLK major alarm in *DMS SuperNode Alarm and Performance Monitoring Procedures*, 297-5001-543. When you have completed the procedure, return to this point. |

| 11 | Go to step 6. |

| 12 | Confirm the DPSYNC command by typing **YES** and pressing the Enter key. |

### At the CM reset terminal for the inactive CPU

| 13 | Wait until A1 flashes on the reset terminal for the inactive CPU. |

<table>
<thead>
<tr>
<th>If A1</th>
<th>Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>flashes</td>
<td>step 14</td>
</tr>
<tr>
<td>does not flash after approximately 5 min</td>
<td>step 33</td>
</tr>
</tbody>
</table>

---continued---
## Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>

### At the CM reset terminal for the inactive CPU

| 14  | Perform the required restart procedure by typing  
|     | `>\RESTART <WARM/COLD/RELOAD>`  
|     | and pressing the Enter key.  
|     | **RTIF response:**  
|     | Please confirm: (YES/NO) |

### CAUTION

**Loss of service**

Ensure that you perform the restart on the inactive CPU. The reset terminal for the inactive CPU is identified by the word Inactive on the top banner of its display.

| 15  | Confirm the restart command by typing  
|     | `>YES`  
|     | and pressing the Enter key. |

### At the MAP

| 16  | Perform the LIMITED_PRESWACT procedure by typing  
|     | `>BCSUPDATE;LIMITED_PRESWACT`  
|     | and pressing the Enter key.  
|     | **Example of a MAP response:**  
|     | LIMITED_PRESWACT should not be used for BCSUPGRADE SWACTs. Do you wish to confirm? ("YES","Y","NO","N")  
|     | The LIMITED_PRESWACT command runs a series of steps that are required to prepare the switch for the NORESTARTSWACT. All of these steps must complete successfully before the NORESTARTSWACT can be performed. If the LIMITED_PRESWACT command stops with an error message, the error must be corrected and the LIMITED_PRESWACT command must be entered again to complete the remaining steps. If necessary, the next level of support should be contacted to complete this procedure.  
| 17  | Confirm the LIMITED_PRESWACT command by typing  
|     | `>YES`  
|     | and pressing the Enter key. |

---

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up
### Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>18</strong></td>
<td><strong>If the LIMITED_PRESWACT</strong> Do</td>
</tr>
<tr>
<td></td>
<td>was successful step 19</td>
</tr>
<tr>
<td></td>
<td>failed step 33</td>
</tr>
<tr>
<td><strong>19</strong></td>
<td>Refer to the <em>DMS-100 Family Software Operations One Night Process and Hybrid Software Delivery Procedures</em>, 297-1001-303, section &quot;PreSWACT DIRP and Billing&quot; for the procedures to handle secondary billing devices over the NORESTARTSWACT. When you have completed this procedure, return to this point.</td>
</tr>
<tr>
<td><strong>20</strong></td>
<td>Verify that all essential services or high profile customers (police, hospital, emergency bureaus, radio stations) are not in emergency call processing mode by contacting the appropriate customer.</td>
</tr>
<tr>
<td><strong>21</strong></td>
<td>Disable any periodic testing.</td>
</tr>
<tr>
<td><strong>22</strong></td>
<td>Ensure no further activity is performed on the Distributed Processing Peripheral (DPP), including DPP polling or disk backup. Inform the downstream processing center.</td>
</tr>
<tr>
<td><strong>23</strong></td>
<td>Dump the Switch Performance Monitoring System (SPMS) register to a printer or other device according to operating company standards.</td>
</tr>
<tr>
<td><strong>24</strong></td>
<td>Disconnect any ISDN DTA monitor prior to the SWACT.</td>
</tr>
</tbody>
</table>

**At the CM reset terminal for the inactive CPU**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>25</strong></td>
<td>Release the jam on the inactive CPU by typing</td>
</tr>
<tr>
<td></td>
<td>&gt;\RELEASE JAM</td>
</tr>
<tr>
<td></td>
<td>and pressing the Enter key.</td>
</tr>
<tr>
<td></td>
<td>RTIF response:</td>
</tr>
<tr>
<td></td>
<td>JAM RELEASE DONE</td>
</tr>
</tbody>
</table>

—continued—
Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the MAP</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 26 | Perform the SWACT by typing  
**>BCSUPDATE;SWACTCI;NORESTARTSWACT**  
and pressing the Enter key.  
*Note:* After the CPUs switch activity, you are logged off of the MAP terminal. A dollar sign ($) appears and the cursor moves one space to the right.  
Go to step 27. |
| 27 | Login to the MAP terminal by typing  
**>>break>LOGIN**  
*username*  
*password* |
| 28 | Perform the POSTSWACT procedure by typing  
**>BCSUPDATE;POSTSWACT** |
| 29 | Refer to the *DMS-100 Family Software Operations One Night Process and Hybrid Software Delivery Procedures, 297-1001-303*, section “Recover Billing” for the procedures to recover the secondary billing devices after the NORESTARTSWACT. When you have completed this procedure, return to this point. |
| 30 | Synchronize the CM by typing  
**>MAPCI;MTC;CM;SYNC**  
and pressing the Enter key.  
*Example of a MAP response:*  
Maintenance action submitted.  
Synchronization successful.  
If the SYNC command Do  
was successful step 34  
failed step 33 |

---continued---
Using the NORESTARTSWACT utility (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Perform the necessary restart (cold, warm, or reload) to activate the table or parameter change. When you have completed the procedure, return to this point.</td>
</tr>
<tr>
<td>32</td>
<td>Go to step 34.</td>
</tr>
<tr>
<td>33</td>
<td>For further assistance, contact the personnel responsible for the next level of support.</td>
</tr>
<tr>
<td>34</td>
<td>You have completed this procedure.</td>
</tr>
</tbody>
</table>

End
Office parameter administration guide

Office parameters are initially set by Northern Telecom to meet end of design criteria and switch configuration. This guide is intended to assist operating company personnel responsible for administering office parameters by providing guidelines to using the available tools.

Introduction

Office parameters examined in this document are located in table OFCENG (office engineering). These parameters allocate resources (memory) for switch activities such as call throughput and custom calling usage. These parameters are initially calculated using telephone company input, high day/end of design criteria and standard engineering formulas. The formulas are designed for standardization and simplified operating company and Northern Telecom use. The formulas are constructed to cover a wide variety of applications and are considered set up for end of design for most applications.

An ongoing process should take place to determine if parameter settings are appropriate for each office’s requirements. This process should include the monitoring of actual parameter usage compared to the parameter setting in the switch. It is conceivable that offices may have to adjust individual parameter settings to match the changing office requirements.

It is also possible that offices not at the end of design could reclaim memory for a period of time by reducing office parameter settings. Caution should be used in lowering office parameters to prevent impact to switch operation during high day operation. Some parameters are not recommended for value reduction. See section “Office parameters that are no recommended to be modified”.

Memory allocated for office parameters can be reclaimed during the BCS delivery by way of dump and restore if the decision is made to lower office parameters. However, office parameter changes should be safely and systematically implemented before a dump and restore.
What to collect

The following data should be collected to determine the usage of many of the office parameters in table OFCENG:

- operational measurement groups CP2, EXT, and FTRQ
- BCSMON report
- listing of table OFCENG

Operational measurements

The OMs and especially the high water OMs can be used as a bench mark of the levels of traffic-dependent activity in the switch during the current interval. The high water mark OMs display the highest level of simultaneous usage reached in critical office parameters for the collection period. Overflow OMs display the number of times that the parameter was required but no resources were available.

The following OM groups should be monitored:

- CP2
- EXT
- FTRQ

CP2 measures call processing software resources such as call processing letters, call condense blocks, and wakeup blocks. EXT measures extension block usage such as special billing records, data extensions for operator services, and custom calling features. FTRQ measures feature queueing resources for MDC features such as call hold, last number redial, and call waiting. Refer to the Operational Measurements Reference Manual, 297-1001-814 for information on the registers and corresponding office parameters measured.

An OM accumulating class made up of CP2, EXT, and FTRQ should be defined with the same collection period as office parameter OMXFR in table OFCENG. When datafilling tables OMACC and OMPRT, field WHEN set to AUTO guarantees this. It is important that the collection period and transfer period are the same to ensure that the high water mark registers present a valid picture of peak activities. With a one hour collection period and a 30 minute transfer period, the peak levels are summed.

The following is an example of setting up an OM class that contains OM groups EXT, CP2, and FTRQ. The symbol (>) represents commands to be entered.
The OM class to be defined is called REALTIM3. Double precision is used.

>OMCLASS REALTIM3 DOUBLE

List the table OMACC to see the tuple added.

>LIS ALL

The table is listed. Position on the newly added tuple.

>POS REALTIM3

<table>
<thead>
<tr>
<th>CLASS</th>
<th>ENABLED</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>REALTIM3</td>
<td>N</td>
<td>AUTO</td>
</tr>
</tbody>
</table>

(Now the tuple is changed.)

>CHA

ENTER Y TO CONTINUE PROCESSING OR N TO QUIT.

>Y

ENABLED: N

>Y

REP: AUTO

TUPLE TO BE CHANGED:

REALTIM3 Y AUTO

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

>Y

TUPLE CHANGED. WRITTEN TO JOURNAL FILE AS JF NUMBER 544

>QUIT

CI:

(Now add OM groups to the OM class)

>OMACCGRP REALTIM3 ADD GROUP CP2
OK

>OMACCGRP REALTIM3 ADD GROUP FTRQ
OK

>OMDUMP CLASS REALTIM3 COMMANDS
OMCLASS REALTIM3 DOUBLE
OMACCGRP REALTIM3 ADD GROUP CP2
OMACCGRP REALTIM3 ADD GROUP EXT
OMACCGRP REALTIM3 ADD GROUP FTRQ

> TABLE OMPRT
   TABLE: OMPRT
> LIS ALL

(Table OMPRT is listed here. Position on an unused position. Position 228 is chosen in this example.)

> POS 228

(Now the tuple is changed.)

> CHA
   ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
> Y
   ACTIVE: N
> Y
   SUPZERO: N
>
   ID: ALL
> ALLCLASS
   CLASS:
> REALTIM3
   REP: MONTHLY
> AUTO
   BUFFOUT: N
>
   OUTDEV: SINK
>
   TUPLE TO BE CHANGED:
   228 Y N ALLCLASS REALTIM3
       AUTO N SINK

ENTER Y TO CONFIRM. N TO REJECT OR E TO EDIT.
> Y
   TUPLE CHANGED
   WRITTEN TO JOURNAL FILE AS JF NUMBER 547

> QUIT
   CI:
> LOGUTIL
   LOGUTIL:
(The name TATSPRT is a local printer defined for this example.)

>`ADDREP TATSPRT OMPR 228
1 report(s) Added
>`LISTROUTE DEVICE TATSPR
Device TATSPRT print classes:

ADD REPORTS:
  OMPR 228 (OM REPORT)

DELETE REPORTS:

>`STARTDEV TATSPRT
Log device TATSPRT has been started.
Number of devices started : 1

>`STOPDEV TATSPRT
Log device TATSPRT has been stopped.
Number of devices stopped : 1
BCSMON

BCSMON is used to gather switch data as well as high water OMs. The switch data can be used in calculating office parameters in place of the engineering estimates used at initial load time.

BCSMON uses OM results as inputs for the BCSMON high water report. BCSMON itself keeps a running tab of a subset of parameter high water marks over a 30 day period. For the parameters that are currently reported by BCSMON, this report is the easiest for the administrator to use. However, since all the high water OMs are not included in BCSMON, the OM groups mentioned previously should be collected. Also, parameter overflows are not reported in BCSMON output, only in the OM groups.

The following is required to produce the needed BCSMON information from the CI level of the MAP:

```plaintext
>BCSMON
>HIGHPARMS
```

The following BCSMON example shows a subset of actual counts of switch data and high water marks for office parameters:

Number of nodes: 379
Number of Networks: 0

Number of TM8 PMs: 3
Number of MTM PMs: 53
Number of LGC PMs: 12
Number of LCM PMs: 48
Number of DTC PMs: 13

Number of DP_POTS lines: 3
Number of DGT_POTS lines: 15
Number of DP_IBN lines: 185
Number of DGT_IBN lines: 2835
Number of TOTAL_UNEQ lines: 15962
Number of TOTAL_OFFL lines: 5373

Number of PPHONE_STATION lines: 152
Number of DISPLAY_PPHONE_STATION lines: 35
Number of M3009_STATION lines: 6705
Number of M5112_STATION lines: 618
Number of M5209_STATION lines: 144
Number of M53l2_STATION lines: 37

Number of DNs on keysets: 35403
Number of IBN lines with CALL WAITING FEATURE: 8
Number of IBN lines with CALL FORWARDING FEATURES: 508
Number of IBN lines with SPEED CALL FEATURE: 225
Number of KSET lines with CALL WAITING FEATURE: 4
Number of KSET lines with CALL FORWARDING FEATURE: 6613
Number of KSET lines with SPEED CALL FEATURE: 6327

Number of trunks: 4704
Number of unequipped trunks: 10655
Number of offline trunks: 554
Number of trunk groups: 715
Number of IBNT1 trunks: 893
Number of IBNT0 trunks: 334
Number of IBNT2 trunks: 49
Number of OP trunks: 52

Number of RCVRMF receivers: 8
Number of RCVRDGT receivers: 4 (expected:8) *****
Number of RCVRATD receivers: 32

Number of CF3 ports: 70
Number of CF6 ports: 83

Number of LTUs: 6
Number of TTUs: 5

Number of VDUs: 39

Number of customer groups: 253
Number of consoleless customer groups: 250
Number of customer subgroups: 2
Number of attendant consoles: 30
## Tables of daily usage for critical office parameters

This is a partial report showing 20 days of high water mark values with the most current one (yesterday) being printed first. A-1 means that no data is collected yet for that day.

<table>
<thead>
<tr>
<th>Date</th>
<th>NUMPCLETTERS</th>
<th>NCCBS</th>
<th>NUMCALLPROCES</th>
<th>NUMOUTBUF</th>
<th>NUMULTIBLKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>13</td>
<td>97</td>
<td>4</td>
<td>51</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>105</td>
<td>4</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>28</td>
<td>17</td>
<td>914</td>
<td>4</td>
<td>51</td>
<td>13</td>
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<td>18</td>
<td>18</td>
<td>908</td>
<td>4</td>
<td>51</td>
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<tr>
<td>32</td>
<td>16</td>
<td>893</td>
<td>5</td>
<td>51</td>
<td>14</td>
</tr>
<tr>
<td>29</td>
<td>14</td>
<td>761</td>
<td>5</td>
<td>51</td>
<td>11</td>
</tr>
<tr>
<td>27</td>
<td>13</td>
<td>63</td>
<td>4</td>
<td>51</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>70</td>
<td>4</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>85</td>
<td>4</td>
<td>51</td>
<td>3</td>
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<tr>
<td>8</td>
<td>12</td>
<td>457</td>
<td>4</td>
<td>51</td>
<td>7</td>
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<tr>
<td>19</td>
<td>18</td>
<td>504</td>
<td>4</td>
<td>51</td>
<td>9</td>
</tr>
<tr>
<td>18</td>
<td>11</td>
<td>435</td>
<td>4</td>
<td>51</td>
<td>8</td>
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<tr>
<td>19</td>
<td>12</td>
<td>273</td>
<td>4</td>
<td>51</td>
<td>5</td>
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<tr>
<td>13</td>
<td>12</td>
<td>63</td>
<td>4</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>66</td>
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<td>51</td>
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<tr>
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<td>12</td>
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<td>4</td>
<td>51</td>
<td>3</td>
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<tr>
<td>8</td>
<td>12</td>
<td>512</td>
<td>4</td>
<td>51</td>
<td>9</td>
</tr>
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<td>21</td>
<td>14</td>
<td>796</td>
<td>5</td>
<td>51</td>
<td>12</td>
</tr>
<tr>
<td>31</td>
<td>23</td>
<td>941</td>
<td>5</td>
<td>51</td>
<td>15</td>
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<td>50</td>
<td>16</td>
<td>874</td>
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<td>51</td>
<td>13</td>
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<tr>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FTRQAGENTS</td>
<td>FTRQ0WAREAS</td>
<td>FTRQ2WAREAS</td>
<td>FTRQ4WAREAS</td>
<td>FTRQ8WAREAS</td>
</tr>
<tr>
<td>---</td>
<td>------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>0</td>
<td>9435</td>
<td>0</td>
<td>3437</td>
<td>6230</td>
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<td>3511</td>
<td>6179</td>
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</tr>
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<td>9451</td>
<td>0</td>
<td>3862</td>
<td>6120</td>
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<tr>
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<td>6185</td>
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<td>0</td>
<td>3784</td>
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<td>14</td>
</tr>
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<td>9451</td>
<td>0</td>
<td>3587</td>
<td>6360</td>
<td>10</td>
</tr>
<tr>
<td>0</td>
<td>9435</td>
<td>0</td>
<td>3334</td>
<td>6361</td>
<td>0</td>
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<td>0</td>
<td>9436</td>
<td>0</td>
<td>3345</td>
<td>6342</td>
<td>0</td>
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<tr>
<td>0</td>
<td>9435</td>
<td>0</td>
<td>3377</td>
<td>6337</td>
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</tr>
<tr>
<td>2</td>
<td>9443</td>
<td>0</td>
<td>3469</td>
<td>6359</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>9441</td>
<td>0</td>
<td>3458</td>
<td>6390</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>9440</td>
<td>0</td>
<td>3456</td>
<td>6396</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>9437</td>
<td>0</td>
<td>3458</td>
<td>6327</td>
<td>8</td>
</tr>
<tr>
<td>0</td>
<td>9430</td>
<td>0</td>
<td>3451</td>
<td>6283</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>9430</td>
<td>0</td>
<td>3454</td>
<td>6271</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>9429</td>
<td>0</td>
<td>3450</td>
<td>6265</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>9439</td>
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<td>3582</td>
<td>6261</td>
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</tr>
<tr>
<td>6</td>
<td>9435</td>
<td>0</td>
<td>3796</td>
<td>6174</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>9438</td>
<td>0</td>
<td>3935</td>
<td>6090</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>9433</td>
<td>0</td>
<td>3923</td>
<td>6090</td>
<td>16</td>
</tr>
</tbody>
</table>
**Table OFCENG**

Table OFCENG lists the setting of parameter values. This table should be listed to provide the parameters to be considered and their current settings. The table can be listed with the following CI commands:

```
>TABLE OFCENG;LIST ALL;QUIT
```

The following example shows a subset of table OFCENG:

<table>
<thead>
<tr>
<th>PARMNAME</th>
<th>PARMVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACD_MIB_OUT_EVENT_BUFFER_SIZE</td>
<td>110</td>
</tr>
<tr>
<td>ACD_TOLL_DELAYED_BILLING</td>
<td>N</td>
</tr>
<tr>
<td>ACT_MAX_DURATION</td>
<td>255</td>
</tr>
<tr>
<td>ALL_ACD_LOGIN_IDS_VALID</td>
<td>Y</td>
</tr>
<tr>
<td>ALT_TTT_USAGE_PERCENTAGE</td>
<td>50</td>
</tr>
<tr>
<td>ALT_TTT_USAGE_PERCENTAGE</td>
<td>50</td>
</tr>
<tr>
<td>AMA_FAILURE_FREE_CALL</td>
<td>Y</td>
</tr>
<tr>
<td>AMA_LONG_DUR_AUDIT_INTERVAL</td>
<td>24</td>
</tr>
<tr>
<td>ATTLOG</td>
<td>1000</td>
</tr>
<tr>
<td>AVG_NUM_TGS_PER_OHCBQCALL</td>
<td>4</td>
</tr>
<tr>
<td>BELLANI_ALARM_ID</td>
<td>9</td>
</tr>
<tr>
<td>BELLANI_INTERCEPT_ID</td>
<td>9</td>
</tr>
<tr>
<td>CABLE_LOCATE_TIMEOUT</td>
<td>180</td>
</tr>
<tr>
<td>CABLE_SHORT_TIMEOUT</td>
<td>180</td>
</tr>
<tr>
<td>CC_ENGLEVEL_WARNING_THRESHOLD</td>
<td>77</td>
</tr>
<tr>
<td>CFD_EXT_BLOCKS</td>
<td>3500</td>
</tr>
<tr>
<td>CFW_EXT_BLOCKS</td>
<td>350</td>
</tr>
<tr>
<td>COINDISPOSAL</td>
<td>IGNORE_COIN</td>
</tr>
<tr>
<td>COMMAND_SCREEN</td>
<td>Y</td>
</tr>
<tr>
<td>COPP_RELAY_OPEN_TIME</td>
<td>80</td>
</tr>
<tr>
<td>CPSTATUS_SWITCHABLE</td>
<td>Y</td>
</tr>
<tr>
<td>CBLINK_ALARM_THRESHOLDS</td>
<td>30 60</td>
</tr>
<tr>
<td>CUSTOMER_GROUP_IBNGRP_OM_COUNT</td>
<td>512</td>
</tr>
<tr>
<td>DATA_COS</td>
<td>0</td>
</tr>
<tr>
<td>DEBUG_HUNT_SWERRRS</td>
<td>N</td>
</tr>
<tr>
<td>DEFAULT_CARRIER_OR_TREAT</td>
<td>C 288</td>
</tr>
<tr>
<td>DEFAULT_COMMANDCLASS</td>
<td>0</td>
</tr>
<tr>
<td>DEFAULTLANGUAGE</td>
<td>ENGLISH</td>
</tr>
<tr>
<td>DISC_TIME_BILLED</td>
<td>Y</td>
</tr>
<tr>
<td>DISCTO_TIMEOUT_VALUE</td>
<td>13</td>
</tr>
<tr>
<td>DM_PCM_ENCODING</td>
<td>DM_MU_LAW</td>
</tr>
<tr>
<td>DTER_AUTO_DEACTIVATION_ENABLE</td>
<td>Y</td>
</tr>
<tr>
<td>EA_CCIS6_TANDEM_BILL</td>
<td>N</td>
</tr>
<tr>
<td>EA_OCS_AND_DP_OVLP_NEEDED</td>
<td>N</td>
</tr>
<tr>
<td>EA_OCS_DIGCOL_METHOD</td>
<td>PXFALL</td>
</tr>
<tr>
<td>EA_OVERLAP_CARRIER_SELECTION</td>
<td>Y</td>
</tr>
</tbody>
</table>

297-1001-455  Standard 22.02  March 1994
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA_WITH_CD</td>
<td>N</td>
</tr>
<tr>
<td>EADAS24H_BUFFER_SIZE</td>
<td>7100</td>
</tr>
<tr>
<td>EADAS30M_BUFFER_SIZE</td>
<td>32000</td>
</tr>
<tr>
<td>EADAS60M_BUFFER_SIZE</td>
<td>7100</td>
</tr>
<tr>
<td>EBS_BUZZ_SPLASH_ON</td>
<td>Y</td>
</tr>
<tr>
<td>EBS_TO_TRUNK_TRD_TIME</td>
<td>50</td>
</tr>
<tr>
<td>ENHANCED_DEAD_SYSTEM_ALARM</td>
<td>Y</td>
</tr>
<tr>
<td>EXPIRED_PASSWORD_GRACE</td>
<td>3</td>
</tr>
<tr>
<td>FLOW_CONTROL_TIMEOUT</td>
<td>6</td>
</tr>
<tr>
<td>FTRQAGENTS</td>
<td>1500</td>
</tr>
<tr>
<td>FTRQAUDIT</td>
<td>10</td>
</tr>
<tr>
<td>FTRQOWAREAS</td>
<td>1</td>
</tr>
<tr>
<td>FTRQ2WAREAS</td>
<td>1500</td>
</tr>
<tr>
<td>FTRQ4WAREAS</td>
<td>693</td>
</tr>
<tr>
<td>FTRQ8WAREAS</td>
<td>704</td>
</tr>
<tr>
<td>FTRQ16WAREAS</td>
<td>20</td>
</tr>
</tbody>
</table>
How to interpret what is collected

The OMs provide an indication of overflows. If there are insufficient resources for a given office parameter, the OMs indicate this with an overflow peg. It is important to note that parameter usage should be monitored in all offices, not only those interested in reducing office parameters for the purpose of memory reclamation.

When examining registers FTRQHI and FTRQSEIZ of OM group FTRQ and the FTRQ entities in BCSMON HIGHWATER, it should be noted that these reflect the number of blocks simultaneously in use. The corresponding FTRQ office parameters reflect the number of blocks allocated in multiples of 10. For example, a setting of 300 for office parameter FTRQAGENTS allows for a FTRQAGENTS high water mark of 3000. Note that this multiple of 10 factor applies only to FTRQ parameters (that is, FTRQAGENTS, FTRQAUDIT, FTRQ0WAREAS, FTRQ2WAREAS, FTRQ4WAREAS, FTRQ8WAREAS, FTRQ16AREAS, FTRQ32WAREAS, FTRQ0WPERMS, FTRQ2WPERMS, FTRQ4WPERMS, FTRQ8WPERMS, FTRQ16PERMS, and FTRQ32PERMS).

The following example shows that FTRQAGENTS is set to 1261 in table OFCENG. This allocates 12610 FTRQAGENT blocks as indicated in field FTRQOM_INFO in the OM group FTRQ. For the sample period, the high water mark, field FTRQHI, indicates a maximum of 6137 feature queue blocks in simultaneous use.

CI:
>TABLE OFCENG : POS FTRQAGENTS
TABLE: OFCENG
FTRQAGENTS 1261

>LIST 10
PARMNAME       PARMVAL
FTRQAGENTS     1261
FTRQAUDIT      10
FTRQ0WAREAS    1
FTRQ2WAREAS    1575
FTRQ4WAREAS    799
FTRQ8WAREAS    800
FTRQ16WAREAS   1
FXOGS_REMBSY_BITS A_OFF_B_OFF_HK
GLOBAL_CUTOFF_ON_DISCONNECT Y 80 N
GROUND_START_DELAY Y

>QUIT
CI:
>OMSHOW FTRQ HOLDING
FTRQ

CLASS: HOLDING
START: 1990/01/12 14:00:00 FRI: STOP: 1990/01/12 14:15:00
SLOWSAMPLES: 9 : FASTSAMPLES: 90 :

KEY (FTRQOM_TUPLE_KEY)
INFO (FTRQOM_INFO)
FTRQSEIZ  FTRQOVFI  FTRQHI

0 FTRQAGENTS
   12610
   369   0    6137

1 FTRQOWAREAS
   10  
   0    0    0

2 FTRQ3WAREAS
   15750
   509   0    3394

3 FTRQ4WAREAS
   7880
   238   0    2828

4 FTRQ8WAREAS
   8000
   72    0    30

5 FTRQ16WAREAS
   10
   0    0    0

Referring to example 2, the high water marks can be interpreted. The last 30 days of high water marks are displayed. For FTRQ4WAREAS, 6396 is the highest value displayed. For this office the office parameter FTRQ4WAREAS in table OFCENG is set to 693. Accounting for the factor of 10, this allows for 6930 blocks. Operating company personnel may decide to raise this parameter since the high water value is so close to the parameter setting.

For parameter NUMCPWAKE, 50 is the highest 30 day value. For this office, the office parameter NUMCPWAKE in table OFCENG is set to 425. Assuming high day for this event is during the sample period, the telephone company may decide to lower the parameter slightly to recover memory, or leave the parameter set as is.

As can be seen in the above two cases, if the value is increased or decreased office memory is impacted. If a parameter value is increased and made active, more memory is allocated for that resource from spare or not in use pool of office memory. On the other hand, if a parameter value is reduced, made active, and taken through the dump and restore process, office memory
is returned to the spare pool of memory. It is important to note that complete memory reclamation cannot take place without a dump and restore.

**How often to collect**

It is imperative that the telephone company monitor the actual usage regularly in order to account for high day busy hour for each of the critical office parameters and changing calling traffic patterns. Each of these factors should be taken into account in order to establish the time interval for examining OMs and are analyzed in more detail below.

High day busy hour for each event must be considered. The high day busy hour for POTS features may be very different than that of Meridian Digital Centrex (MDC) features. Based on this criterion, usage must be monitored based on the office parameters being analyzed. For example, CFW_EXT_BLOCKS allocate the number of simultaneous active call forwarded calls.

Traffic patterns can change dramatically over time and, therefore, the actual usage could fluctuate dramatically. Actual usage must be monitored on a regular basis to determine if trends are evolving. The decision to collect daily, weekly, or biweekly is the decision of the individual operating company.

**How to make a decision**

Criteria must be chosen to decide whether to lower or raise parameter values. An operating company engineer can choose criteria such as never reducing a given office parameter at all or never reducing an office parameter below three times (or more) the highest ever high water mark.

Lowering office parameters values should be carefully considered. In general, Northern Telecom does not recommend lowering office parameter values unless office memory is in jeopardy.

Factors such as planned large office additions and office history play an important role in deciding how large a buffer to add to the office data. The operating company is responsible for determining how large to make the buffer above the high water OMs. It is strongly recommended that the office be monitored for many months before making a decision.

Most telephone companies will probably decide never to reduce office parameter values, unless office memory is exhausted.
Office parameters that are not recommended to be modified

In general, the memory allocating office parameter values in table OFCENG can be considered for lowering. However, Northern Telecom does not recommend changes to the parameters detailed below. Any changes are at telephone company discretion.

NCCBS defines the number of call condense blocks (CCB) required that are held up through the life of a call. NCCBS is provisioned to provide for 100% use of network facilities. No change is recommended.

NUMCALLPROCESSES defines the number of call processes (CP) required that are associated with a call during set up, take down and feature processing. The current formula is sufficient to provide for high calling volumes. No change is recommended.

NUMCPLETLETTERS defines the number of call processing letters required that are used to pass messages between call processes and the rest of the DMS. NUMCPLETLETTERS is set at 2000 to provide for overload protection during peak traffic periods. No change is recommended.

NUMTLBS defines the number of terminal linkage blocks used in the input/output system. NUMTLBS is provisioned based on the number of hardware nodes present in the office. No change is recommended.

PPMBUFFS defines the number of peripheral process message buffers used for sending messages to the peripheral modules. If PPMBUFFS is underprovisioned, switch degradations can occur. A margin of safety is built in to prevent degradation during high traffic periods and unexpected high maintenance situations. No change is recommended.

Reducing office parameter values

The preferred method of implementing office parameter reductions is to gradually make changes in the existing office parameter tables, performing the necessary restarts as required during very low traffic times. Changing two or so parameter values downward at a time, then verifying that the changes had no adverse effect is the safest way to implement reductions. Possible problem variables are kept to a minimum and a known safe fall-back is available. If troubles do arise, reverting back to the old values can be done quickly. The OMs should be monitored closely to ensure proper engineering. All changes should be made at least 3 weeks prior to the dump and restore or One Night Process (ONP). At least 3 weeks is required to allow the BCS delivery process to capture the new values.

Memory is not reclaimed until the dump and restore is performed. At that time, the reduced values are copied from the existing load into the new office load.
If parameter reductions are required, the telephone company should communicate their intentions and work with the Northern Telecom regional software systems engineering manager.

**Increasing office parameter values**

In general, increasing parameter values is a safer process than reducing them. The major issue with increasing parameter values (other than timing related parameters) is the increased memory requirements. Unlike reducing parameter values, memory is utilized immediately upon activation (usually a cold restart). Often, parameters in table OFCENG require more memory when increased. The memory requirements for parameters are in the data store area for NT-40 loads, but in total office memory for SuperNode loads, where there is no distinction between data and program store.

A basic outline of when values should be increased is as follows:

Determine actual spare memory available in the switch.

Determine the established memory requirements indicated by the required parameter value increases.

Analyze and determine if the amount of increased memory does not exceed the amount of memory spare and available for use. Keep in mind the Northern Telecom and individual telephone company requirements for spare memory overheads. Reference SEB 88–01–002 or contact a Northern Telecom regional software systems engineering manager to aid in this task. After a determination has been made that the increased values will not exceed memory limitations including spare or overhead requirements, a safe implementation process can begin.

If only 2 or 3 parameter values are to be increased, all could be done at the same time, with the monitoring of parameters and memory after the change. If larger numbers of parameters values need to be increased, a staged increase should be implemented. Monitor two or three parameter changes and if all is well and memory usage is safe, move forward with others.

**Notifying Northern Telecom**

In order to ensure propagation to future BCSs of decreases made to office parameters, the operating company must contact their regional software systems engineering manager with a single point of contact at the operating company. The contact should be able to approve of any changes to the office parameters for a given office.
Conclusion

Northern Telecom engineers office parameters based on telephone company input and standard formulas. A wide variety of applications are covered by the standard formulas. These formulas yield a safe value in nearly every office. Operating company monitoring of the office parameter usage on an ongoing basis to determine if the parameter settings are appropriate for the office application is required.

Any changes made to the office parameters discussed in this document result in a change in the memory allocated in the switch. An increase in a setting requires more memory. A decrease in value decreases memory requirements. Note, a decrease in a parameter value only yields an actual memory decrease if a rebuild (that is, a dump and restore) occurs.
OFCENG parameters
**ACCS_NUM_RU**

**Parameter name**
Automated Calling Card Service Number of Recording Units

**Functional description of parameter ACCS_NUM_RU**
This parameter specifies the number of Automated Calling Card Service (ACCS) recording units (RU) that are allocated for ACCS call processing.

**Provisioning rules**
Set the value of this parameter equal to the maximum number of simultaneous ACCS calls that can be in progress.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**
Increase – immediate
Decrease – cold restart

**Dependencies**
Not applicable

**Consequences**
Underprovisioning of this parameter results in insufficient recording units being allocated for ACCS call processing.
Overprovisioning of this parameter results in wasted memory.

**Verification**
Not applicable.

**Memory requirements**
Each recording unit requires 91 words of memory.

**Dump and restore rules**
This parameter was introduced in BCS31.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Automated Calling Card Service Database Response Delay

Functional description of parameter ACCSDB_RESPONSE_DELAY
This parameter is required for a Traffic Operator Position System (TOPS) switching unit with Automated Calling Card Service (ACCS) that has the Exchange Alternate Billing Services feature.

This feature is applicable to intra-LATA calls only and provides the software capability to query a line information database (LIDB) through the Signaling System 7 (SS7) network using transaction capability application part (TCAP). ACCS provides capabilities similar to mechanized calling card service (MCCS), (calling card validation (CCV) queries and billed number screening (BNS) queries), but provides additional line information as well.

Whenever the personal identification number (PIN) is included in the query, a CCV query is sent. If the PIN is not included in the query, a BNS query is sent.

A database simulator is also provided through a local application.

Table ACCSDB is the database for the local application and contains simulated database responses from the LIDB.

Table QUERYTYP contains the databases for the billed digits.

This parameter specifies the delay, in 1 second intervals, for the simulation of access delay from the LIDB (actually table ACCSDB for the local application).

Provisioning rules
Specifies the delay, in 1 second intervals, for the simulation of access delay from the LIDB.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The following parameters are also associated with this feature:
- TOPS_MCCS_CCV in table OFCOPT
- TOPS_MCCS_BNS in table OFCOPT
ACCSDB_RESPONSE_DELAY

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS24.
Copy the existing value of this parameter when doing a dump and restore.
**ACD_MIS_OUT_EVENT_BUFFER_SIZE**

**Parameter name**
Automatic Call Distribution Management Information System Outgoing Event Buffer Size

**Functional description of parameter ACD_MIS_OUT_EVENT_BUFFER_SIZE**
This parameter is required to determine the actual outgoing event buffer size allocated for Automatic Call Distribution Management Information System (ACD MIS) sessions.

The ACD MIS Application provides protocols to enable a Down Stream Processor (DSP) to request and collect ACD information from the switch. This information provides real time statistics and historical reports.

The outgoing buffer stores DSP replies (such as return error, return result) and ACD MIS invocations (such as SWITCHENDSUBPOOLDATA and SWITCHENDOFINIT).

If this parameter is set to the maximum value of 200, the buffer can contain up to 150 outstanding replies and invocations.

Field OUTEVENT in table ACDMISPL can be used to engineer the size of the ACD MIS outqueue on a per session basis.

This parameter provides the default value for field OUTEVENT in table ACDMISPL when the field is new. If a value is not entered in field OUTEVENT, the value specified by this parameter is used. By using the value of this parameter, all of the ACD MIS pool values can be set to the value of ACD_MIS_OUT_EVENT_BUFFER_SIZE.

Memory is allocated on a per pool basis as defined in field OUTEVENT in table ACDMISPL and not on the value of this parameter.

**Provisioning rules**
If the buffer size required is not 110 (default), specify the size of the buffer.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>200</td>
<td>110</td>
</tr>
</tbody>
</table>

**Activation**
Do not change this parameter while there is an active session. The new size for the buffer is allocated as soon as a session is logged in.

**Dependencies**
Field OUTEVENT in table ACDMISPL can be used to engineer the size of the ACD MIS outqueue on a per session basis.
ACD_MIS_OUT_EVENT_BUFFER_SIZE

Consequences
If this parameter is underprovisioned, event messages are discarded if an attempt is made to enqueue them in a full queue.

If this parameter is overprovisioned additional data store is allocated.

Verification
Any nonzero value in field MISLOST of operational measurement (OM) group ACDMISPL indicates underprovisioning.

See the Operational Measurement Reference Manual 297-1001-814 for a description of OM GROUP ACDMISPL.

Memory requirements
Data store is allocated on a per pool basis as defined in field OUTEVENT in Table ACDMISPL.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing dump and restore.
Parameter name

Automatic Call Distribution Overflow Blocks

Functional description of parameter ACD_OVERFLOW_BLOCKS

This parameter is required for a switching unit with the Automatic Call Distribution (ACD) feature. It determines the number of ACD extension blocks.

These extension blocks are required for all queued and ringing ACD calls. Additional data for base ACD is stored in these blocks. The value for this parameter determines the maximum number of simultaneous queued or ringing calls.

Provisioning rules

Set the value of this parameter to the maximum number of simultaneous queued or ringing calls.

In the worst case, assuming calls are ringing at all agent positions and that all queues are full, the number of ACD_OVERFLOW_BLOCKS required is the number of agent positions added to the sum of the MAXCQSIZ fields of the ACD groups datafilled in table ACDGRP.

If the maximum number of simultaneous ringing and/or queued calls for a switch is known (determined by the engineering group), and is smaller than the maximum number for the worst case, then these values can be used to determine the value of this parameter.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4094</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

Not applicable

Consequences

If this parameter is underprovisioned, any incoming ACD calls exceeding the value determined by this parameter are routed to treatment.

If the value is overprovisioned, data store is wasted.
ACD_OVERFLOW_BLOCKS

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTHI2
EXTHI2
77  ACD_OVFLINQ_EXTENSION
30

0  0  0  0  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual 297–1001–814 for a description of OM group EXT.

Memory requirements

Each unit requires 17 words of memory.

Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
ACD_TOLL_DELAYED_BILLING

Parameter name
Automatic Call Distribution Toll Delayed Billing

Functional description of parameter ACD_TOLL_DELAYED_BILLING
This parameter is required in a switching unit with the Automatic Call Distribution (ACD) feature. It is provided to satisfy operating company tariffs (Automatic Message Accounting records).

The value of this parameter specifies when billing is to commence and causes an offhook condition that notifies the switching unit where billing takes place to start billing.

The functionality of this parameter applies to interoffice calls only. For intraoffice calls, see the description of table ACDGRP in the Meridian Digital Centrex (MDC) Customer Data Schema 297-2001-451.

Provisioning rules
When the value of this parameter is set to N (no), billing starts at the time the caller enters the queue.

When the value of this parameter is set to Y (yes), billing does not start until the caller is answered by an idle agent.

If a call is answered by an Attendant Console before being extended to the ACD position, an offhook condition is reported back to the switching unit where billing takes place and billing commences, regardless of the value of this parameter.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable
ACD_TOLL_DELAYED_BILLING

Dump and restore rules
This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
**ACT_MAX_DURATION**

**Parameter name**
Activity MAP Level Maximum Duration

**Functional description of parameter ACT_MAX_DURATION**
This parameter specifies the maximum value that can be passed to the commands START or STRTLOG in the ACTIVITY MAP level. Entering a duration value greater than the value of this parameter results in an error message.

The command STRTLOG has an optional parameter of time duration in minutes. If no value is entered, the duration defaults to the value of this parameter. A STRTLOG FOREVER overrides the setting of this parameter.

The tool ACTIVITY, a MAP level, is used to confirm that a switch is operating and handling calls properly. It also allows the operating company to monitor rates of traffic, occupancy, and grade of service that their subscribers are receiving. The use of the tool reduces the efficiency of the call processing activity on the switch. Therefore, the tool automatically turns itself off when the value specified by this parameter is reached.

**Provisioning rules**
When ACTIVITY is entered, the counter/timer displayed in the top right corner of the MAP is set to the value of this parameter in hours and minutes. If the value of the parameter is 255, the timer is set to 4 hours 15 minutes. This is a count-down timer, that is updated every five s. When the counter reaches 0, ACTIVITY is turned off.

If this value is to be changed, and the logs for ACTIVITY are running, keep in mind that unfinished log reports, that are normally output every 15 to 17 minutes, are lost when the time limit expires.

If a 3 h limit is desired, 195 min may be preferred over 180 min. This allows the last log report to complete and be output.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>510</td>
<td>255</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

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Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up  OFCENG-11
ACT_MAX_DURATION

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Active Directory Number System

Functional description of parameter ACTIVE_DN_SYSTEM

This parameter specifies the type of directory numbers (DN) that can be used in an office. The two values are NORTH_AMERICAN and UNIVERSAL.

Provisioning rules

For BCS33 only, this parameter should be set to UNIVERSAL for any office that has datafill in tables DNHEAD, DNCODE, or DNRTE.

The value UNIVERSAL is only applicable if the necessary software to support universal DNs is available in the load. The value UNIVERSAL allows directory numbers of varying length to be used. They continue to take the form of AREA-OFCE-STN, but the elements can vary in length.

When the value is set to NORTH_AMERICAN, only directory numbers that use the form NPA-NXX-DEFG may be used.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NORTH_AMERICAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UNIVERSAL (Universal DN software offices)</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

This parameter cannot be changed once data has been added to any DN table (TOFCNAME, DNINV, DNRUTE).

Consequences

Setting this parameter to NORTH_AMERICAN restricts the DNs in an office to a fixed length.

In offices that use the standard North American dialing plan, setting the value to UNIVERSAL results in unnecessary store consumption.

Verification

Not applicable

Memory requirements

The value of this parameter directly affects the amount of store used by table DNINV. Refer to the data store requirements for table DNINV for a description of store consumption calculation.
ACTIVE_DN_SYSTEM

Dump and restore rules

This parameter was introduced in BCS33.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Advanced Intelligent Network Active

Functional description of parameter AIN_ACTIVE
This parameter controls the activation of the Advanced Intelligent Network (AIN) software. During the switch provisioning process it may be desirable to deactivate AIN until all datafill is stable.

Provisioning rules
Set the value of this parameter to Y (yes) to activate AIN software.
Set the value of this parameter to N (no) to deactivate AIN software.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
If the value of this parameter is set to N, datafill in table TRIGGRP is not utilized by the switch.

Consequences
Not applicable

Verification
If a call is originated from an AIN agent and all criteria in table TRIGGRP have been satisfied, a corresponding action defined in table TRIGGRP takes place. For example, this may involve launching a query to a service control point (SCP). If this parameter is set to N, the AIN subscription is disregards and the call is processed within the SSP.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS35
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 parameter description added to NTP
**AIN_MAX_SERIAL_TRIGGER**

**Parameter name**
Advanced Intelligent Network Maximum Number of Serial Triggers

**Functional description of parameter AIN_MAX_SERIAL_TRIGGER**
This parameter determines the number of times that a call is allowed to trigger without being routed out of a service switching point (SSP).

A trigger occurs when the SSP determines that it must query the service control point (SCP) or adjunct to continue processing a call.

**Provisioning rules**
The value for this parameter should be based on the number of trigger detection points (TDP) and triggers that one agent could encounter. If it is conceivable that one agent could encounter more than six triggers in one call, the value of this parameter should be increased accordingly.

The Bellcore recommended value is the default of 6.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>6</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If the value of this parameter is under provisioned some calls are routed to treatment.

If the value of this parameter is over provisioned switch resources are consumed unnecessarily if the SCP instructs the SSP to continue processing the call too often after acting on triggers. This parameter provides a limit to avoid overload conditions.

**Verification**
Verify that an AIN call is routed to treatment after the number of triggers specified by this parameter is exceeded.

**Memory requirements**
This parameter requires 1 word of memory.
Dump and restore rules

This parameter was introduced in BCS35

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  parameter description added to the NTP
**AIN_NUM_EXT_BLKS**

Parameter name
Advanced Intelligent Network Number of Extension Blocks

**Functional description of parameter AIN_NUM_EXT_BLKS**
This parameter specifies the number of extension blocks that are available for use by the Advanced Intelligent Network (AIN) feature.

**Provisioning rules**
If office parameter AIN_ACTIVE in table OFCENG is set to Y (yes), this parameter must be provisioned using the following formula:

\[ X = (ccb \times ain) \]

*where*
- \( X \) is the number of AIN extension blocks
- \( ccb \) is the number of call condense blocks
- \( ain \) is the percentage of traffic that is AIN calls (that is, calls requiring communication with an SCP or adjunct)

An extension block is held by an AIN call while waiting for a response from the SCP or adjunct processor. The block is held from the time that an AIN trigger criteria is successfully met until either the call is connected or the call is taken down, whichever comes first.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Increase - immediate
Decrease - cold restart

**Dependencies**
Office parameter AIN_ACTIVE in table OFCENG must be set to Y before the blocks provisioned by this parameter will be used.

**Consequences**
Underprovisioning of this parameter value results in some calls that would have normally sent a query to an SCP being rerouted to No Software Resources (NOSR) treatment.

**Verification**
Use the command interpreter (CI) command OMSHOW EXT ACTIVE 118 and verify that sufficient extension blocks have been allocated. The external name of the extension block is AIN_EXT_BLK.
Memory requirements
Each unit requires 253 words of memory. For example, a value of 100 requires 25600 words of memory.

Dump and restore rules
This parameter was introduced in BCS35.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 parameter description added to NTP
**AIN_NUM_PROCESSING_BLKS**

**Parameter name**
Advanced Intelligent Network Number of Processing Units

**Functional description of parameter AIN_NUM_PROCESSING_BLKS**
This parameter is required in a switching unit with the Advanced Intelligent Network (AIN). It specifies the number of AIN processing extension blocks that are available for use during the processing of a response, following a service control point (SCP) query.

**Provisioning rules**
Specify the number of AIN processing extension blocks by using the following calculation:

\[ \text{ain} = (\text{sub} \times \text{traf}) \]

*where*
- `ain` is the number of AIN processing extension blocks
- `sub` is the total number of AIN subscribers (either on an individual, group, or office basis)
- `traf` is the percentage of anticipated AIN traffic for those subscribers

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If the value of this parameter is underprovisioned, some AIN calls are routed to no software resource (NOSR) treatment.

If the value of this parameter is overprovisioned, memory is wasted.

**Verification**
Verify that the extension blocks have been allocated by using the command `OMSHOW EXT ACTIVE 125`.

**Memory requirements**
Each extension block requires 253 words of memory.
Dump and restore rules

This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter introduced
**AIN_T1_TIMER**

**Parameter name**
Advanced Intelligent Network T1 Timer

**Functional description of parameter AIN_T1_TIMER**
This parameter specifies the length of time, in seconds, that a service switching point (SSP) waits for a response from the service control point (SCP) or adjunct following the launching of a query. If no response is received by the time this timer expires, the call is routed to treatment.

**Provisioning rules**
The value for this parameter must be determined based on the following:
- response time from the SCP or adjunct
- the congestion of the network sending messages to and from the SCP or adjunct

It should be set to a value greater than the expected response time from the SCP or adjunct.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>99</td>
<td>3</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If the value of this parameter is underprovisioned, some calls are routed to treatment if the SCP or adjunct is slow to respond.

If the value of this parameter is overprovisioned, switch sources such as extension blocks may be tied up unnecessarily if the SCP fails to respond.

**Verification**
If a response to a query takes longer than the amount of time specified by this parameter, verify that the call is sent to treatment.

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
Parameter history

BCS36 parameter description added to NTP
ALL_ACD_LOGIN_IDS_VALID

Parameter name
All Automatic Call Distribution Login Identifications Valid

Functional description of parameter ALL_ACD_LOGIN_IDS_VALID
This parameter is required for a switching unit with the Automatic Call Distribution (ACD) Agent Login Enhancement feature.

This parameter is required to determine whether an ACD login ID is valid if it is not datafilled in table ACDLOGIN.

Provisioning rules
If this parameter is left at the default value of Y (yes), and an agent enters a login ID that is not datafilled in table ACDLOGIN, the agent is still able to login.

If the parameter is set to N (no) and an ACD agent attempts to login with a login ID datafilled in table ACDLOGIN, the parameter check will be ignored and the agent permitted to login if all other checks are met.

If the parameter is set to N, and an agent enters a login ID not datafilled in table ACDLOGIN, the agent is not allowed to login and receives reorder tone.

Range information

<table>
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<tr>
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<th>Maximum</th>
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<tbody>
<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory Requirements
This parameter has no memory impact.

Dump and restore rules
This parameter is new in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Allocate Universal Extension Blocks

Functional description of parameter ALLOC_UNIV_EXT_BLK
This parameter is used to allocate universal extension blocks allocated for Call Screening Applications for Australian ISUP User Part (AISUP) and R2 applications.

When a universal extension block is active on a call, it is held for the duration of the call. The memory allocated for the extension blocks is permanently allocated unless ALLOC_UNIV_EXT_BLK or NCCBS parameter values are altered.

Provisioning rules
If this office parameter is set to a value of Y (yes), one universal extension block is allocated for each Call Condense Block (CCB) based on the value of NCCBS in table OFCENG.

If this parameter is set to a value of N (no), all store previously allocated for the universal extension block is deallocated.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
The activation is immediate if the parameter value is changed from N to Y or if the value is set to Y and the value of NCCBS increases.

A cold restart is required if the parameter value is changed from Y to N, or if the value is set to Y and the value of NCCBS decreases.

Dependencies
The value of office parameter NCCBS has a direct impact on this parameter.

Consequences
If this parameter is set to N when it should be set to Y, error logs may be generated and call types requiring universal extension blocks fail.

Verification
To verify that space has been allocated for universal extension blocks, use the CI command “cpalloci 85”.

Memory requirements
If this parameter is set to a value of Y, 47 bytes of memory are required by each block allocated by office parameter NCCBS in table OFCENG.
ALLOC_UNIV_EXT_BLK

Dump and restore rules

This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
ALLOW_RINGING_ON_TIP_SIDE

Parameter name
Allow Ringing On Tip Side

Functional description of parameter ALLOW_RINGING_ON_TIP_SIDE
This parameter allows the customer to choose to force distinctive ringing to the RING side of Line Concentrating Modules (LCM) lines. This parameter is used to end the propagation of patch TLA67.

Provisioning rules
A value of N (no) causes ringing on type A and message waiting line cards to be held to the RING side of the line only. A value of Y (yes) allows ringing on both the TIP and RING sides of the line.

This parameter must only have a value of N for offices with single party lines. It must have a value of Y if the office is equipped with LCMs with type A line cards supporting two-party lines.

Support of two-party lines in conjunction with this parameter must be provided by use of the type B line card that supports multi-party (including 2FR) lines.

Range information

<table>
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</thead>
<tbody>
<tr>
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<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

The feature is active by default. It is necessary to BUSY and RTS each unit of the LCM in order to activate a change to this parameter.

Dependencies
Not applicable

Consequences
The Ring Mux Reversal Relay, located in the bus interface card (BIC) has a static RMUX pattern table that is altered when this parameter is set to N.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
ALLOW_RINGING_ON_TIP_SIDE

Dump and restore rules

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
ALT_LIT_RES_NUM_FAILS_TO_SET

Parameter name
Automatic Line Testing Loop Insulation Test Resistance Number of Failures To Set

Functional description of parameter ALT_LIT_RES_NUM_FAILS_TO_SET
This parameter specifies the threshold that determines when an automatic line test (ALT) facility reports a failure during a loop insulation test (LIT).

LIT resistance exceeding either a least critical (LCT) or most critical (MCT) resistance threshold, pegs the line as having a LIT resistance problem (not a failure). These problems are considered band 1 failed.

A failure is reported if the number of consecutive resistance problems (as defined by this parameter) exceeds or has reached the threshold and the most critical resistance threshold is exceeded. These problems are considered band 0 failed.

If the threshold set by this parameter is reached or exceeded and the least critical resistance is also exceeded, but the most critical resistance is not exceeded, the line is considered band 1 failed.

Band 0 and band 1 failures can be posted in the LTP level of the MAP. Band 0 failures are reported by ALT and require operating company maintenance to improve the service. Band 1 failures are identified as possible problem lines and can require maintenance action.

For more information on ALT, refer to Automatic Line Testing Procedures 297-2101-517.

 Provisioning rules
This office parameter must be set by the operating company, based on the following information and the frequency at which lines are LIT tested in the office:

If the office is provisioned, as recommended in the Automatic Line Testing Procedures 297-2101-517, with one LTE (line test equipment) for each 5120 lines and based on an average time of 15 seconds per LIT test, the following formula applies:
5120 lines X 15 seconds = 76800 s = 21.33 h

Assume LIT is allowed to run 6 h per night.

It takes approximately 3.5 days of testing to perform another LIT test on the same line. Based on the above, the default setting of 4 for this parameter would take:
3.5 days X 4 = 14 days elapsed time to report a problem
ALT_LIT_RES_NUM_FAILS_TO_SET

Note: This example assumes that all line drawers are fully equipped and datafilled. All lines are tested and none are considered not applicable or skipped.

By lowering this office parameter value, the elapsed time for problem recognition is shortened. However, more transient problem lines can be reported, as ALT LIT conducts fewer resistance tests.

If more ALT LIT resistance tests are performed, better filtering of transient problems is performed by ALT.

Range information

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<thead>
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</thead>
<tbody>
<tr>
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<td>4</td>
<td>4</td>
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</tbody>
</table>

Activation

Immediate

Any existing LIT resistance values are not changed and cannot be posted at the MAP until a LIT run is done.

Dependencies

Not applicable

Consequences

For large offices the elapsed time between tests can be too long if this parameter is set to the default value. As a result, subscribers may report problems before ALT identifies them.

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
**ALT_LIT_RES_NUM_PASSES_TO_CLR**

**Parameter name**

Automatic Line Testing Loop Insulation Test Resistance Number of Passes to Clear

**Functional description of parameter ALT_LIT_RES_NUM_PASSES_TO_CLR**

This parameter specifies the number of consecutive resistance test passes required by an automatic line test (ALT) facility during a loop insulation test (LIT) before a previous fail condition is cleared.

ALT removes the band 0 or band 1 fail condition from the line if it has passed, consecutively, the number of times specified by this parameter and neither the least critical (LCT) or most critical (MCT) resistance threshold has been exceeded.

Band 0 and band 1 failures can be posted in the LTP level of the MAP. Band 0 failures are reported by ALT and require operating company maintenance to improve the service. Band 1 failures are identified as possible problem lines and may require maintenance action.

The accumulated passes are cleared to zero if a further band 0 or band 1 fail is measured before the value of this parameter is reduced.

For more information on ALT, refer to *Automatic Line Testing Procedures 297-2101-517*.

**Provisioning rules**

It is recommended that this office parameter be set to:

the value of ALT_LIT_RES_NUM_FAILS_TO_SET + 2

**Range information**

<table>
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<tr>
<th>Minimum</th>
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<th>Default</th>
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<tbody>
<tr>
<td>1</td>
<td>6</td>
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</tbody>
</table>

**Activation**

Immediate

**Dependencies**

For further information see parameter ALT_LIT_RES_NUM_FAILS_TO_SET in table OFCENG.

**Consequences**

Not applicable

**Verification**

Not applicable
ALT_LIT_RES_NUM_PASSES_TO_CLR

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS28.
Copy the existing value of this parameter when doing a dump and restore.
ALT_TTT_USAGE_PERCENTAGE

Parameter name
Automatic Line Test Transmission Trunk Test Usage Percentage

Functional description of parameter ALT_TTT_USAGE_PERCENTAGE
This parameter is required for a local or SL100 switching unit. It specifies the percentage of transmission trunk tests (TTT) that are available for automatic line test (ALT).

This percentage depends on the number of trunks installed in the system, since these trunks also require the use of the TTT equipment. A value must be calculated so that ALT and TIP can function together.

When ALTSCHED calculates the number of TTTs for ALT, the number of TTTs is rounded down. For example, if a switching unit has 3 TTTs and 50% of these TTTs can be used by ALT, ALT is permitted only on 1 TTT.

Provisioning rules
If other than 50%, specify the percentage of TTTs that are available for ALT.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

Activation
Immediate

All test streams already defined in table ALTSCHED must be recalculated in order to take advantage of the new value of this parameter. This is done by entering the ALT level of the MAP and stopping and submitting each defined ALTTSID stored in the ALTSCHED table.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.
ALT_TTT_USAGE_PERCENTAGE

Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
ALT_TTU_USAGE_PERCENTAGE

Parameter name
Automatic Line Test Transmission Test Unit Usage Percentage

Functional description of parameter ALT_TTU_USAGE_PERCENTAGE
This parameter is required for a Local or SL-100 switching unit. It specifies the percentage of transmission test units (TTU) that are available for automatic line test (ALT).

The percentage depends on the number of trunks installed in the system, since these trunks also require the use of the TTU equipment. A value must be calculated so that ALT and TTP can function together efficiently.

When ALTSCHED calculates the number of TTU for ALT, the number of TTUs is rounded down. For example, if a switching unit has three TTUs and 50% of these TTUs can be used by ALT, then ALT is permitted only on 1 TTU.

Provisioning rules
If other than 50%, specify the percentage of TTUs that are available for ALT.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

Activation
Immediate

All test streams already defined in table ALTSCHED should be recalculated in order to take advantage of the new value of this parameter. This is done by entering the ALT level of the MAP and stopping and submitting each defined ALTTSTID stored in the ALTSCHED table.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.
ALT_TTU_USAGE_PERCENTAGE

Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
AMA_EBCDIC_CONVERT

Parameter name
Automatic Message Accounting Extended Binary Decimal Interchange Code Convert

Functional description of parameter AMA_EBCDIC_CONVERT
This parameter specifies whether to convert Northern Telecom (NT) format Automatic Message Accounting (AMA) messages to Extended Binary Decimal Interchange Code (EBCDIC).

This parameter applies only to offices using NT format AMA. It does not affect the BellCore format AMA stream.

NT format AMA includes Station Message Detail Recording (SMDR).

Provisioning rules
Set the value of this parameter to Y (yes) to convert NT format Automatic Message Accounting (AMA) messages to Extended Binary Decimal Interchange Code (EBCDIC).

If this parameter is set to a value of N (no), Binary Coded Decimal (BCD) is used for NT format AMA messages.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
In order to activate/deactivate this parameter, verify that office parameter AMA_EBCDIC_CONVERT_ENABLE is set to Y in Table OFCOPT. Also, demount all volumes in Device Independent Recording Package (DIRP) that are recording Station Message Detail Recording (SMDR) data. Set the parameter to Y or N and perform a warm restart.

Dependencies
This parameter is only listed in this table if office parameter AMA_EBCDIC_CONVERT_ENABLE in table OFCOPT is set to Y (yes).

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 1 word of memory.
AMA_EBCDIC_CONVERT

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.

Parameter history
BCS36 specified that this parameter is for use only with NT AMA
AMA FAILURE FREE CALL

Parameter name
Automatic Message Accounting Failure Free Call

Functional description of parameter AMA_FAILURE_FREE_CALL
This parameter is required in a switching unit with the Local (LAMA) or Centralized (CAMA) Automatic Message Accounting feature.

This parameter provides routing options that can be used to charge toll calls during AMA problems or failures.

AMA failures occur when one of the following conditions exists:
• lack of sufficient recording units
• no files mounted against the AMA stream (device failure)
• AMAPROC recording process is dead

If the above routing option is not desired, calls can be allowed to complete without billing.

Provisioning rules
If the value of this parameter is set to Y (yes), all toll calls (CAMA and LAMA) are routed free of charge when AMA problems or failures exist.

If this parameter is set to N (no), all toll calls, excluding CAMA calls on CAMA or SuperCAMA trunks, are routed to the position in table POSITION that is specified in parameter AMA_FAILURE_ROUTE_POSITION in table OFCVAR, when AMA problems or failures exist.

CAMA calls in CAMA or SUPERCAMA trunk groups will complete.

Range information

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</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Field ALARMS in table CRSFMT must be set to a value of Y for this parameter to be functional.

Consequences
Not applicable
AMA_FAILURE_FREE_CALL

Verification

See OM group AMA for the operational measurements associated with this parameter.

Memory requirements

Not applicable

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
AMA_LONG_DUR_AUDIT_INTERVAL

Parameter name
Automatic Message Accounting Long Duration Audit Interval

Functional description of parameter AMA_LONG_DUR_AUDIT_INTERVAL
This parameter provides the capability for switching units with NT Centralized Automatic Message Accounting (CAMA) or Local Automatic Message Accounting (LAMA) to check for long duration calls (calls of more than 24-h duration). This parameter specifies the time between audits in 1-h intervals, as selected by the operating company.

The NT AMA Format long duration logs (AMA112) are only produced for AMA calls on CAMA trunks (Trunk Group Type SC) and LAMA calls from lines. LCDR, SMDR and AMA calls on TOPS trunks are not included in the long duration call audit.

Provisioning rules
Specify the time long duration audit interval in units of 1-h.

Range information

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<tbody>
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<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
APPLY_PATCHES_BY_SEQUENCE

Parameter name
Apply Patches By Sequence

Functional description of parameter APPLY_PATCHES_BY_SEQUENCE
This parameter is used to enable the Forced Sequence Application feature. It forces patches to be applied in sequence number order. This sequence number is assigned by Northern Telecom as patches are released for general distribution.

Provisioning rules
Operating companies that use the CI command DLCHECK on all NTI patches should set this parameter to Y (yes). All others should set this parameter to N (no).

Range information

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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
If this parameter is set to Y and all patches (including those that are not required) are not checked by the CI patch command DLCHECK, the FORCE option must be used with command APPLY to apply patches that are not in sequence. For more information on command DLCHECK, refer to the Nonmenu Commands Reference Manual, 297-1001-820.

If this parameter is set to N, the system still keeps track of the sequence numbers of patches that are applied and checked by DLCHECK. The results can be viewed with the command INFORM MISSING.

Verification
Not applicable.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Automatic Recall Block For Private Centrex Lines

Functional description of parameter AR_BLOCK_PRIVATE_CTX
This parameter appears only in offices with the CMS Auto Recall Blocking of Private Calls (CABOP) feature. It controls the blocking of automatic recall (AR) activation attempts to a private directory number for an Integrated Business Network (IBN) line or a centrex Meridian business set (MBS) line within an end office.

The CABOP functionality allows an operating company to satisfy the regulatory ruling that disallows the disclosure of private directory numbers.

Provisioning rules
The value of this parameter can be set to ALL or NOBLK.

If the value of this parameter is set to ALL, all AR activated calls to private numbers are blocked.

If the value of this parameter is set to NOBLK, no AR activated calls to private number are blocked.

The default value for this parameter is NOBLK. However, during a software upgrade to a software load that contains the CABOP feature, the value of this parameter is set as follows:
- If patch FPA32 (Blocking Automatic Recall to long distance private calls) was active in the previous load, then the value of this parameter is automatically set to ALL.
- If patch RPG89 (Blocking Automatic Recall activation on all private calls) was active in the previous load, then the value of this parameter is automatically set to ALL.
- If neither patch was active in the previous load, then the value of this parameter must be set by the operating company in accordance with the regulatory regulations.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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<tbody>
<tr>
<td>NOBLK</td>
<td>NOBLK</td>
<td>NOBLK</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable
AR_BLOCK_PRIVATE_CTX

Consequences
Not applicable

Verification
Verify that register ARPVTBLK in the AR operational measurement (OM) group is pegged each time that an AR activation attempt is blocked when the value of this parameter is set to ALL.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in CSP02.

Copy the existing value of this parameter when doing a dump and restore. See the provisioning rules in this section for dump and restore rules when upgrading from a software load without the CABOP feature to a software load with the CABOP feature.

Parameter history
BCS36 parameter introduced
Parameter name
Automatic Recall Block For Private Residential Lines

Functional description of parameter AR_BLOCK_PRIVATE_RES
This parameter appears only in offices with the CMS Auto Recall Blocking of Private Calls (CABOP) feature. It controls the blocking of automatic recall (AR) activation attempts to a private directory number for residential (RES) lines within an end office.

RES lines are residential and business lines with the 1FR and 1MR line class codes (datafilled as RES in table LINEATTR when the office parameter RES_AS_POTS is set to Y) and those with the RES line class code.

The CABOP functionality allows an operating company to satisfy the regulatory ruling that disallows the disclosure of private directory numbers.

Provisioning rules
This parameter can be set to a value of ALL, TOLL, or NOBLK.

When the value of this parameter is set to ALL, all AR calls to private numbers are blocked.

When the value of this parameter is set to TOLL, only long distance AR calls to private numbers are blocked.

When the value of this parameter is set to NOBLK, no AR activated calls to private numbers are blocked.

The default value for this parameter is NOBLK. However, during a software upgrade to a software load that contains the CABOP feature, the value of this parameter is set as follows:

- If patch FPA32 (Blocking Automatic Recall to long distance private calls) was active in the previous load, then the value of this parameter is automatically set to TOLL.
- If patch RPG89 (Blocking Automatic Recall activation on all private calls) was active in the previous load, then the value of this parameter is automatically set to ALL.
- If neither patch was active in the previous load, then the value of this parameter must be set by the operating company in accordance with the regulatory regulations.

Range information

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<tbody>
<tr>
<td></td>
<td></td>
<td>NOBLK</td>
</tr>
</tbody>
</table>
AR_BLOCK_PRIVATE_RES

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Verify that register ARPVTBLK in the AR operational measurement (OM) group is pegged each time that an AR activation attempt is blocked because of the value of this parameter.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in CSP02.

Copy the existing value of this parameter when doing a dump and restore. See the provisioning rules in this section for dump and restore rules when upgrading from a software load without the CABOP feature to a software load with the CABOP feature.

Parameter history
BCS36 parameter introduced
Parameter name
Automatic Recall Dialable Directory Number Line Or Office

Functional description of parameter AR_DDN_LINE_OR_OFFICE
This parameter specifies when the Dialable Directory Number (DDN) is voiced back for Automatic Recall (AR) two level activation. This feature allows the subscriber to dial an AR activation code and receive an announcement of the directory number of the last station that called the subscriber’s station, followed by instructions to complete the AR request (Dialing the number 1). See feature AG1228 for more details of two level activation.

Provisioning rules
Set this parameter to the value LINE so that the ARDDN line option must be assigned to each line before that line receives DDN voiceback (as opposed to the 10-digit Directory Number).

Set this parameter to the value OFFICE to enable any line in the office, equipped with the AR option, to receive DDN voiceback on two level activation.

Range information

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<tbody>
<tr>
<td></td>
<td></td>
<td>LINE</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
Not applicable.

Verification
To verify that this parameter is working, make test calls on AR lines. If the parameter is set to LINE and the activation level in Table RESOFC is set to TWOLEVEL, only lines that have the ARDDN line option assigned should receive DDN voiceback on AR activation. If the parameter is set to OFFICE and the office is set up to do two level activation, any line in the office that has the AR option should receive DDN voiceback upon AR activation.

Memory requirements
Each unit requires 1 word of memory.
**AR_DDNLINEOROFFICE**

**Dump and restore rules**

This parameter was introduced with software release BCS33.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Automatic Trunk Testing Log

Functional description of parameter ATTLOG
This parameter specifies the number of words of memory required for the automatic trunk test log (feature package NTX051AA – Automatic Trunk Testing).

Provisioning rules
Specify the number of words of memory required for the automatic trunk test log.

Range information

<table>
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<td>1000</td>
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</tbody>
</table>

Activation
Warm Restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
The number of words required by this parameter is equal to the value of this parameter.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
AUXCP_CPU_SHARE

Parameter name
AUXCP Central Processing Unit Share

Functional description of parameter AUXCP_CPU_SHARE
This parameter is required for a switching unit that has any of the following feature packages:
• Basic Simplified Message Desk Interface (SMDI) (NTX732)
• High-speed SMDI package (NTXN10AA)
• SCAI usage available through CompuCALL (NTXJ59 or NTXJ65)

This parameter is used to indicate what percentage of the CPU realtime is allocated to the AUXCP class. For example, if this parameter is set to 1, the AUXCP receives 1 percent of the CPU realtime.

AUXCP class is a scheduler class that is used for SMDI and SCAI.

Provisioning rules
This parameter is engineered in percentages of CPU occupancy. The value is the guaranteed percentage of the CPU for AUXCP class when the switch is under load. This value is determined by the amount of CPU that the operating company is willing to dedicate to SMDI and Switch Computer Applications Interface (SCAI) usage. The amount of SMDI traffic, the type of SCAI usage and the amount of CP traffic must be examined.

Contact Northern Telecom for assistance in engineering this parameter.

Range information

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<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
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</tr>
<tr>
<td></td>
<td></td>
<td>(if high-speed SMDI software is present)</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(if high-speed SMDI software is not present)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
This office parameter affects the amount of time awarded to the class in which the incoming SMDI process runs. If under provisioned, and there are bursts of incoming SMDI traffic or increased SCAI usage, there can be some delay in applying the appropriate messages to the terminals. This may occur when the switch is heavily loaded, since the AUXCP will not be able to get unused time from other classes to make up for the underprovisioning.
If the amount of time given to the AUXCP is more than that required by SMDI traffic and SCAI usage, the unused time is given to the CP if more time is required. If the CP traffic level normally uses a certain amount of the CPU, and the AUXCP is allocated some of this time through overprovisioning, delays on the CP origination queue could increase.

**Verification**

This parameter can be verified by entering table control and positioning on AUXCP_CPU_SHARE. The user can verify that the parameter is set at the intended value.

**Memory requirements**

This parameter requires one word of data store. 300 words of store are temporarily required while the value of this parameter is changed.

**Dump and restore rules**

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
AVG_NUM_TGS_PER_OHCBQCALL

Parameter name
Average Number of Trunk Groups Per Off-hook/Call Back Queuing Call

Functional description of parameter AVG_NUM_TGS_PER_OHCBQCALL
This parameter is only required in an Integrated Business Network (IBN) switching unit that has one or more customer groups with the Call Back Queue (CBQ) or Off-Hook Queuing (OHQ) feature.

This parameter specifies the average number of trunk groups that are involved in CBQ or OHQ.

Provisioning rules
The recommended value is 4.

If this feature is not provided leave the value of this parameter at the default value of 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>32 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
See operational measurement (OM) groups OHQCBQCG and OHQCBQRT in the Operational Measurements Reference Manual 297-1001-814 for the OMs that are affected by this parameter when it is underprovisioned.

The user is given No Software Resource (NOSR) treatment when either CBQ or OHQ is attempted and there are no queuing resources available.

Verification
Not applicable

Memory requirements
The number of words of memory required is determined by the following formula:

\[ \text{Number of words} = \text{parameter NUMOHCBQTRANSBLKS} \times \text{parameter AVG_NUM_TGS_PER_OHCBQCALL} \times 15 \text{ words} \]
Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
B911_3WC_ALLOWED

Parameter name
B911 Three-way Calling Allowed

Functional description of parameter B911_3WC_ALLOWED
This parameter appears only in switching units with both the Emergency Service Bureau (ESB) and Three-way Calling (3WC) features.

This parameter specifies whether a three-way call involving a public safety answering point (PSAP) operator can be established. Certain business customers provide a hot-line service. In an emergency, the hot-line attendant dials 911. This feature allows the originator and the hot-line attendant to be conferenced in with the PSAP operator. Without the feature, a three-way call involving a PSAP cannot be made.

Regardless of the value of this parameter a line with the 3WC feature is not allowed to dial a third party once a call with a PSAP operator is established. All flashes from the line are ignored in a simple line to PSAP call.

Provisioning rules
If this parameter is left at the default value of N (no), only the 3WC line and the PSAP operator can talk.

If this parameter is set to the value Y (yes), the 3WC line is allowed to flash again and bring in all three parties.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

OFCENG-54 297-1001-455 Standard 22.02 March 1994
Dump and restore rules

This parameter was introduced in BCS28.

Copy existing value of parameter when doing dump and restore.
**BACKUP_METER_FREQUENCY_LINES**

Parameter name

Backup Meter Frequency Lines

**Functional description of parameter BACKUP_METER_FREQUENCY_LINES**

This parameter is required for a switching unit with the world systems and the DMS-100 Metering System. It specifies the starting time and the interval at which the line meter blocks are backed up.

The start time is used as the first time that the backup is done.

The value of this parameter is equal to the starting time (0 to 23 hours and 0 to 59 minutes) and the frequency (1 to 24 hours) at which the meter counts are to be saved.

A reasonable time interval is once every two hours.

The default value is a starting time of midnight (0 0) and a frequency of once every 2 hours.

**Provisioning rules**

If a starting time other than midnight and a frequency of other than 2 hours is required for the saving of line meter counts, specify the time and frequency required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0 0 2 HRS</td>
</tr>
</tbody>
</table>

**Activation**

The value of the parameter is checked at midnight. If the value has changed in the last 24 hours the next backup of line meter blocks will be at the indicated start time and the frequency of subsequent backups will be at the indicated frequency.

**Dependencies**

Not applicable

**Consequences**

If the frequency is too high, the previous backup is not completed.

A check in the system prints a log if the backup has not completed before another one is requested.

Another consequence of a excessively high frequency is that the device holding the backups is filled too quickly, and requires attention more often.

If the frequency is too low the backup line meter blocks. A much lower meter count value than desired is available.
Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Backup Meter Frequency Trunks

Functional description of parameter BACKUP_METER_FREQUENCY_TRUNKS

This parameter is required for a switching unit with the world systems and the DMS-100 metering system. It specifies the starting time and the interval at which the trunk meter blocks are backed up.

The start time is used as the first time that the backup is done.

This value of this parameter is equal to the starting time (0 to 23 hours and 0 to 59 minutes) and the frequency (1 to 24 hours) at which the meter counts are to be saved.

A reasonable time interval to use is once every two hours.

The default value is a starting time of midnight (0 0) and a frequency of once every 2 h.

Provisioning rules

If a starting time other than midnight or a frequency of 2 hours is required for the saving of trunk meter counts, specify the time and frequency required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>002 HRS</td>
<td></td>
<td>0 0 2 HRS</td>
</tr>
</tbody>
</table>

Activation

The value of the parameter is checked at midnight. If the value has changed in the last 24 hours the next backup of trunk meter blocks will be at the indicated start time and the frequency of subsequent backups will be at the indicated frequency.

Dependencies

Not applicable

Consequences

If the frequency is too high, the previous backup can not complete.

There is a check in the system that prints a log if the backup has not been completed before another one is requested.

Another consequence of an excessively frequency, is that the device holding the backups is filled too quickly, and requires attention more often.

If the frequency is too low, the backup trunk meter blocks. There is a much lower meter count value than desired.
Verification
   Not applicable

Memory requirements
   This parameter requires 1 word of memory.

Dump and restore rules
   This parameter was introduced in BCS28.

   Copy the existing value of this parameter when doing a dump and restore.
**BC_CHECKING_SCOPE**

**Parameter name**
Bearer Capability Checking Scope

**Functional description of parameter BC_CHECKING_SCOPE**
This parameter is required in a switching unit with the Integrated Services Digital Network (ISDN) feature. It specifies if call screening between stations based on bearer capability (BC) and low layer compatibility (LLC) is allowed in both the Integrated Business Network (IBN) and ISDN environments. This includes members of multiple appearance directory number (MADN) groups, ISDN stimulus terminal short hunt groups and huntgroups.

This parameter does not provide for the assignment of BCs to anything other than IBN electronic business sets (EBS), data units (DU) or ISDN stimulus terminals (this does not apply to 500/2500 sets, attendant consoles or trunks).

**Provisioning rules**
If BC checking is not applicable, leave the value of this parameter at the default of NONE.

If all calls terminating on IBN and ISDN agents with bearer capabilities are to have BC compatibility screening applied to them, set the value of this parameter to IBN.

If only calls terminating on ISDN terminals are to have BC compatibility screening applied to them, set the value of this parameter to ISDN.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NONE</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

OFCENG-60 297-1001-455 Standard 22.02 March 1994
Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**BELL_ANI_ALARM_ID**

**Parameter name**
Bell Automatic Number Identification Alarm Identification

**Functional description of parameter BELL_ANI_ALARM_ID**
This parameter specifies the automatic number identification (ANI) information digit (ID) assigned by the operating company to indicate an alarm condition.

**Provisioning rules**
Any digit from 0 to 9 can be assigned. The recommended digit is 8.

This parameter only exists if the switching unit supports the ANI request.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Bell Automatic Number Identification Intercept Identification

Functional description of parameter BELL_ANI_INTERCEPT_ID
This parameter specifies the automatic number identification (ANI) information digit (ID) assigned by the operating company to indicate an intercept type of call.

Provisioning rules
Any digit from 0 to 9 can be assigned. The recommended digit is 9.
This parameter only exists if the switching unit supports the ANI request.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
To bind in this parameter the parameter SPILL_ANI_9 in table OFCENG must be set to Y (yes) and a restart is required.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS15.
Copy the existing value of this parameter when doing a dump and restore.
**BLOCK_555_DIGITS**

**Parameter name**
Block 555 Digits

**Functional description of parameter BLOCK_555_DIGITS**
This parameter is required in a DMS-300 switching unit and will be used to enable or disable the blocking of calls to NNX code 555.

In North America, the convention for long distance directory assistance is an NNX of 555. Customer dialed calls terminating in the host country are blocked at present if the 4th, 5th and 6th digits are 555, unless explicitly allowed in table OVNTRNSL. This blocking is invalid for other countries that do not have the same structure in their numbering plans as North America.

This parameter indicates if subscriber dialed calls terminating in the country of the switch are to be blocked if the DEF digits are 555.

**Provisioning Rules**
If this parameter is left at the default value of Y (yes), subscriber dialed calls terminating in the country of the DMS-300 are blocked if the DEF digits are 555, unless there is specific datafill in table OVNTRNSL allowing the code.

If this parameter is set to the value of N (no), no checks will be made for NNX code 555 blocking.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
If this parameter is left at the default value of Y (yes), subscriber dialed calls terminating in the country of the DMS-300 are blocked if the DEF digits are 555, unless there is specific datafill in table OVNTRNSL allowing the code.

**Consequences**
Not applicable

**Verification**
Not applicable

**Dump and restore rules**
This parameter is new in BCS21.
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

D and E Digit Blocking

**Functional description of parameter BLOCK_D_E_DIGITS**

This parameter is required in a DMS-300 switching unit and is used to enable or disable the D and E digit blocking feature.

In North America, there is a three digit numbering plan area (NPA) followed by a three digit NNX office code. A digit represented by ‘N’ is a digit in the range 2 to 9, an ‘X’ is a digit 0 to 9. The position of the digit is designated by letters ABCDEF. In the digit string 613-726-2000 the D (4th) digit is ‘7’ and the E digit is ‘2’.

The NPA always has the structure NO/1N (for example, 613, 212). In a very few numbering plan areas, local office codes with a 0/1 as the second digit are allowed. These are ambiguous and translations are determined by the number length.

A ‘D’ digit of 0 or 1 indicates an operator or test call which cannot be accessed by normal subscribers. ‘D’ digit blocking is used to prevent subscriber access to these codes.

‘E’ digit blocking is used to prevent fraud by having an NPA followed by another valid NPA and possibly an operator code. This could allow invalid access to an code that is not allowed.

Current translations prevent customer dialed calls from having a 0/1 as the 4th or 5th digits for calls terminating in the country unless the combination is explicitly allowed in table OVNTRNSL, for ambiguous codes. This blocking is invalid for other countries which do not have the same structure in their numbering plans as North America.

**Provisioning Rules**

If this parameter is left at the default value of Y (yes), subscriber dialed calls terminating in the country of the DMS-300 are blocked if the D or E digit is a 0 or 1, unless there is specific datafill in table OVNTRNSL allowing the code.

If parameter is set to the value of N (no), no checks will be made for D or E digit blocking.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**

Immediate
BLOCK_D_E_DIGITS

Dependencies
If this parameter is left at the default value of Y (yes), subscriber dialed calls
terminating in the country of the DMS-300 are blocked if the D or E digit is
a 0 or 1, unless there is specific datafill in table OVNTRNSL allowing the
code.

Consequences
Not applicable

Verification
Not applicable

Dump and restore rules
This parameter was introduced in BCS21.
Copy the existing value of this parameter when doing a dump and restore.
BRI_CLIP GENERALLY AVAILABLE

Parameter name
Basic Rate Interface Calling Line Identification Presentation Generally Available

Functional description of parameter BRI_CLIP GENERALLY AVAILABLE
This parameter specifies whether calling line identity information is available for all Basic Rate Access Functional Sets (BRAFS) or only for subscribers with lines that have the Calling Line Identification Presentation (CLIP) option in table KSETLINE assigned.

Provisioning rules
Set the value of this parameter to Y (yes) to permit the calling line identity to be presented to all BRAFS. When this parameter is set to Y, it overrides the line data. The CLIP option in table KSETLINE does not need to be specified for each line.

Set the value of this parameter to N (no) so that the called user must subscribe to the CLIP supplementary service on an individual basis in order to be presented with the calling line identity.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
**BTUP_INTL_DGT_PREFIX**

**Parameter name**
British Telephone User Part International Digit Prefix

**Functional description of parameter BTUP_INTL_DGT_PREFIX**
This parameter is used to signify international numbers over British Telephone User Part (BTUP). The specified value is added to outgoing BTUP Calling Line Identity (CLI) digits to indicate international calls. It is removed from incoming (received) BTUP CLI digits before they are passed to another signaling system.

This parameter is used in the interworkings between Integrated Services Digital Network User Part (ISUP) to BTUP and Primary Rate Interface (PRI) to BTUP. When an international call has been signified by field NADDR of the ISUP CLID HDB, the value of this parameter is added to the start of the CLI digit string after any Hex “B” characters.

In any interworkings where BTUP is the originator, the received CLI is examined. If the International Digit Prefix is present, it is removed and a representation of the prefix is stored in the CLID HDB for use by the terminating agent.

The ranges of values for this parameter are 00 to 99 and 0 to 18.

**Provisioning rules**
Specify the value to be added to outgoing BTUP CLI digits to indicate international calls.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>99 18</td>
<td>10 2</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
An error message is generated if this parameter is set to a value outside of the valid range.

**Verification**
Not applicable

**Memory requirements**
Each unit requires 3 words of memory.
Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**BTUP_NETWK_ID**

**Parameter name**
British Telephone User Part Network Identifier

**Functional description of parameter BTUP_NETWK_ID**
This parameter is required in a DMS-300 switch. It specifies the value of the Network Identifier that is included in British Telephone User Part (BTUP) Initial and Final Address Messages (IFAM) generated by the DMS.

**Provisioning rules**
Set the value of this parameter according to the network identifier required as outlined in table 1.

| Table 1
<table>
<thead>
<tr>
<th>Network Identifier Values by User</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>NI_NO_INFORMATION</td>
</tr>
<tr>
<td>NI_BRITISH_TELECOM</td>
</tr>
<tr>
<td>NI_TEL_SECUR_CELLULAR_RAD</td>
</tr>
<tr>
<td>NI_MERCURY</td>
</tr>
<tr>
<td>NI_RACAL_VODAPHONE</td>
</tr>
<tr>
<td>NI_HULL</td>
</tr>
<tr>
<td>NI_ISLE_OF_MAN</td>
</tr>
<tr>
<td>NI_JERSEY</td>
</tr>
<tr>
<td>NI_GUERNSEY</td>
</tr>
<tr>
<td>NI_EIRE</td>
</tr>
<tr>
<td>NI_VPN</td>
</tr>
<tr>
<td>NI_BES</td>
</tr>
<tr>
<td>NI_VPN_AND_BES</td>
</tr>
<tr>
<td>NI_PAN_EUROPE_RACAL_VOD</td>
</tr>
<tr>
<td>NI_PAN_EUROPE_TEL_SEC_CELL_RAD</td>
</tr>
<tr>
<td>NI_EXTENSION_IDENTIFIER</td>
</tr>
</tbody>
</table>

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>NI_NO_INFORMATION</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OFCENG–70 297-1001-455  Standard 22.02  March 1994
Activation
   Immediate

Dependencies
   Not applicable.

Consequences
   Not applicable.

Verification
   To verify that this parameter is operational, generate an enhanced BTUP
   IFAM and verify that the network indicator value is equal to the value of
   the office parameter.

Memory requirements
   This parameter requires 1 word of memory.

Dump and restore rules
   This parameter was introduced with software release BCS34.
   Copy the existing value of the parameter when doing a dump and restore.
**BTUP_PARTIAL_CLI**

**Parameter name**
British Telephone User Part Partial Calling Line Identity

**Functional description of parameter BTUP_PARTIAL_CLI**
This parameter is required for switching units with the British Telephone User Part (BTUP) call processing feature.

This parameter contains partial calling line identity (PCLI) data and consists of three fields. It is used to indicate a particular node within a given network (that is, used when a BTUP signaling call encounters another signaling system that cannot interwork a Full Calling Line Identity).

**Provisioning rules**
If other than 0 0 0, specify the PCLI required.

The fields for PCLI are defined in table 1 for a particular design of exchange.

<table>
<thead>
<tr>
<th>Field</th>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TYPE OF UNIT</td>
<td>00 - 99</td>
</tr>
<tr>
<td>2</td>
<td>REGION and AREA</td>
<td>00 - 99</td>
</tr>
<tr>
<td>3</td>
<td>UNIT IDENTITY</td>
<td>0000 - 9999</td>
</tr>
</tbody>
</table>

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0 0 0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory Requirements**
This parameter requires 1 word of memory.
Dump and restore rules

This parameter was introduced in software release BCS28.

Copy the existing value of this parameter when doing a dump and restore.
**BTUP_VER_IND**

**Parameter name**
British Telephone User Part Version Indicator

**Functional description of parameter BTUP_VER_IND**
This parameter is used for identifying the UK national telephone user part (BTUP) version (V2 or V2+) required on a nodal basis. It determines the CCITT No.7 BTUP version indicator on the Initial Address Message/Initial and Final Address Message (IAM/IFAM) when generated at originating, transit and interworking nodes.

This parameter is read-only to the operating company and can be changed only by Northern Telecom.

**Provisioning rules**
This office parameter can be set to a value of BTV2SNDE or BTV2PNDE.

The value BTV2SNDE indicates that the node is version 2.

The value BTV2PNDE indicates that the node is version 2+.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTV2SNDE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
This parameter is read-only to the operating company. The parameter value can be verified by listing the parameter at the MAP level.

**Memory requirements**
Each unit requires 3 words of memory.

**Dump and restore rules**
This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

C11_EXPANSION

Functional description of parameter C11_EXPANSION

This parameter is required for an International Switching Centre (ISC). It defines the 1 to 12 digit code (digits 0 to 9) that operator codes of type C11, are be converted to so that they are accepted nationally when received from overseas.

Provisioning Rules

Specify the 1 to 12 digit code (digits 0 to 9) that operator codes of type C11, are be converted to so that they are accepted nationally when received from overseas.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>999999999999</td>
<td>121</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump a restore.
C11_OUTG_EXPANSION

Parameter name
C11 Outgoing Expansion

Functional description of parameter C11_OUTG_EXPANSION
This parameter is required in a DMS-300 switching unit and specifies an operator code (field DIGITS) and the single digit (field C11C12) with which it is to be replaced on outgoing calls. The incoming trunk class (field INTRKCLS) of the trunk group (trunk group type GW) in table TRKGRP must be a 1 for the conversion to be done.

If only these 1 to 12 digits follow any initial country code, discrimination digit, or (optionally) city code digits, on outgoing calls, they are replaced by the single digit in the C11C12 field.

The range of the DIGIT field is 1 to 12 digits (digits 0 to 9).

The range of the C11C12 field is 1 digit in the range 0 to 9,B,C,D,E,F.

Provisioning rules
Specify an operator code (field DIGITS) and the single digit (field C11C12) with which it is to be replaced on outgoing calls.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>121 B</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The incoming trunk class (field INTRKCLS) of the trunk group (trunk group type GW) in table TRKGRP must be a 1 for the conversion to be done.

Consequences
Not applicable

Verification
Not applicable

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing dump and restore.
Parameter name

C12 Expansion

Functional description of parameter C12_EXPANSION

This parameter is required for an International Switching Centre (ISC) and defines the 1-to-12 digits (digits 0 to 9) that operator codes of type C12 are converted to so that they are accepted nationally when received from overseas.

Provisioning rules

Specify 1-to-12 digits (digits 0 to 9) that operator codes of type C12 are converted to so that they are accepted nationally when received from overseas.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>131</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
C12_OUTG_EXPANSION

Parameter name
C12 Outgoing Expansion

Functional description of parameter C12_OUTG_EXPANSION
This parameter is required in a DMS-300 switching unit. It specifies an operator code (field DIGITS) and the single digit (field C11C12) with which it is to be replaced on outgoing operator calls. If only these 1-to-12 digits follow any initial country code, discrimination digit or (optionally) city code digits on outgoing calls, they are replaced by the single digit in field C11C12.

If only this 1-to-18 digits follows any initial country code and discrimination digits on outgoing calls, they are replaced with the single digit C.

The range of the DIGIT field is 1 to 12 digits in the range 0 to 9.

The range of the C11C12 field is 1 digit in the range 0 to 9A,B,C,D,E,F.

Provisioning rules
Specify an operator code (field DIGITS) and the single digit (field C11C12) with which it is to be replaced on outgoing operator calls.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>131 B</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
C12 Plus Outgoing Expansion

Functional description of parameter C12_PLUS_OUTG_EXPANSION
This parameter is required in a DMS-300 switching unit. It specifies the
operator code that is to be converted to a C digit on outgoing international
trunks (trunk group type GW in table TRKGRP), that must be followed by
one to four digits.

Provisioning rules
This parameter can have a numeric value from 1 to 12 digits (digits 0 to 9).
Typically the value is a 2-digit number.

If the switching unit is in North America, leave this parameter value at the
default of 11.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
See the Common Customer Data Schema, 297-1001-451 for a description of
table TRKGRP.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 4 words of memory

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
CABLE_LOCATE_TIMEOUT

Parameter name
Cable Locate Timeout

Functional description of parameter CABLE_LOCATE_TIMEOUT
This parameter is required for the Dialable Line Circuit Identification feature.

Upon dialing an access code followed by a seven-digit directory number (DN) from any line circuit, the DMS-100 connects the desired tone on the tip and ring of the dialed DN. The cable locator tone remains on the line for the predetermined period of time specified by this office parameter.

Provisioning rules
Specify the length of time, in seconds, that the cable locator tone remains on the line.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>600 (10 min)</td>
<td>180 (3 min)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
CABLE_SHORT_TIMEOUT

Parameter name
Cable Short Timeout

Functional description of parameter CABLE_SHORT_TIMEOUT
In the process of diagnosing a fault on a line, it is sometimes necessary to place a short across the tip and ring leads of the line. The Dialable Short Circuit feature eliminates the need for manual intervention by providing this capability through an access code dialed by a craftsperson from either the faulty line or any other DMS-100 line.

This parameter defines the length of time, in 1-s intervals, that the short circuit is applied across the tip and ring of a selected line for the above feature.

Provisioning rules
The value of this parameter should be set at the discretion of the operating company based on the required time to locate line faults.

The default value is set at 180 seconds (3 mins).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>600</td>
<td>180</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This feature requires the pseudo common language location identifier (CLLI) DSCKT to be assigned in table CLLI.

For plain ordinary telephone service (POTS) lines and integrated business network (IBN) lines with the Direct Outward Dial (DOD) feature, the access code for this feature to be assigned in subtable STDPRT.

For IBN lines without the DOD feature, the access code for this feature is assigned in table IBNXL.A.

This parameter requires at least one horizontal agent to be assigned with selector S in table MTAHORIZ.

Consequences
Not applicable

Verification
Not applicable
CABLE_SHORT_TIMEOUT

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
CC_ENGLEVEL_WARNING_THRESHOLD

Parameter name
Call Processing Engineered Level Warning Threshold

Functional description of parameter CC_ENGLEVEL_WARNING_THRESHOLD
This parameter is associated with the CPSTATUS (call processing status) tool. It specifies the level at which the switch is engineered to run. The value is used by CPSTATUS to determine if the switching unit is running above or below its engineered level. This is also displayed, as additional information, by the CI command CPSTAT.

The CPSTATUS tool provides a measure of all central processing unit (CPU) occupancies including call processing occupancy, a measure of additional CPU time available for call processing work, an indication of overload and an indication of switch performance with respect to the switch engineering.

In BCS34, this parameter is modified for Series 50 SuperNode applications by creating a linear representation of call processing capacity. The call processing occupancy (CPOCC) used in other DMS cores is replaced by a call capacity percentage (CAPACITY) that represents the current call processing throughput relative to a projected safe maximum. The default value for this application has been changed to 100. This value has been chosen because 100% CAPACITY represents the safe engineering level for all markets.

Provisioning rules
The value of this parameter must be the percentage of CPOCC for which the switching unit is engineered.

The default value is 77 (77%). Plain old telephone service (POTS) switching units are engineered at this value.

Set the value of this parameter to a value of 100 for a Series 50 SuperNode switch.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100 (Series 50</td>
<td>100 (Series 50</td>
</tr>
<tr>
<td></td>
<td>SuperNode)</td>
<td>SuperNode)</td>
</tr>
<tr>
<td></td>
<td>83 (all other</td>
<td>77 (all other</td>
</tr>
<tr>
<td></td>
<td>cores)</td>
<td>cores)</td>
</tr>
</tbody>
</table>

Activation
Immediate
**CC_ENGLEVEL_WARNING_THRESHOLD**

**Dependencies**

The parameters CPSTATUS_ON in table OFCVAR and CPSTATUS_SWITCHABLE in table OFCENG are also associated with this feature.

**Consequences**

Overprovisioning or underprovisioning this value is not performance affecting. The CPSTAT and CPSTATUS displays will read ABOVE or BELOW depending on the value of this parameter and the CPOCC for the last minute.

The following message appears if an attempt is made to change the value of the parameter outside its range of 0 to 83 in a switch other than a Series 50 SuperNode switch:

\*ERROR\* : VALUE OUTSIDE VALID RANGE (0 TO 83)

**Verification**

The value of this parameter can be verified using the CPSTAT command.

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.

Offices that upgrade to BRISC CPU must change the value of the parameter CC_ENGLEVEL_WARNING_THRESHOLD in table OFCENG to 100.

**Parameter history**

BCS36 added dump and restore information for upgrades to BRISC CPU.
Parameter name
Central Control Routine Exercise Scheduled Hour

Functional description of parameter CC_REX_SCHEDULED_HR
This parameter specifies the hour during which the Central Control (CC) REXTEST is started.

The actual time within the hour that the test starts is independently determined by the software.

The CC REXTEST drops sync and executes diagnostics on the inactive side. An image test is also performed on the inactive side.

Note that this test can take up to an hour on average. It can take up to 5 hours to complete if there are multiple store card faults. This time is for the software to fix the problems and finish the test. The test should be run during the five lowest traffic hours on the switch. In most cases this period starts at midnight.

Provisioning rules
The recommended value for this parameter is 0.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
It is recommended that the scheduling for office parameters CC_REX_SCHEDULED_HR and CMC_REX_SCHEDULED_HR be staggered. The recommended value for CC_REX_SCHEDULED_HR is 0 and the recommended value for CMC_REX_SCHEDULED_HR is 1.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 1 word of memory.
CC_REX_SCHEDULED_HR

Dump and restore rules

This parameter was introduced in BCS17.

Copy the existing value of this parameter when doing a dump and restore.
CCMTR_FAILURE_FREE_CALL

Parameter name
Central Control Metering Failure Free Call

Functional description of parameter CCMTR_FAILURE_FREE_CALL
This parameter is required in a local switching unit with universal translations. It specifies whether new calls are allowed to go through free of charge or route to treatment when no Central Control (CC) metering resources are available.

Provisioning rules
If the value of this parameter is left at the default value of N (no), new calls will be routed to treatment if there are no CC metering resources.

If the value of this parameter is set to Y (yes), new calls will be allowed to go through free of charge. Note that calls already up will be unaffected. They will not be taken down.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
See parameter NUM_CCMTR_EXT_BLKS in table OFCENG for the assignment of CC metering extension blocks.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS22.

Copy the existing value of this parameter when doing a dump and restore.
**CDC_RESTRICTION_ACTIVE**

**Parameter name**
Customer Data Change Restriction Active

**Functional description of parameter CDC_RESTRICTION_ACTIVE**
This parameter is associated with the Customer Data Change (CDC) Service Order (SERVORD) enhancements feature.

It controls a CDC user's ability to do the following:
- use the NEW and OUT command for Primary Directory Numbers (PDNs);
- add or delete the MDN feature to PDNs
- add, delete, or establish MLH, DLH, DNH, or MPH hunt groups on PDNs
- to use the SWAP with intercept option.

**Provisioning rules**
Set the value of this parameter to Y (yes) to restrict access to SERVORD commands for PDNs for CDC users.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Table CDCLOGON indicates which parameters of these commands are CDC user changeable.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Call Diversion Extension Blocks

Functional description of parameter CDIV_EXT_BLOCKS
This parameter is required in a local switching unit (international) with universal translations and the international Call Diversion Operator (CDO) feature. It specifies the number of call diversion extension blocks required.

This parameter is a part of the Absent Subscriber Intercept (ASI) feature that allows for call diversion to an ASI operator while the subscriber is away.

Provisioning rules
One call diversion block is required for each active call diversion in the switching unit.

The parameter should be equal to the maximum number of active call diversions at any one point in time.

If this feature is not required, set the value to 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
Each subscriber with the CDO feature must be assigned the option CDO in table LENFEAT.

Consequences
If no extension blocks are available, a call diversion fails.

Verification
To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 37 and read the following entry:

```
37 DIV_EXTENSION
  2
  0  0  0  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.
CDIV_EXT_BLOCKS

Measurement EXTH1 AND EXTHI2 records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual 297-1001-814 for a description of OM group EXT.

Memory requirements
Each unit requires 14 of words of memory.

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Call Detail Recording 100 Byte Format

Functional description of parameter CDR_100_BYTE_FORMAT
This parameter allows the reduction of the UK standard Call Detail Record (CDR) from a size of 180 bytes to 100 bytes in a DMS-100 or DMS-250 switch.

Provisioning rules
Set the value of this parameter to Y (yes) to produce the new 100-byte CDR.

Leave the value of this parameter at the default of N (no) to produce the existing 180-byte CDR.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Warm restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter is new with software release BCS31.

Copy the existing value of this parameter when doing a dump and restore.
CDR_FORMAT

Parameter name
Call Deatail Recording Format

Functional description of parameter CDR_FORMAT
This parameter specifies the Call Detail Recording (CDR) format for DMS-100 as either CDR_180_FORMAT (180 bytes), CDR_100_FORMAT (100 bytes) or CDR_46_FORMAT (46 bytes).

Provisioning rules
When an office installs a BCS34 (or later) load from a BCS33 (or earlier) load, this parameter is initialized based on the value of office parameter CDR_100_BYTE_FORMAT in table OFCENG. If CDR_100_BYTE_FORMAT is set to a value of Y (yes), CDR_FORMAT remains set to CDR_100_FORMAT. Otherwise, it is set to CDR_180_FORMAT.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CDR_100_FORMAT</td>
</tr>
</tbody>
</table>

Activation
Activation occurs on a Billing file rotate for CDRs (dirp Subsystem OCC) or on a warm restart.

Dependencies
Field DATADUMP in table CRSFMT must be set to a value of Y (yes) prior to setting this parameter to a value of CDR_46_FORMAT.

Consequences
Not applicable.

Verification
To verify that this parameter is functioning, perform the following procedure:
1. Set this parameter to a value of CDR_180_FORMAT.
2. Perform a billing file rotate.
3. Check to see that the CDRs are in 180 byte format.
4. Change the office parameter value to CDR_100_FORMAT.
5. Perform a billing file rotate.
6. Check to see that the CDRs are in 100 byte format.
7. Set this parameter to a value of CDR_46_FORMAT.
8. Perform a billing file rotate.
9. Check to see that the CDRs are in 46 byte format.
Memory requirements
Each unit requires one word of memory.

Dump and restore rules
Check the value of CDR_100_BYTE_FORMAT on the BCSN side. If the value is Y, CDR_FORMAT is set to CDR_100_FORMAT. Otherwise, the current CDR format was the 180 byte CDR. Set CDR_FORMAT to CDR_180_FORMAT.

This parameter was introduced with software release BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**CFD_EXT_BLOCKS**

**Parameter name**
Call Forward Extension Blocks

**Functional description of parameter CFD_EXT_BLOCKS**
This parameter specifies the number of Call Forwarding Busy and Don’t Answer extension blocks required for Meridian Digital Centrex (MDC) and Residential Enhanced Services (RES) stations.

These are in addition to the extension blocks specified under parameter CFW_EXT_BLOCKS in table OFCENG.

**Provisioning rules**
The value of this parameter is determined by the following formula:

Value = NS X 0.7

where: NS = total number of stations with one or more types of MDC or RES Call Forwarding

Include all types of MDC and RES Call Forwarding, not just stations with Call Forwarding Busy and Don’t Answer.

If this feature is not required, leave the value at the default of 1000.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Activation**
Increase – immediate
Decrease – cold restart

**Dependencies**
Not applicable

**Consequences**
If an insufficient quantity of blocks is specified, MDC and RES Call Forwarding may cease to function.

**Verification**
To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE and read the following entry:

```
EXTSEIZ2   EXTOVFL   EXTHI   EXTSEIZ2
EXTHI2 19  CFD_EXTENSION
1000 0 0 0 0
```

**OFCENG-94** 297-1001-455 Standard 22.02 March 1994
CFD_EXT_BLOCKS

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual 297-1001-814 for a description of OM group EXT.

Memory requirements

Each unit requires 22 words of memory.

Dump and restore rules

This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**CFW_EXT_BLOCKS**

**Parameter name**
Call Forwarding Extension Blocks

**Functional description of parameter CFW_EXT_BLOCKS**
This parameter is required for all switching units that have the Call Forwarding (CFW) feature.

A call forwarding extension block is required on an active call when any variation of call forwarding (POTS, Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES)) is involved in the call.

**Provisioning rules**
For switching units without software package NTX806, use the following formula to calculate the value of this parameter:

\[
\text{Value} = 0.05 \times (\# \text{ of POTS lines with CFW excluding Remote Call Forwarding (RCF) lines}) \\
+ 0.01 \times ((\# \text{ of IBN lines with CFW excluding RCF}) \\
+ (\# \text{ of RES lines with CFW excluding RCF})) \\
+ (\# \text{ of lines equipped with RCF})
\]

If the switching unit has software package NTX806 use the following formula to calculate the value of this parameter:

\[
\text{Value} = 0.05 \times ((\# \text{ of POTS lines with CFW excluding RCF}) \\
+ (\# \text{ of POTS lines with Call Forward Busy}) + \\
+ (\# \text{ of POTS lines with Call Forward Don’t Answer}) \\
+ (\# \text{ of hunt groups with CFGDA}) \\
+ 0.1 \times ((\# \text{ of IBN lines with CFW excluding RCF}) \\
+ (\# \text{ of RES lines with CFW excluding RCF}) \\
+ (\text{the maximum } \# \text{ of simultaneous calls that can be forwarded from all lines with the Multiple Simultaneous Call Forwarding Feature}) \\
+ (\# \text{ of lines equipped with RCF})
\]

The maximum number of simultaneous calls term must reflect the maximum expected usage of Multiple Simultaneous Call Forwarding required for the engineering interval on lines with that feature. This is determined by the operating company.

The number of MDC + RES CFW, RCF, POTS CFW, CFBL and CFDA must be the maximum quantity required for the engineering interval.

The number of simultaneous calls that can be forwarded is defined in field NUMCALLS of table CFW, but the quantity in the formula should be the maximum required for the engineering interval.
Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate  
Decrease – cold restart

Dependencies

The value of this parameter must increase if the number of MDC, RES, RCF or POTS lines with any variation of call forwarding is to be increased for the engineering period, or for the addition of software package NTX806.

Consequences

Insufficient blocks will cause a line with the CFW feature to be routed to No Software Resource treatment (NOSR) in the Line Treatment table when attempting to activate CFW and no extension blocks are available.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE and read the following entry:

```
EXTSEIZ2  EXTSEIZ1  EXTOVFL  EXTHI  EXTHI2  EXTSEIZ2
 9  CFW_EXTENSION
15
   0       0       0       0

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual 297-1001-814 for a description of OM group EXT.

In a switching unit with the Integrated Business Network (IBN) feature the operational measurement group GROUP CALLFWD is provided for this feature.

In a switching unit with the POTS feature the OM group GROUP CFWPOTS is provided for this feature.

Memory requirements

14 words of memory are required for each call forwarding extension block.
Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Call Forwarding Separate Keylist Feature

Functional description of parameter CFX_SEPARATE_KEYLIST_FEATURE
This parameter is required for a Meridian Digital Centrex (MDC) switching unit and specifies whether the Call Forwarding Separate Keylist feature is active.

The Call Forwarding Separate Keylist feature allows separate keylists in table KSETFEAT for Call Forwarding Universal (CFU), Call Forwarding Intragroup (CFI), Call Forwarding Fixed (CFF), Call Forwarding Busy (CFB), and Call Forwarding Don’t Answer (CFD).

For example, if the Electronic Business Set (EBS) has four directory number (DN) keys the following assignments are possible:
- CFB DEFAULT could be assigned to DN keys 1, 2 and 4.
- CFD FIXED could be assigned to DN keys 1 and 4.
- CFU could be assigned to DN key 2.

In the above example
- DN 1 has CFB DEFAULT and CFD FIXED.
- DN 2 has CFB DEFAULT and CFU.
- DN 3 has no call forwarding.
- DN 4 has CFB DEFAULT and CFD FIXED.

Provisioning rules
Set the value of this parameter to Y (yes) to activate the Call Forwarding Separate Keylist feature.

Leave the value of this parameter at the default of N (no) if the Call Forwarding Separate Keylist feature is not required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
It is strongly recommended that this parameter not be changed to N once it has been set to Y. This could result in some false representation of CFX tuples in table KSETFEAT.
CFX_SEPARATOR_KEYLIST_FEATURE

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS27.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Call Forwarding Extension Blocks

Functional description of parameter CFZ_EXT_BLOCKS
This parameter is required for a switching unit that has the plain ordinary telephone service (POTS) Call Forwarding feature package NTX806. It specifies the maximum number of call forwarding extension (CFZ) blocks required for the engineering period.

One extension block (CFZ) is used to extend the call condense block (CCB) of every call that terminates on a station with any form of POTS Call Forwarding active such as Call Forward (CFW), Call Forwarding Busy (CFBL) or Call Forwarding Don’t Answer (CFDA), and then attempts to forward. If the forward is unsuccessful the block is released. Calls successfully forwarded release the block upon exit.

Provisioning rules
If the switching unit has software package NTX806 use the following formula to calculate the value of this parameter:

Value = (12% of the number of POTS CFW lines X the simultaneous calls that can be forwarded) + (number of POTS CFBL lines X the simultaneous calls that can be forwarded) + (number of POTS CFDA lines X the simultaneous calls that can be forwarded)

The number of POTS CFW, CFBL and CFDA lines must be the maximum quantity required for the engineering interval.

The number of simultaneous calls that can be forwarded is defined in field NUMCALLS of table CFW, but the quantity in the formula should be the maximum required for the engineering interval.

CFDA calls do not receive any treatment, the ringing station continues to ring.

For a switch without software package NTX806, set the value of this parameter to 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart
CFZ_EXT_BLOCKS

Dependencies
The value of this parameter must increase if the number of POTS lines with any variation of call forwarding is to be increased for the engineering period.

Changing the value of this parameter affects the value of the following parameters:
- CFW_EXT_BLKS in table OFCENG
- NUMCPWAKES in table OFCENG

Consequences
Insufficient blocks cause calls terminating on POTS lines with feature CFW, CFBL or CFDA not to be forwarded.

For an overflow on CFW or CFBL calls No Software Resource (NOSR) treatment is given to the originator. If the call originates from a line, a LINE138 log is generated. A TRK138 log is generated if the originator is a trunk.

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 49 and read the following entry:

```
  EXTSEIZ  EXTSEIZ2
 EXTVOFL  EXTHI  EXTHI2
  49 CFZ_EXTENSION
    15
   0    0    0    0
```

Any nonzero value in EXTVOFL indicates underprovisioning

Measurement EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual 297-1001-814 for a description of operational measurements (OM) group EXT.

See OM group CFPOTS for the OMs associated with this feature.

Memory requirements
Each call forwarding extension (CFZ) block requires 18 words of memory.

Dump and restore rules
This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Charge Update Frequency

Functional description of parameter CHARGE_UPDATE_FREQUENCY

This parameter makes the timing of the Charge Update Process (CUP) and the Table History Queue Clean-up datafillable.

The Charge Update Process looks at all the active calls, and updates the meter charges for every active metered call that has been active for more than two hours. These calls are said to be CUPped, and become CC metered calls. These calls are also called long duration calls. The CUP also does the appropriate calculations to determine the time of its next execution.

Table History Queues contain the history of each tariff change for each metering network. An entry is added to these queues whenever a change of tariffs occurs. (that is, a metering changeover, change of datafill in the metering table, a SETTIME). These queues must be cleaned regularly to ensure that they not not overflow.

The parameter contains the frequency for which the CUP and THQ clean up are to be executed. The start time is used as a base time to calculate the running times.

Prior to BCS30, the CUP and the THQ Cleanup were always executed at 0315 every day. This parameter allows some flexibility, to allow the time and frequency of execution to be datafillable. This office parameter is also used to determine if the MTR143 log is generated when the CUP encounters a long duration call.

Provisioning rules

Specify the parameter values as outlined in table 1:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Datafill for CHARGE_UPDATE_FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>Datafill</td>
</tr>
</tbody>
</table>
| Start time (HH MM) | HH is from 0 to 23  
                       MM is from 0 to 59 |
| Frequency | value is from 2 HRS to 24 HRS     |
| Generate_log | Y or N                             |

Examples:

If this parameter is set to a value of 200 12 HRS Y, the start time is 02:00, the frequency is 12 HRS and the execution times are 02:00 and 14:00. MTR143 logs are generated.
If this parameter is set to a value of 3:30 7 HRS N, the start time is 03:30, the frequency is 7 HRS, and the execution times are 03:30, 10:30, 17:30, and 00:30. MTR143 logs are not generated.

*Note:* The pattern wraps to the next day, and is restarted at the start time. This means that for the above values, the CUP executes at 00:30, 03:30, 10:30 and 17:30 every day.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 2 HRS</td>
<td>23 59 24 HRS</td>
<td>03 15 24 HRS N</td>
</tr>
</tbody>
</table>

**Activation**

Changing this office parameter does not change the timing of the CUP immediately. It takes effect on either of the following actions:

- the next restart
- the next execution of the CUP

When the CUP runs, the time of the next execution is calculated using the current values of this parameter.

The log is generated immediately on the next execution of the CUP.

**Dependencies**

Not applicable

**Consequences**

The frequency should be low enough to ensure that the THQs do not overflow. 24, the maximum allowed frequency, has proven to be a value that does not make the THQs overflow.

Care must be taken in choosing the execution times of the CUP and THQ cleanup. It is preferred to not execute these two at a busy switch time. The CUP process searches through every active call for those which have been active longer than two hours. At busy times, there are more active calls, which means that the CUP would take longer to run.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
CIRCUIT_QUERY_AUDIT_START_TIME

Parameter name
Circuit Query Audit Start Time

Functional description of parameter CIRCUIT_QUERY_AUDIT_START_TIME
This parameter is required in a switching unit with the Common Channel Signaling 7 (CCS7) and the Trunk Test Position (TTP) enhancements for trunks that use CCS7 signaling (ISUP).

As part of this feature, an audit is included to be performed once daily. It will run the trunk query procedure on all ISUP trunks to correct any state mismatches if the far end office can accept it. See Table ADJNODE.

This parameter specifies the time when the circuit query audit runs. The time specified should be during off-peak hours because it can generate many CCS7 messages.

Provisioning rules
Specify the time for the circuit query audit runs. It can have a value of hours (0 to 23) and minutes (00 to 59). The default value is 200 (2 a.m).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>

Activation
The value changes once the audit has run once using the old value.

Dependencies
See Field REMCQSUP in table ADJNODE for additional information about Circuit Query Messages. If the value of REMCQSUP is set to Y, circuit query messages can be sent to the far end office.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS22.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Calling Line Identification National Prefix

Functional description of parameter CLI_NATIONAL_PREFIX

This parameter allows the insertion of a variable number, preceding the calling line identification (CLI) received from the international network which has to be presented to the national network. The variable number represents those digits normally dialed by the receiver of this CLI, in order to gain access to the international gateway (excluding the trunk access digit/s), when making an international call.

Provisioning rules

This parameter has two fields. The first field has a value of Y (Yes) or a N (No). The second field is a number that can carry a maximum of four digits. The valid range for a digit is a number from 0 to 15 to allow the use of hexadecimal numbers. This field carries the actual prefix digits that will be prefixed to the CLI that is received from the international network for presentation to the national network.

If this parameter's first field is set to N, the only value that can be datafilled for the second field is $ (dollar sign) to mean that the second field is null. If the parameter is activated then it is necessary to datafill the second field with a valid value other than $ (dollar sign).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N $</td>
<td>Y FFFF</td>
<td>N $</td>
</tr>
</tbody>
</table>

*Note:* This default is chosen to insure that no digits are appended to the CLI unless the parameter has been specifically datafilled at the MAP to indicate its use. This avoids picking up unintended prefix digits in the parameter.

Activation

Immediate

Dependencies

Not applicable
CLI_NATIONAL_PREFIX

Consequences

The following error or warning messages is indicated in the event of an incorrect setting of this parameter:

CLI_NATIONAL_PREFIX NOT ACTIVATED :

This message indicates that the value of prefix digits cannot be datafilled to a value other than $ (dollar sign – meaning no digits present) if the parameter is to be deactivated (First field of parameter set to N).

CLI_NATIONAL_PREFIX VALUE ILLEGAL – 0 LENGTH :

This message indicates that the parameter must be supplied with prefix digits if it is activated (First field set to Y). In other words the value Y $ (dollar sign) is illegal.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Central Message Controller Routine Exercise Scheduled Hour

Functional description of parameter CMC_REX_SCHEDULED_HR
This parameter specifies the hour during which the Central Message Controller (CMC) PERIODIC tests are started.

The actual time within the hour that the test is started is independently determined by the software.

Provisioning rules
The recommended value for this parameter is 1.

This parameter runs the CMC periodic tests that check the two CMCs by busying one and testing it and then doing the same to the other.

Do not schedule this test during a high traffic period.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
It is recommended that the office parameters CMC_REX_SCHEDULED_HR and CC_REX_SCHEDULED_HR be staggered. Therefore, the recommended value for CMC_REX_SCHEDULED_HR is 1 and the recommended value for CC_REX_SCHEDULED_HR is 0.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS17.

Copy the existing value of this parameter when doing a dump and restore.
COINDISPOSAL

Parameter name
Coin Disposal

Functional description of parameter COINDISPOSAL
This parameter is required for local and combined local/toll switching units.

The value of this parameter determines what should be done with any coins that are left in the coin chute at the termination of a line to operator call.

Provisioning rules
The value of this parameter can be set to one of the following values as outlined in table 1.

<table>
<thead>
<tr>
<th>Value</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLIND_COLLECT</td>
<td>always collect coins</td>
</tr>
<tr>
<td>BLIND_RETURN</td>
<td>always return coins</td>
</tr>
<tr>
<td>IGNORE_COIN</td>
<td>take no special action</td>
</tr>
</tbody>
</table>

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IGNORE_COIN</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Command Screening

Functional description of parameter COMMAND_SCREEN

This option specifies whether the command screening feature can be used at the Line Test Position (LTP).

With the introduction of data lines, a method of screening operators from performing operations on certain types of terminals is required.

This means that a person only authorized to perform tests on data lines is not able to perform tests on voice lines (POTS and IBN Business Sets).

Command screening is accomplished through the use of two special commands; VOICE_SCREEN and DATA_SCREEN. The operating company sets the PRIVCLAS of these commands as desired and permits users to have the command class of the type of lines for which they are authorized.

For example, if the operating company sets the PRIVCLAS of DATA_SCREEN to be 7, and the PRIVCLAS of VOICE_SCREEN to be 8, a user who has the command class of 7, but not 8 is allowed access only to data lines. If the user tried to busy, diagnose, or LCO a voice line, it would not be permitted.

Users are only screened from commands that affect the state of the line (for example, BUSY, LCO, and so on). They are still able to POST, CKTLOC, ALMSTAT, and so on.

Provisioning rules

Set the value of this parameter to Y (yes) if command screening is required.

Leave the value of this parameter at the default value of N (no) if command screening is not required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation

Cold restart

Dependencies

Not applicable

Consequences

Not applicable

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up  OFCENG–111
COMMAND_SCREEN

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Cutoff on Permanent Signal and Partial Time Relay Open Time

**Functional description of parameter COPP_RELAY_OPEN_TIME**
This parameter is required to specify the time required before Cutoff on Permanent Signal and Partial Time (COPP).

**Provisioning rules**
Specify the time, in 10-ms intervals, required before Cutoff on Permanent Signal and Partial Time (COPP).

**Range information**

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50 (500 ms)</td>
<td>1000 (10 s)</td>
<td>80</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
This parameter is associated with the routing list element, COPP, which governs the duration of the open battery signal that will be applied to subscriber line equipment that enters permanent signal or partial dial conditions, given that the PDIL and PSIG treatments have been datafilled accordingly.

The open battery signal is intended to inform subscriber line equipment suitably equipped that the line has entered a permanent signal or partial dial state.

A new routing list element, COPP, which the operating company can introduce into the routing list associated with the line treatments PSIG and PDIL provide the operating company with the ability to supply, on every standard line in a DMS-100F office, an open battery signal as the first operation in processing permanent signal and partial dial subscriber line conditions.

This routing list element has no impact on IBN Business Sets, Data Units or display phones.
Tables 1 and 2 illustrate one possible datafill for the PSIG and PDIL treatments. If the datafill corresponds to this example an open battery signal would be applied as the first operation in processing permanent signal and partial dial subscriber line conditions.

Table 1
<table>
<thead>
<tr>
<th>Treatment</th>
<th>Log</th>
<th>FSRTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSIG</td>
<td>N</td>
<td>T OFRT 51</td>
</tr>
<tr>
<td>PDIL</td>
<td>N</td>
<td>T OFRT 51</td>
</tr>
</tbody>
</table>

Table 2
<table>
<thead>
<tr>
<th>Route</th>
<th>RTELIST</th>
<th>Contmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>S D COPP</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>S D PSPD</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>S D ROH</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>S D OFLO</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>S D LKOUT</td>
<td>$</td>
</tr>
</tbody>
</table>

It is important to note that the routing element COPP must not be used in any other line treatments and when used for the PSIG and PDIL line treatments must only appear as the first element in the routing list corresponding to those treatments. Also, when COPP is used in the routing list corresponding to the PSIG and PDIL line treatments it must be followed by the LKOUT routing list element somewhere in the routing list.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Customer Originated Trace Announcement Type

Functional description of parameter COT_ANNOUNCEMENT_TYPE
This parameter specifies the type of Customer Originated Trace (COT) announcements that are utilized in an operating office. The possible values are CUSTOM and STANDARD.

Provisioning rules
The value chosen will depend on whether the office is equipped with the appropriate cards for standard and custom announcements. The customized announcements require a Digital Recorded Announcement Machine (DRAM) with a 1X75BA controller card and a 1X76AJ programmable read only memory (PROM) card (for English). If French announcements are required, a 1X76BJ card is needed.

Set the value of this parameter to CUSTOM to allow access to existing PROM recordings through datafill in table DRMUSERs.

Set the value of this parameter to STANDARD to allow the random access memory (RAM) recordings and separate announcements in table DRAMTRK to be used.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STANDARD</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter must be set before datafilling table RESOFC. In order to datafill the standard COT announcements, the following tables must be datafilled in order:

- CLLI
- ANNS
- ANNHEMS
- DRAMS
- DRAMTRK
- RESOFC

In order to datafill the custom COT announcements, the following tables must be datafilled in order:

- CLLI
- ANNS
COT_ANNOUNCEMENT_TYPE

- ANNMEMS
- DRMUSERS
- RESOFC

Consequences
Not applicable.

Verification
Not applicable

Memory requirements
This parameter value requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS33.

Copy the existing value of the parameter when doing a dump and restore.
Parameter name
Call Processing Error Threshold

Functional description of parameter CPERRORTRESHOLD

This parameter specifies the maximum number of call processing errors (specifically call suicides and traps) allowed in a one minute period for a call processing terminal (for example lines and trunks) before system action is initiated.

Once a terminal exceeds this maximum, it is removed from service to be diagnosed by system maintenance. If the diagnostic does not identify a problem, the terminal is returned to service.

If the terminal continues to cause call processing errors, it is removed from service again and manual action is required to recover.

A terminal is removed from service if any of the error frequency conditions outlined in table 1 are met, where X is the value of this parameter:

<table>
<thead>
<tr>
<th>Error count</th>
<th>Time (consecutive minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>1.5X</td>
<td>2</td>
</tr>
<tr>
<td>2.0X</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note: When calculating a value for error count, all results are rounded down to the next integer.*

Provisioning rules

Specify the number of call processing errors per terminal that can occur in a 1 minute period.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable
CPERRORTHRESHOLD

Consequences
The effect of call processing errors on system real time performance is more significant before action is initiated, the higher the value of this parameter is set.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Central Processor and Memory Extended

Functional description of parameter CPM_EXTENDED
This parameter is used to indicate that the memory capacity of a CPM shelf (peripheral equipment code (PEC) NT3X41DA) with an NT3X94 controller has been extended with NT4X80AA or NT3X93zz memory cards.

The value of this parameter can be NOT_EXTENDED, EXTENDED_4X80AA, or EXTENDED_3X93zz.

Provisioning Rules
Set the value of this parameter to EXTENDED_4X80AA if the memory capacity of the CPM shelf with PEC NT3X41DA and the NT3X94 controller has been extended with NT4X80AA memory cards.

Set the value of this parameter to EXTENDED_3X93zz if the memory capacity of the CPM shelf with PEC NT3X41DA and NT3X94 controller has been extended with NT3X93zz memory cards.

Set the value of this parameter to NOT_EXTENDED if the switching unit does not have the CPM shelf extension feature.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NOT_EXTENDED</td>
</tr>
</tbody>
</table>

Activation
The value of this parameter can only be changed by Northern Telecom.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
CPM_EXTENDED

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

At extension time, change the value of this parameter to
EXTENDED_4X80AA or EXTENDED_3X99ZZ, if modifying the
switching unit with the CPM shelf extension feature.
Parameter name
Call Recording Stream Primary Recording Unit Pool1 Size

Functional description of parameter CRS_PRU_POOL1_SIZE
This parameter controls the provisioning for the CRS_PRU_POOL1 extension block pool in OM group EXT.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform. If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 1. This value is too small for larger offices.

Provisioning rules
Each application that requires an extension block from the pool controlled by this parameter is described on the following pages as well as the conditions that determine the application’s usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst-case maximum value. The “engineered percentages” that are required for most of the recommended calculations should aid in determining a reasonable number for a particular application.

If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is better to use the recommended calculation than the maximum calculation even if certain percentages are not exactly known. The maximum value is provided for those operating companies that are unable to provide the information required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter can occur. In some cases, the maximum value is not appropriate and is not provided.

In some cases, a value of 5% is multiplied into the provisioning formulas. This takes into account the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the Automatic Message Accounting (AMA) record is released for formatting.

If the conditions for a particular application are met, the application’s usage must be determined based on the formula. The sum of these formulas determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the formulas, use the default value. Never provision this parameter at a value less than the default of 1.
ISDN Service Order AMA

The Austrian ISDN base package utilizes this recording unit pool to provide billing data for administrative actions on ISDN lines. An AMA record is generated to hold ISDN-specific data that is entered by the operating company personnel by means of Service Order transactions. A unit from this pool is required for the D4 record with the heading ISDN Service Order AMA Record. If no AMA record can be generated due to a lack of recording units, the operator is warned and prompted whether to stop or continue the transaction.

Conditions:

If the Austrian ISDN base package is present, then

Recommended:

(number of MAP interfaces)
X (percentage of SO transactions that are ISDN)
X (percentage of ISDN SO transactions that require a record)

Maximum:

(number of MAP interfaces)

DataSPAN Frame Relay Service (FRS)

DataSPAN FRS applies only to DMS-250 switches that are InterExchange Carriers. It is a connection-oriented "packet" data service in which an FRS subscriber is connected to a frame relay switch through an access channel on which multiple logical link connections to other subscribers may exist. FRS permits subscribers to communicate on one or more logical links simultaneously. FRS subscribers are billed on a usage basis. Counts of the actual data going through the Frame Relay Interface Unit (FRIU) are tabulated. The counts are then collected by the FRS Billing Controller and stored in FRS billing internal storage. During the aggregation phase, the counts are retrieved and table lookups are performed to obtain billing information required for the billing record. The billing record is separated into two parts: a base recording unit and a customer-specific subrecording unit. Both of these make up the frame relay Call Detail Record (CDR).

An extension block is required from this pool for the base recording unit and is claimed during the aggregation phase described above. One recording unit is required from this pool for each Permanent Logical Link Connection (PLL). The number of PLLCs is equal to the number of tuples datafilled in subfield CONNECT of table PVDNCUST plus the number of trunk-to-trunk connections datafilled in table FRSTRKCN.
Conditions:

If package NTXQ34AA (Frame Relay Billing Base Package) is present, then

Recommended:

(number of PLLCs)

Maximum:

A maximum calculation is not applicable in this case.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4294967295</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Dependencies

The CRS_PRU_POOL1 extension block is controlled by this parameter.

Consequences

Since this parameter controls a PRU pool, failure to claim a block in this pool results in the inability to do any call recording for the active call.

Verification

This parameter controls the extension block with an external identifier name of CRS_PRU_POOL1, and an index of 100 for Operational Measurement (OM) group EXT. See the Operational Measurements Reference Manual 297-1001-814 for a description of OM group EXT.

Memory requirements

Each extension block requires 35 words of memory.

Dump and restore rules

This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
CRS_PRU_POOL2_SIZE

Parameter name
Call Recording Stream Primary Recording Unit Pool2 Size

Functional description of parameter CRS_PRU_POOL2_SIZE
This parameter controls the provisioning for the CRS_PRU_POOL2 extension block pool.

This parameter is currently defined only for offices that contain a recording subsystem that uses the call recording stream platform. If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

Provisioning rules
This office parameter currently applies only to Bellcore Automatic Message Accounting (AMA) offices. In table CRSFMT, the tuple with key field AMA must be datafilled with a FORMAT of BCFMT.

The base AMA packages are NTX098AA (Bellcore CAMA Format) and NTX159AA (Bellcore LAMA Format). Package NTX098 provides centralized AMA recording in a DMS switch and supports BellCore CAMA format. Package NTX159 provides AMA recording in a local DMS switch and supports the Bellcore LAMA format. For both the CAMA and LAMA billing, a list of call agents that are classified as such are provided below.

CAMA office
Calls with the following characteristics are classified as CAMA calls:
• CAMA or SuperCAMA (SC) trunks
• incoming access tandem trunks
• TOPS/CAMATOPS trunks
• cellular mobile carrier
• Enhanced 800 Service (E800)
• 800 Plus Service (800+)
• E008
• Private Virtual Network (PVN) (trunk originated)
• Advanced Intelligent network (AIN) (trunk originated)
• Trunk Group Member Usage (TGMU) trunks

LAMA office
Calls with the following characteristics are classified as LAMA calls:
• incoming access tandem trunks
• PX/P2 trunks
• Meridian Digital Centrex (MDC) trunk originations
- MDC trunk terminations
- POTS line originations
- MDC line originations
- Residential Enhanced Services (RES) line originations
- Direct Inward System Access (DISA) organizations
- attendant console originations
- Virtual Facility Group (VFG) originations
- PVN line originations
- AIN line originations
- POTS line terminations
- MDC line terminations
- RES line terminations
- VFG terminations
- generic call codes 800 through 999
- operating company selected service-feature-codes (table AMAPRT)
- MDRAAO
- ONA/ESP
- Wide Area Telephone Service (WATS)
- Screening List Editing (SLE) feature screening list access
- custom local area signaling service (CLASS) subscriber usage-sensitive pricing (SUSP)

**BellCore billing methods**

The number and variety of Bellcore format billing methods are too numerous to list. Most of the billing methods can be classified into one of the following categories:
- translations indicators
- line and trunk options
- database query determinations
- inherent billing applications (for example, TOPS)

Reference the following NTP documents for details of all possible billing methods:
- 297-1001-012 - *Bellcore Format AMA Product Guide*
- 297-1001-182 - *Bellcore Format AMA Planning and Engineering Guide*
- 297-1001-341 - *Bellcore Format AMA Administration Guide*
- 297-1001-365 - *Bellcore Format AMA Translations Guide*
- 297-1001-830 - *Bellcore Format AMA Reference Guide*
- 297-1001-830B - *Bellcore Format AMA Bulletin*
Accurate provisioning of this pool requires a knowledge of all billing opportunities that a switch is using and the expected frequency of billing usage.

**Recording unit usage**

Bellcore format AMA uses an instance of a primary recording unit (PRU) in three manners: long term, short term, and fast-write. One of these manners of usage is required for each Bellcore AMA record that is produced.

A long-term PRU is taken from this pool and attached to a call for the entire call duration to hold the billing information. With respect to provisioning, this is the most costly usage because a PRU from this pool is only able to serve one call for a relatively long period of time.

For CAMA, the following list contains the applications that require long-term PRU usage:

- Cellular Mobile Carrier (CMC) calls
- Number Services Code (NSC) calls requiring a database query
- calls using a generic call code from AMA pretranslations
- calls using a generic service feature from AMA pretranslations
- calls requiring ISDN Circuit-mode billing
- TGMU billing

For LAMA, the following list contains the applications that force long-term PRU usage:

- billable MDC originating calls utilizing a NET selector
- billable MDC calls using the AMACUST option in table CUSTSMDR
- MDC calls using a WATS route selector that were routed through a VFG
- CDAR calls
- calls assigned a generic call code from AMA pretranslations
- calls assigned a generic service feature from AMA pretranslations
- calls routed through a VFG with special billing assigned through option VFGAMA
- AMA test calls when the AMATEST option is involved
- terminating and originating FGA calls (FGA line option)
- calls terminating on an MDC trunk with FACTYPE assigned
- all terminating billing records
- billable originating trunk calls with TRKINFO option assigned
- equal access calls to an operator (OP) trunk
- terminating access records involving local termination
- billing records generated as the result of the first leg of a multi-leg call
A short-term PRU is used when the call billing data is held in the call condense block (CCB) associated with the call while in progress. At the end of the call or billing period, a short-term PRU is retrieved from this pool and filled with the call's billing data from the CCB. After the billing data is copied and any necessary manipulations are completed, the PRU is queued against the AMA process, formatted into a record, and then placed back in the pool of available PRUs.

With respect to provisioning, this is normally an efficient usage because a PRU from this pool is only associated with a call for a short period of time allowing the possibility of one block to service many calls.

For CAMA, the following list contains the situations that force short-term PRU usage:

- TOPS/Overseas Operating Center (OOC) calls
- all CAMA calls that normally use the fast-write mechanism, but are unable to do so

For LAMA, the following list contains the situations that force short-term PRU usage:

- SUSP aggregate billing records produced from audits
- all LAMA calls that normally use the fast-write mechanism, but are unable to do so

In the calculation discussion to follow, a recommended 5% multiplier is included against application's billing capacity that use short-term PRUs (that is, TOPS).

The fast-write PRU is a single PRU that is not part of this pool. The CCB holds the call billing data during the call. At the end of the call, the billing information is copied from the CCB into the fast-write PRU. Instead of
being queued against the AMA process, the call process formats the fast-write PRU directly. Because call processes cannot be preempted, this single PRU can service all the call processes attempting to use the fast-write mechanism.

With respect to provisioning, applications that consistently use the fast-write mechanism do not effect the provisioning of this pool because a PRU from this pool is not used. However, as stated below, many factors affect whether or not a call can use the fast-write mechanism.

In the calculation statements to follow, a “percentage of calls unable to use fast-write” factor is included against the values that have the potential to use fast-write. This factor must be estimated based on the percentage of a category of calls that do not fall into the list of applications given under long-term PRU usage and short-term PRU usage. A value of no less than 1% should be used.

Controls for Bellcore billing
In addition, several AMA recording options are datafilled in table AMAOPTS. These options allow operating companies to control the recording of call data for certain types of calls.

Provisioning rules
At the beginning of the formula for the provisioning of this parameter, the initial conditions for the formula are provided. In some cases, additional conditions for specific applications are indicated. For example, an office that has the CAMA package NTX098 or the LAMA package NTX159 may or may not have a package that involves a specific application. If required, the conditions for specific applications are included. The use of this pool for each application must be determined and the sum of these will determine the value of CRS_PRU_POOL2_SIZE. If the default value for this parameter is greater than the value determined by the sum of the formulas, the default value should be used. This parameter should never be provisioned at a value less than that of the default.

If package NTX098AA or NTX159AA is present, add the values derived from the following application formulas to obtain the value for CRS_PRU_POOL2_POOL.

CAMA or SuperCAMA trunks
(number of SC trkgrp members) 
X (engineered percentage of simultaneous trunk offhks) 
X (percentage of calls originating from SuperCAMA trunks that are billable) 
X (percentage of billable calls originating from SuperCAMA trunks unable to use fast-write)
Equal Access (% including CMC)

FGA

(number of FGA lines)
X (engineered percentage of simultaneous FGA line offhks)

FGB

(number of FGB trunks)
X (engineered percentage of simultaneous FGB trunk offhks)
X (percentage of FGB calls that are billable due to controls in table AMAOPTS)
X (percentage of FGB billable calls unable to use fast-write)

FGC, FGD

(number of FGC and FGD trunks)
X (engineered percentage of simultaneous FGC and FGD trunk offhks)
X (percentage of FGC and FGD calls that are billable due to controls in table AMAOPTS)
X (percentage of FGC and FGD billable calls unable to use fast-write)

TOPS and CAMA/TOPS trunks

10% X ((TOPS_NUM_RU in table OFCENG) + (OOC_NUM_RU in table OFCENG) + (GOS_NUM_RU in table OFCENG))

CMC

Conditions

Package NTXE23AA (Cellular Interconnect-End Office) is present.

Formula

(number of PX trunk group members with LOCALCMC set to Y in table TRKGRP)
X (engineered percentage of simultaneous trunk offhks)
X (percentage billable due to controls in table AMAOPTS)

Conditions

Package NTX843AA or NTX843AB (Cellular Interconnect) is present.

Formula

(number of CELL trkgrp members)
X (engineered percentage of simultaneous trunk offhks)
X (percentage billable due to controls in table AMAOPTS)
E800

Conditions
Package NTX554AA CCS7-E800/SSP) is present.

Formula
(estimate of the number of simultaneous 800 calls that the office is engineered to handle)

*** OR ***

((number of TOPS trunks) X (percentage of trunks used for E800 traffic))
+ ((number of IT trunks) X (percentage of trunks used for E800 traffic))
+ ((number of SC trunks) X (percentage of trunks used for E800 traffic))
+ ((number of lines) X (estimate of E800 usage))

E800+

Conditions
Package NTX555AB (800 Plus) is present.

Formula
(estimate of the number of simultaneous 800 PLUS calls that the office is engineered to handle)

*** OR ***

((number of TOPS trunks) X (percentage of trunks used for 800+ traffic))
+ ((number of IT trunks) X (percentage of trunks used for 800+ traffic))
+ ((number of SC trunks) X (percentage of trunks used for 800+ traffic))
+ ((number of lines) X (estimate of 800+ usage))
E008

**Conditions**

Package NTXH84AA (Enhanced 008 for Australia) is present.

**Formula**

(estimate of the number of simultaneous E008 calls that the office is engineered to handle)

***OR***

((number of ATUP trunks) X (percentage of trunks used for E008 traffic))
+ ((number of AISUP trunks) X (percentage of trunks used for E008 traffic))
+ ((number of MDC lines) X (estimate of E008 usage))

---

PVN

**Conditions**

Package NTX983AB (Intelligent Network Billing Attributes) is present.

**Formula**

((estimate of the number of simultaneous PVN calls that the office is engineered to handle) X (percentage of PVN calls that are billable))
+ (percentage of nonbillable PVN calls that provide termination notification to the SCP)

***OR***

(number of SC trkgrp members signaling FGD)
+ (number of IT trkgrp members signaling FGD)
+ (number of MDC trkgrp members)
+ (number of MDC business group stations)
+ (number of MDC attendant consoles)
+ (number of MDC Stations)
+ (number of remote access lines or trunks)
Advanced intelligent network (AIN)

As of BCS36, blocks from this pool are used to record calls that are billable only because they are AIN calls. For example, a POTS line to POTS line call does not produce an AMA record. However, if the same call becomes an AIN call, it produces an AMA record.

Conditions
Software packages NTX983 and NTXN28 are present.

Formula

\[
\text{Number of AIN calls} = (\text{estimate of the number of simultaneous AIN calls that the office is engineered to handle}) \times (\text{percentage of AIN calls that are billable}) + (\text{number of non-billable AIN calls that provide termination notification to the SCP}) + (\text{number of previously non-billable calls that became billable if they are AIN calls})
\]

Note: The number of AIN calls includes billable AIN calls as well as any unanswered AIN calls that are recorded due to datafill in tables AMAOPTS and BCCODES.

***OR***

\[
\text{Number of POTS and RES lines} + (\text{number of SC trkgrp members signaling FGD}) + (\text{number of IT trkgrp members signaling FGD}) + (\text{number of MDC trkgrp members}) + (\text{number of MDC Business Group Stations}) + (\text{number of MDC Attendant Consoles}) + (\text{number of MDC stations}) + (\text{number of Remote Access lines or trunks})
\]

Lines: For each of the line classes (POTS, MDC, RES, ISDN, WATS, Coin, Hunt groups), perform the addition:

\[
(\text{number of insert line class lines}) \times (\text{engineered percentage of simultaneous insert line class offhks}) \times (\text{percentage of insert line class calls that are billable}) \times (\text{percentage of insert line class billable calls unable to use fast-write})
\]

Multi-leg calls: For each of the multcall types (active call forwarding options, attendant consoles, DISA numbers), perform the addition:

\[
(\text{number of insert multileg call types}) \times (\text{average number of simultaneous calls established through insert multileg call type}) \times (\text{percentage of calls established through insert multi-leg call type})
\]
that are billable)
X (percentage of billable calls established through <insert multileg call type> unable to use fast-write)

**Permanent logical link connections**

**Conditions**

If package NTXQ35AA (Permanent Relay LEC Billing) is present

**Formula**

\[(\text{number of PLLCs})\]

**Trunks:** For each of the trunk types (MDC, PRI, PX/P2) perform the addition:

\[(\text{number of <insert trunk type> trunks})\]
X (engineered percentage of simultaneous <insert trunk type> offhks)
X (percentage of <insert trunk type> calls that are billable)
X (percentage of <insert trunk type> billable calls unable to use fast-write)

**TGMU trunks**

\[(\text{number of TGMU trkgrp members})\]
X (engineered percentage of simultaneous trunk offhks)

**VFGs:** For each VFG defined, perform the following addition:

\[(\text{size of VFG})\]
X (percentage of VFGs simultaneously in use)
X (percentage of VFG calls that are billable)
X (percentage of VFG billable calls unable to use fast-write)

**SUSP audit options**

**Conditions**

Packages NTXE56AA (CLASS Screening List Editing) or NTXE82AA (DMS-300 International 800) service are present.

**Formula**

\[(\text{number of lines with BCLID option or CLASS display features})\]

**DMS packet handler**

**Conditions**

If package NTXP47AA (DMS Packet Handler) is present

**Formula**

\[1000 \times (\text{number of XLIUs})\]
Call forwarding conditional (CFC)

The CFC feature gives subscribers to the German Intelligent Network (GIN) services the ability to forward incoming calls at the trunk level. A recording unit from this pool is required to record call data for the duration of a CFC call. If a call is forwarded as the result of a called number is busy (CFC-BY) or called number does not answer (CFC-DA) condition, a forwarding record is generated.

Conditions

The CFC feature is present.

Formula

(estimated maximum number of simultaneous CFC forwards)

Maximum

(estimated maximum number of simultaneous E008 calls)

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4294967295</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Dependencies

The CRS_PRU_POOL2 extension block is controlled by this parameter.

Consequences

This parameter provisions a recording unit pool. Failure to obtain enough of these units results in the loss of call recording data. Because this controls a PRU pool, failure to claim a block in this pool (which is controlled by this office parameter) will result in the inability to do any call recording for the active call.

Verification

This parameter controls the extension block with an external identifier name of CRS_PRU_POOL2 and an index of 101 for operational measurement (OM) group EXT.

Memory requirements

Each unit requires 55 words of memory.
Dump and restore rules

Parameter CRS_PRU_POOL2_SIZE replaces
NUM_OF_BC_LAMA_UNITS and NUM_OF_BC_AMA_UNITS, which
were deleted in BCS32.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 The following changes were made to this parameter:

• provisioning rules for CMC and AIN added
• provisioning rules for SUSP audit modified
• provisioning rules for TOPS offices modified
**CRS_PRU_POOL3_SIZE**

**Parameter name**
Call Recording Stream Primary Recording Unit Pool3 Size

**Functional description of parameter CRS_PRU_POOL3_SIZE**
This parameter specifies the number of extension blocks available for use by the Station Message Detail Recording (SMDR) system.

This parameter replaces office parameter NO_OF_SMDR_REC_UNITS in table OFCENG.

**Provisioning rules**
For a switch in the United States market, other than a Meridian Digital Centrex (MDC) stand-alone, leave the value of this parameter at the default of 100.

For an MDC stand-alone, set the value of this parameter to 600. An MDC stand-alone office consists of 90% MDC or KSET lines.

In either case, the value must not be lower than the previous value of NO_OF_SMDR_REC_UNITS.

For offices in non-US markets, provision the parameter as follows.

If the switch has North American translations with the SMDR feature and each Integrated Business network (IBN) line is assigned the SMDR option, the recommended value is determined by the following formula:

\[
0.8 \times (\text{value of OFCENG parameter NCCBS})
\]

If the switch has North American translations with the SMDR feature and the SMDR line option is not assigned to all or any of the IBN lines, the recommended value is determined by the following formula:

\[
0.3 \times (\text{number of IBN lines in customer groups without the MDRRAO feature}) + (\text{number of simultaneous calls for all customer groups with the MDRRAO feature that involve a direct inward system access (DISA) number or the account code feature})
\]

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4294967295</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**
Increase - immediate
Decrease - cold restart
Dependences
This parameter controls the provisioning of the CRS_PRU_POOL3 extension block.

Consequences
If this parameter is underprovisioned, the collection of data for call recording will be incomplete.

If this parameter is overprovisioned, data store is wasted.

Verification
This parameter controls the extension block with an external identifier name of CRS_PRU_POOL3 and an EXT OM index of 115.

Memory requirements
Each unit requires 45 words of memory.

Dump and restore rules
This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
CRS_SUBRU_POOL1_SIZE

Parameter name
Call Recording Stream Sub-Recording Unit Pool1 Size

Functional description of parameter CRS_SUBRU_POOL1_SIZE
This parameter controls the provisioning for the CRS_SUBRU_POOL1 extension block pool.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform. If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

Provisioning rules
A description of each application that requires an extension block from the pool controlled by this parameter is provided in the following pages as well as the conditions that determine the application’s usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst-case maximum value. The “engineered percentages” that are required for most of the recommended calculations are meant to aid in determining a reasonable number for a particular application. If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is better to use the recommended calculation than the maximum calculation even if certain percentages are not exactly known. The maximum value is provided for those operating companies that are unable to provide the information required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter may occur. In some cases, the maximum value is not appropriate and is not provided.

Some of these formulas include an estimated percentage of the billable activities involving the respective application. Note that the term “billable” includes all activities that generate a record.

In some cases, a value of 5% is multiplied into the provisioning formulas. This takes into account the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the Automatic Message Accounting (AMA) record is released for formatting.

If the conditions for a particular application are met, the application’s usage must be determined based on the formula. The sum of these formulas is then used to determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the formulas, use the default value. Never provision this parameter at a value less than that of the default.
MDRRAO AMA
Message Detail Recording Revenue Accounting Office (MDRRAO) features are included in package NTXA88AA (MDR via AMA Stream). MDRRAO is a Meridian Digital Centrex (MDC) line option datafilled in table CUSTSMDR along with a business group identifier (ID). These are datafilled against customer group IDs. Module code 100 is used to capture the business group ID for customer groups for which MDRRAO is an option. Module code 100 requires a block from this pool. This block is held for the length of the call.

Conditions
If software package NTXA88AA is present, then

**Recommended**

(number of MDC lines with custgrp that has MDRRAO option)
X (percentage of MDC offhks that the office is engineered to handle)
X (percentage of MDC offhks that are billable)

**Maximum**

(number of MDC lines with custgrp that have the MDRRAO option)

**Centrex group ID**
If a call originates on an MDC line with a customer group that has the AMACUST option datafilled in table CUSTSMDR, module code 120 is appended to the AMA record and is used to record the customer group ID. Module code 120 requires a block from this pool. The block is held for the length of the call. The AMACUST option is included in package NTX851AA (SMDR Derived from BCR AMA).

Conditions
If software package NTX851AA is present, then

**Recommended**

(number of MDC lines with custgrp that has AMACUST option)
X (percentage MDC offhks that the office is engineered to handle)
X (percentage MDC offhks that are billable)

**Maximum**

(number of MDC lines with custgrp that have the AMACUST option)

**Trunk information (TRKINFO) in table AMAKOPT**
The TRKINFO option in table AMATKOPT is included in the base AMA packages NTX098AA (Bellcore CAMA format) and NTX159AA (Bellcore
LAMA Format). Each origination from or termination to a member of a
trunk group that is assigned TRKINFO results in the generation of module
code 104. Module code 104 requires a block from this pool. This block is
held for a short time because it is allocated just before the AMA record is
released for formatting.

Conditions

If software package NTX098AA or NTX159AA is present, then

Recommended

5% X (number of trkgrp members with the TRKINFO option)

Maximum

A maximum calculation is not applicable in this case. The above formula
does not require any kind of estimate.

Custom Local Area Signaling Service (CLASS) display AMA

The CLASS display features are included in software package NTXA82
Class Line Office Data). Module code 111 is attached to the AMA record
for calls originating from lines datafilled with two or more CLASS display
features. Module code 111 requires a block from this pool. This block is
held for a short time because it is allocated just before the AMA record is
sent to the formatter.

Conditions

If package NTXA82AA is present, then

Recommended

5% X (number of lines with two or more CLASS features)

Maximum

A maximum calculation is not applicable in this case. The above formula
does not require any kind of estimate.

TOPS Equal Access (EA) service time

For TOPS EA Service time, a block is required from this pool if parameter
EA_SERV_PROCESSING_TIME in table TOPAMAOP is enabled, the
office is using TOPS Enhanced BellCore AMA Format (EBAF) Phase 1 or
2, and operator services are rendered by an operating company for a carrier.
Module code 059 is appended to the AMA record in this case. The
extension block from this pool is held for a short time because it is allocated
just prior to releasing the AMA for formatting. This capability is provided
by packages NTXE20AA (TOPS Extended Bellcore AMA Format) and NTX714AA (TOPS InterLATA Carrier Service).

**Conditions**

If packages NTXE20AA and NTX714AA are present and (TOPS EBAF Phase 1 or 2 is being used) and (EA_SERV_PROCESSING_TIME = Y), then

**Recommended**

5% X (estimate of the maximum number of simultaneous TOPS calls that the operating company handles for all carriers)

**Maximum**

5% X (TOPS_NUM_RU in table OFCENG)

**TOPS Guest Name and Room Number**

For TOPS Guest Name and Room Number, a block is required from this pool if parameter RECORD_GUEST_NAME_AND_ROOM_NUM in table TOPAMAOP is enabled, the office is using TOPS EBAF Phase 2, and the guest name or room number is received. Module code 312 is appended to the AMA record in this case. The extension block from this pool is held for a short time because it is allocated just prior to releasing the AMA record for formatting. Package NTXE18AA (TOPS AMA Enhancements) provides this capability.

**Conditions:**

If package NTXE18AA is present and TOPS EBAF Phase 2 is being used and (RECORD_GUEST_NAME_AND_ROOM_NUM = Y) then

**Recommended**

5% X (estimate of the maximum number of simultaneous TOPS calls in which the guest name or room number is received)

**Maximum**

5% X ((TOPS_NUM_RU in table OFCENG) + (OOC_NUM_RU in table OFCENG))

**TOPS listing services**

For TOPS Listing Services, a block is required from this pool if the office is using TOPS EBAF Phase 1 and is recording directory assistance (DA) service or intercept (INT) service. In addition, a block is required from this pool in a TOPS EBAF Phase 2 office if it is recording DA service for a non-intercept call. Module code 055 is appended to the AMA record in both
cases. The extension block from this pool is held for a short time because it is allocated just prior to releasing the AMA record for formatting. Package NTXA62AA (TOPS MP -- DA Audio Response Call Handling) provides this capability.

**Conditions**

If package NTXA62AA is present and TOPS EBAF Phase 1 is being used and the office is recording DA/INT service, then

**Recommended**

5% $X$ (estimate of the maximum number of simultaneous TOPS calls in which DA or INT service is involved)

**Maximum**

5% $X$ (TOPS_NUM_RU in table OFCENG)

***OR***

**Conditions**

If package NTXA62AA is present and TOPS EBAF Phase 2 is used and the office is recording DA service for non-INT calls, then

**Recommended**

5% $X$ (estimate of the maximum number of simultaneous TOPS calls in which DA service is involved)

**Maximum**

5% $X$ (TOPS_NUM_RU in table OFCENG)

**SSP 800 billing requirements**

Package NTXQ39AA (SSP 800 Billing Enhancements) appends module code 031 to all AMA records for 800 PLUS calls. For each 800 PLUS call, a block is needed from this pool. The block is held for the duration of the call.

**Conditions**

If package NTXQ39AA is present, then

**Recommended**

(estimate of the maximum number of simultaneous 800 PLUS calls)
Maximum

A maximum calculation is not logical in this case. Each office with package NTXQ39AA is engineered to handle a certain number of 800 PLUS calls. Because each office is engineered differently, it is not logical to impose a formula that must apply to all offices.

TOPS account code billing

When an account code is entered in a TOPS EBAF Phase 2 environment where parameter ACCOUNT_CODE_BILLING_ENABLE in table TOPSPARM is enabled, module code 301 is appended to the AMA record. Upon receiving an account code, a block from this pool is allocated and held until formatting of the AMA record is complete. This functionality is provided by package NTXJ73AA (TOPS Account Code Billing).

Conditions

If package NTXJ73AA is present and TOPS EBAF Phase 2 is being used and (ACCOUNT_CODE_BILLING_ENABLE = Y), then

Recommended

(estimate of the maximum number of active calls involving the Account Code feature)

Maximum

A maximum calculation specific to the TOPS Account Code billing is not possible because any TOPS facility has the potential to use this feature. If the recommended calculation cannot be determined, the value of TOPS_NUM_RU in table OFCENG can be used. This will likely lead to vast overprovisioning.

Wideband circuit usage

If package NTXR49AA (Dialable Wideband Service PRI) is present in the office, Module Code 913 is appended to the Trunk Group Member Usage (TGMU) AMA record for all wideband calls. Wideband trunks are datafilled in table TRKGRP with selection order (SELSEQ) field set to WIDEBAND. The TGMU option is datafilled for the trunks in table AMATKOPT. For this application, a block is held for the length of the call.

Conditions

If package NTXR49AA is present, then
Recommended

(engineering percentage of simultaneous trunk offhks)
X (number of TGMU trkgrp members with field SELSEQ set to WIDEBAND in table TRKGRP)

Maximum

(number of TGMU trkgrp members with field SELSEQ set to WIDEBAND in table TRKGRP)

Multilocation Business Group (MBG) - business group information
Package NTXN01AB (Multilocation Business Groups) enhances basic MBG to support networked customer groups using a private numbering plan. Module Code 911 is appended to the AMA record for MBG billable calls if the originator’s customer group is datafilled in table BGDATA against a Business Group Identifier (BGID) with the BGMDR option. Module code 911 records the Business Group Information based on the business group parameter in the integrated services digital network (ISDN) user part (ISUP) signaling protocol.

Conditions

If package NTXN01AB is present and (there are tuples in table BGDATA with the CUSTGRP and BGMDR option), then

Recommended

Use the lesser value derived from either formula 1 or 2:

1. (number of MDC lines in customer groups that are associated with the BGMDR option in table BGDATA)
   X (percentage of simultaneous MDC line offhooks that an office is engineered to handle)
   X (percentage of MBG subscriber offhooks that are actually MBG calls)
   X (percentage of MBG calls that are billable)

2. (Number of POTS ISUP trunks that are potentially involved in MBG calls)
   X (percentage of expected trunk utilization in the office)
   X (percentage of MBG calls of these POTS ISUP trunks)
   X (percentage of MBG involved calls that are billable)
Note: The possible number of simultaneous MBG calls in an office for any one particular customer group may be dependent on the total number of customer group members in the other offices. If the office with the highest concentration of subscribers for a particular MBG is being provisioned, the total number of subscribers for this MBG that is to be added to the first term in formula 1 above

(Number of MDC lines in customer groups that are associated with the BGMDR option in Table BGDATA)

is the lesser of the total number of subscribers in this MBG outside of this office and the number in this office.

Maximum

Use the lesser value derived from either formula A or B:

A. (number of MDC lines in custgrps that are associated with the BGMDR option in Table BGDATA)

B. (number of POTS ISUP trunks: trunkgroup types IT, TO, TI and T2)

Number Service Code (NSC) carrier code

Package NTXQ39AA (SSP 800 Billing Enhancements) appends Module Code 044 to all AMA records for 800 PLUS Southbound calls. For each successful 800 PLUS Southbound call, a block is required from this pool. This block is held for the length of the call.

Conditions

If package NTXQ39AA is present, then

Recommended

(number of simultaneous 800 PLUS calls that the office is engineered to handle)

X (percentage of 800 PLUS calls that are Southbound)

Note: 800 PLUS calls that are TOPS assisted are also included in the general description above. However, module code 044 is only appended to TOPS call code 192 in a TOPS EBAF Phase 2 office.

Maximum

A maximum calculation is not logical in this case.
ISDN Service Order AMA

The Austrian ISDN base package utilizes this pool to provide billing data for administrative actions on ISDN lines. An AMA record is generated to hold ISDN-specific data that is entered by the operating company personnel through Service Orders (SO). The following AMA structures use this pool and follow the AMA header record, D4:

- D2 - Double Establish AMA Record for ISDN SO
- D9 - Single Establish AMA Record for ISDN SO
- D3 - Permission AMA Record for ISDN SO
- D5 - Activation AMA Record for ISDN SO

Up to 20 features can be assigned to a subscriber through the SO command Add Option (ADO). A block from this pool can be allocated for each feature assigned to the subscriber. If there is a lack of subrecording units and no AMA record can be generated, the operator is warned and prompted whether to stop the transaction.

Conditions

If the Austrian ISDN base package is included, then

Recommended

(number of MAP interfaces)

X (percentage of SO transactions that are ISDN)

X (maximum number of billable features manipulated for each ISDN SO command)

Maximum

20 X (number of MAP interfaces)
**Metering for the Spanish market (MTR)**

The MTR feature is included in package NTX102AA (IBN -- Station Message Detail Recording). It allows the recording of metered pulse counts in the Spanish market on IBNTO trunk types. These trunks are datafilled in table TRKGRP with the MTR field set to a value of Y (yes). Office parameter MARKET_OF_OFFICE in table OFCENG must be datafilled with a value of SPAIN. The D7 record captures the required information.

**Conditions**

If package NTX102AA is included and office parameter MARKET_OF_OFFICE is set to SPAIN, then

**Recommended**

(Engineered percentage of simultaneous trunk offhks)

\[ X \]  (number of IBNTO trunks with the MTR field set to Y)

**Maximum**

(Number of IBNTO trunks with the MTR field set to Y)

**Personal Identification Number / Travel Card Number**

The PIN/TCN feature is included in package NTX102AA. PIN/TCN is a feature that allows the recording of a PIN and/or TCN on an incoming IBNTI or IBNT2 trunk. Table CUSTSMDR must be datafilled with the business group ID and the PIN option. When an incoming call dials a PIN/TCN the DC extension record is used to capture this information.

**Conditions**

If package NTX102AA is present, then

**Recommended**

(Number IBNTI and IBNT2 trunks where the custgrp has the PIN option)

\[ X \]  (engineered percentage of simultaneous trunk offhks)

**Maximum**

(Number IBNTI and IBNT2 trunks where the custgrp has the PIN option)

**Network Services Software (NSS) bearer capability**

The NSS feature is included in package NTXE75AB (Offnet Access Services). NSS is a feature that allows the recording of bearer capability information on wideband calls. Table CUSTSMDR must be datafilled with the business group ID and the BC option. The DD extension record is used to capture this information.
Conditions
If package NTXE75AB is present, then

Recommended

(number of MDC lines where the custgrp has the BC option)
X (percentage of MDC offhks that the office is engineered to handle)

Maximum

(number of MDC lines where the custgrp has the BC option)

Inbound Toll Call (ITC)
The ITC feature is included in package NTX103AA (IBN -- SMDR Enhanced). This feature produces an SMDR record for each party involved in a call on an incoming IBNTI or IBNT2 trunk type. These trunks are datafilled in table TRKGRP with the SMDRITC option set to Y. The DF extension record with format code 1 is used to capture this information.

Conditions
If package NTX103 is present, then

Recommended

(engineered percentage of simultaneous trunk offhks)
X (number of IBNTI and IBNT2 trunks with the SMDRITC field set to Y)

Maximum

(number of IBNTI and IBNT2 trunks with the SMDRITC field set to Y)

Call forwarding conditional (CFC)
The CFC feature gives subscribers to the German Intelligent Network (GIN) services the ability to forward incoming calls at the trunk level. A recording unit from this pool is required to store the feature type indication (FTI) flags in module 031 when the CFC feature is present. This block is required for the duration of the call. A forwarding record is generated when a call is forwarded as a result of called number is busy (CFC-BY) or called number does not answer (CFC-DA) conditions.

Conditions
If the CFC feature is present, then

Recommended

(estimated maximum number of simultaneous CFC calls)
Maximum

(estimated maximum number of simultaneous E008 calls)

Advance intelligent network (AIN)
The blocks provisioned by this pool are used to store data returned from the Service Control Point (SCP) during call processing. The following list illustrates the optional parameters that require an extension block when included in a response message. The number in parentheses indicates the maximum number of extension blocks that can be recorded for a single call.

- Billing indicator parameters (2) - There are four billing indicator parameters. Only one of the four parameters is used depending upon the route taken by the call. The parameter used contains information requiring two extension blocks.
- AMA service logic program identification module 039 (AMAslpID) (5) The first AMAslpID parameter is recorded in another extension block pool. The remaining five parameters use this extension block pool.

Conditions

If the switching unit has the AIN feature, then

Recommended

\[2 \times (\text{number of AIN calls with a billing indicator parameter used}) + 1 \times (\text{number of AIN calls with 2 AMAslpID parameters}) + 2 \times (\text{number of AIN calls with 3 AMAslpID parameters}) + 3 \times (\text{number of AIN calls with 4 AMAslpID parameters}) + 4 \times (\text{number of AIN calls with 5 AMAslpID parameters}) + 5 \times (\text{number of AIN calls with 6 AMAslpID parameters}) + \text{(number of calls using MBI)}\]

**Note:** The number of AIN calls includes billable AIN calls as well as any unanswered AIN calls that are recorded due to datafill in tables AMAOPTS and BCCODES.

Maximum

A maximum value is not applicable in this case.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>4294967295</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Office Parameters Reference Manual, volume 1 of 2 BCS36 and up OFCENG-149
**CRS_SUBRU_POOL1_SIZE**

**Dependencies**
The CRS_SUBRU_POOL1 extension block is controlled by this parameter.

**Consequences**
This parameter provisions a sub-recording unit pool. Failure to obtain a sufficient number of these units results in the loss of call recording data. This pool is critical in generating the AMA data outlined in the description of this parameter.

**Verification**
This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL1 and an index of 96 for operational measurement (OM) group EXT.

**Memory requirements**
Each unit requires 8 words of memory.

**Dump and restore rules**
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**
BCS36 provisioning rules for CFC and AIN added
Parameter name
Call Recording Stream Sub-recording Unit Pool2 Size

Functional description of parameter CRS_SUBRU_POOL2_SIZE
This parameter controls the provisioning for the CRS_SUBRU_POOL2 extension block pool.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform created by the Increased Flexibility of AMA Software Platform feature. If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

Provisioning rules
This parameter applies only to Bellcore Automatic Message Accounting (AMA) offices.

A description of each application that requires an extension block from the pool controlled by this parameter is provided in the following pages as well as the conditions that determine the application’s usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst case maximum value. The “engineered percentages” that are required for most of the recommended calculations are meant to aid in determining a reasonable number for a particular application. If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is better to use the recommended calculation than the maximum calculation even if certain percentages are not exactly known. The maximum value is provided for those operating companies that are unable to provide the information required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter can occur. In some cases, the maximum value is not appropriate and not provided.

Some of these formulas include an estimated percentage of the billable calls involving the respective application. Note that the term “billable” includes all calls that generate a record such as the following types:

- AMA
- Station Message Detail Recording (SMDR) when Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in table CUSTSMDR and SMDR is turned on for the office.

In some cases, a value of 5% is multiplied into the provisioning formulas. This accounts for the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the AMA record is released for formatting.
If the conditions for a particular application are met, the application’s usage must be determined based on the formula. The sum of these formulas is then used to determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the formulas, the default value should always be used. Never provision this parameter at a value less than that of the default.

Revenue Allocation (REVALL)

An AMA record with call code 136 is generated for calls that are originated by operator (OP) or AMR5 (A5) trunks that are datafilled in table AMATKOPT with the REVALL option. An extension block is required from this pool for this application. This extension block is held for the length of the call. Feature package NTX089 (Enhanced Coin Services) provides this capability.

Conditions

If package NTX089AA is present, then

Recommended

(engineered percentage of simultaneous trunk offhooks)

\[ X \]  (number of OP and AMR5 trunkgroup members with the REVALL option)

Maximum

(number of OP and AMR5 trunkgroup members with the REVALL option)
Account and Authorization Code

When a Meridian Digital Centrex (MDC) line, with a customer group that is authorized to use the Account Code feature in table IBNXLA, keys in an account code during a call, field CDAR (Customer Dialed Account Recording) is appended to the AMA record if package NTX165AA (Bellcore IBN/ESN Detail Recording) is present in the office. When an MDC line, with a customer group that is able to use the Authorization Code feature according to table IBNXLA, keys in an Authorization Code during a call, module code 102 is appended to the AMA record if the customer group has the MDRRAO option datafilled in table CUSTSMDR. If the account code, authorization code, or both are used during a call, an extension block is required from this pool.

Conditions

If package NTXP09 or NTX103 are present and package NTX165 is also present, then

Recommended

\[
\text{(engineered percentage of simultaneous MDC offhks)} \times \left( \text{(number of MDC lines with a custgrp that has access to the Account Code feature)} \right) \times \left( \text{percentage of MDC offhks that are billable} \right) + \left( \text{number of MDC lines with a custgrp that has the MDRRAO option and access to the Authorization Code feature} \right)
\]

Maximum

\[
\left( \text{number of MDC lines with a custgrp that has access to the Account Code feature} \right) + \left( \text{number of MDC lines with a custgrp that has the MDRRAO option and access to the Authorization Code feature} \right)
\]

***OR***

Conditions

If package NTXP09 or NTX103 is present, then

Recommended

\[
\text{(engineered percentage of simultaneous MDC offhks)} \times \left( \text{number of MDC lines with a custgrp with the MDRRAO option and access to the Authorization Code feature} \right)
\]
Maximum

(number of MDC lines with a custgrp with MDRAAO option and access to the Authorization Code feature)

TOPS E800 Service

If an office has TOPS Extended Bellcore AMA Format (EBAF) Phase 2 with parameter RECORD_800_SERVICE_INFORMATION in table TOPAMAOP enabled, and the call is an 800 PLUS call, module code 309 is appended to the AMA record. The extension block is held for a short time because it is allocated just before the AMA record is released for formatting. This feature is provided by package NTXE18AA (TOPS AMA Enhancements).

Conditions

If package NTXE18AA is present and TOPS EBAF Phase 2 is being used, with parameter RECORD_800_SERVICE_INFORMATION set to Y, then

Recommended

5% X (estimate of the maximum number of simultaneous 800 PLUS calls)

Maximum

5% X (TOPS_NUM_RU in table OFCENG)

TOPS overwritten number data

If an office has TOPS EBAF Phase 2 with parameter RECORD_OVERWRITTEN_NUM in table TOPAMAOP enabled, and an operator overwrites the billing number or the forward number, module code 314 or module code 315 is appended to the record. The TOPS operator is allowed to overwrite the billing number or the forward number up to nine times. Up to nine of these module codes can be appended to the record. The extension block for this application is held from the point of encountering an overwritten number until the end of the call. This functionality is provided by package NTXE18AA.

Conditions

If package NTXE18AA is present and TOPS EBAF Phase 2 is being used, with parameter RECORD_OVERWRITTEN_NUM set to Y, then
Recommended

(estimate of the maximum number of simultaneous TOPS/OOC calls where the operator overwrites the billing number or the forward number)

\[ X \] (average number of overwrites per call)

Maximum

\[ 9 \times (\text{TOPS\_NUM\_RU in table OFCENG} + \text{OOC\_NUM\_RU in table OFCENG}) \]

*Note:* This maximum formula results in overprovisioning. The multiplier of 9 implies that every TOPS call overwrites the billing or forward number nine times.

Blue box fraud

Package NTXP82AA (AMA MOD (CAMA) Modules) provides an operating company with the ability to detect blue box fraud. If this package is present, the BLUEBOX Command Interface (CI) indicates that blue box supervision is active, and a short supervisory transition (SST) is detected, module code 065 is appended to the AMA record. Note that, because more than one SST may be detected during a call, module code 065 can be appended to the AMA record up to 16 times. Note that operating companies should normally expect a low occurrence of blue box fraud.

Conditions

If packages NTXP82AA is present and BLUEBOX is active, then

Recommended

\[ 16 \times X \] (estimate of the number of simultaneous fraudulent calls)

Maximum

\[ 16 \times 1\% \times X \] (number of SuperCAMA trunks)

*Note:* 1\% indicates a low expectancy of blue box fraud.
Calling line identification

Base AMA packages NTX098AA (Bellcore CAMA Format) and NTX159AA (Bellcore LAMA Format) support the AMA Calling Line Identification (CLI) feature that provides the capability to append the CLI in AMA records that are produced from a call with a physical originating port that is an ISUP trunk with the AMACLID option. In table AMATKOPT, the option AMACLID can be datafilled against an incoming or two-way ISUP trunk with a BILLDN. The CLI is appended to the AMA record in a module with module code 046.

Conditions

If package NTX098AA or NTX159AA is present, then

Recommended

(Engineered percentage of simultaneous trunk offhks)

X (number of incoming or two-way ISUP trunks with the AMACLID option and BILLDN)

Maximum

(Number of incoming or two-way ISUP trunks with AMACLID option and BILLDN)

Point-of-entry identification

Package NTXK40 supports AMA point-of-entry identification, which provides the ability to append the actual network entry point for billable calls originating from within a network. The option ENTRYID is provided in tables VIRTGRPS and DNROUTE to define both virtual facility groups (VFG) and direct inward system access (DISA) as points of transit. DISA and VFG request the point-of-entry identification for appending to the AMA record. The point-of-entry identification is appended in a module with module code 046.

Conditions

If package NTXK40 is present, then

Recommended

(Size of VFGs with ENTRYID option)

+ ((Engineered percentage of simultaneous DISA terminations)

X (Number of DISA numbers with the ENTRYID option))

Maximum

(Size of VFGs with ENTRYID option)

+ (Number of DISA numbers with ENTRYID option)
Long duration calls

If the office parameter UNIVERSAL_AMA_BILLING is enabled in table OFCENG and a call is recognized as a long duration call, a subrecording unit is required from this pool. It is held for the rest of the call. A long duration call is one that has been connected for the interval that is datafilled in table AMAOPTS for tuple BCLONGCALL. In the case of a long duration call, the subrecording unit and primary recording unit are copied for a short period to generate a long duration AMA record. This occurs during a BCLONGCALL audit. This feature is found in base AMA packages NTX098 and NTX159.

Conditions

If package NTX098 or NTX159 is present and office parameter UNIVERSAL_AMA_BILLING in table OFCENG is set to Y (yes), then

Recommended

(estimate of the maximum number of simultaneous billable long duration calls)

Maximum

A maximum calculation specific to long duration calls is not provided because all facilities in the office have the potential to use this application. When provisioning the recommended value, note that the number of long duration calls are few and the subrecording unit that is used during the BCLONGCALL audit is normally required only during low traffic periods when the audit runs.

Multi-Switch Business Group - Private Called Number Information

Package NTXR43AA (MBG Generic Address Parameter) enhances basic MBG to support networked customer groups using a private numbering plan. Module code 912 is appended to the AMA record for MBG billable calls where the originator's customer group is datafilled in table BGDATA against a business group identifier (BGID) with the BGMDR option. Module code 912 records the private called number information based on the contents of the generic address parameter (GAP) in the initial address message (IAM) that is used to transport the private number.

Conditions

If package NTXR43AA is present and tuples in table BGDATA are datafilled with CUSTGRP and BGMDR options, then
Recommended

Use the smaller value derived from either formula 1 or 2.

1. \[(\text{number of MDC lines in customer groups that are associated with the BGMDR option in table BGDATA}) \times (\text{percentage of simultaneous MDC line offhooks that the office is engineered to handle}) \times (\text{percentage of MBG subscriber offhooks that are MBG calls}) \times (\text{percentage of MBG calls that are billable})\]

2. \[(\text{number of POTS ISUP trunks that are potentially involved in MBG calls}) \times (\text{percentage of expected trunk utilization in the office}) \times (\text{percentage of MBG calls on the above POTS ISUP trunks}) \times (\text{percentage of MBG involved calls that are billable})\]

Note: The possible number of simultaneous MBG calls in an office for any one particular customer group may be dependent on the total number of customer group members in the other offices. If the office with the highest concentration of subscribers for a particular MBG is provisioned, the total number of subscribers for this MBG that is added to the first term of formula 1

\[(\text{Number of MDC lines in customer groups that are associated with the BGMDR option in Table BGDATA})\]

is the lesser of the total number of subscribers in this MBG outside of this office and the number in this office.

Maximum

Use the smaller value derived from either formula a or b.

a. \[(\text{number of MDC lines in custgrps that are associated with the BGMDR option in table BGDATA})\]

b. \[(\text{number of POTS ISUP trunks: trkgrp types IT, TO, TI and T2})\]
Network Facility Access (NFA)

Package NTXR25AA (Network Facility Access) provides MDC and Residential Enhanced Services (RES) subscribers with a direct connection to an intelligent processor (IP) and the services that the IP supports. The subscribers can gain access to the IP either implicitly or explicitly. With implicit access, a subscriber is directly connected to the IP by going off hook. With explicit access, a subscriber must dial an NFA access code to be connected to the IP. After a completed explicit connection between an NFA subscriber and the IP occurs, a record with call code 174 is generated. Module code 047 is attached to the AMA record and requires an extension block from this pool. After a call that is dialed by the IP is answered, module code 047 is appended to the AMA record. If no AMA record is generated at this time, a record with call code 175 is generated and module code 047 is attached.

Translations have an effect on whether these AMA records are generated. In table IBNFEAT, the NFA feature must be added to a line. The booleans IMPLCT_ACC and EXPLCT_ACC indicate what type of access to the IP is available to the subscriber. If AMA_EXPLCT is set to N (no), no AMA record with call code 174 is generated after an explicit connection to the IP. If AMA_IPDIAL is set to N, no AMA record with call code 175 is generated. However, in the case where another AMA record is generated anyway, module code 047 is attached to the record as noted in the paragraph above. In the case where the IP dials itself explicitly, two extension blocks from this pool are required. Trunk groups can also be datafilled with the NFA option to allow subscriber access to the IP.

Conditions

If package NTXR25 is present, then

Recommended

\[
(\text{engineered percentage of simultaneous MDC and RES offhooks}) \\
X \times (\text{number of NFA lines with } \text{AMA}_\text{EXPLCT} = N) \\
+ \{ \text{Use the lesser of either formula a or b} \}
\]

a. \( 2X \) (number of NFA lines with \( \text{AMA}_\text{EXPLCT} = Y \))
b. \( 2X \) (number of NFA trkgrp members)

Maximum

\[
(\text{number of NFA lines with } \text{AMA}_\text{EXPLCT} = N) \\
+ \{ \text{use the lesser of either formula a or b} \}
\]

a. \( 2X \) (number of NFA lines with \( \text{AMA}_\text{EXPLCT} = Y \))
b. \( 2X \) (number of NFA trkgrp members)
Bellcore Frame Relay Service (FRS)

DataSPAN FRS is a connection oriented packet data service in which an FRS subscriber is connected to a frame relay switch through an access channel where multiple logical link connections to other subscribers may exist. FRS permits subscribers to communicate on one or more logical links simultaneously. FRS subscribers are billed on a usage basis where the actual data going through the frame relay interface unit (FRIU) are tabulated. The counts are then collected by the FRS billing controller and stored in the FRS billing internal storage. During the aggregation phase, the counts are retrieved and table lookups are performed to obtain billing information that is required for the billing record. BellCore frame relay recording is achieved by using a unique call code (089) and appending newly created modules with module code 069. The provisioning of CRS_SUBRU_POOL2_SIZE must take into account that one extension block is required for each permanent logical link connection (PLLC). The number of PLLCs is determined by adding the number of tuples datafilled in subfield CONNECT of Table PVDNCUST plus the number of trunk-to-trunk connections datafilled in Table FRSTRKCN. This capability is packaged in NTXQ35AA (Frame Relay LEC Billing).

Conditions

If package NTXQ35 is present, then

Recommended:

(the number of PLLCs)

Maximum

A maximum calculation is not applicable in this case.

Record Digits as Outpulsed (RAO)

The RAO feature is included in package NTX102AA (IBN -- Station Message Detail Recording). It allows the recording of digits outpulsed on a trunk. The RAO option is datafilled in table CUSTSMDR against a business group identifier. All calls in this business group that terminate to a trunk produce a D5 extension record.

Conditions

If package NTX102 is present, then

Recommended

(number of MDC lines where the business group ID has the RAO option)

X (percentage of MDC offhks that the office is engineered to handle)
Maximum

(number of MDC lines where the business group ID has the RAO option)

Account Code and Authorization Code
The Account and Authorization Codes features are included in package NTX103. The Account Code feature allows the recording of customer-dialed account codes. The Authorization Code feature allows the recording of customer dialed authorization codes. In table IBNXLA the customer group must be datafilled with a TRSEL of FEAT and the FEATURE set to ACCT (AUTH). In table CUSTHEAD the customer group must be datafilled with the ACCT (AUTH) option. Account Code and Authorization Code information is recorded in a D6 record.

Conditions

If package NTX103 is present, then

Recommended

(engineered percentage of simultaneous MDC offhks)
X (number of MDC lines where the customer group has access to the Account or Authorization Code feature)

Maximum

(number of MDC lines where the customer group has access to the Account or Authorization Code feature)

Independent Common Carrier (ICC)
The ICC feature is included in package NTXH85AA (CCITT#7 and NCCI#7 for DMS-100). This feature is used to capture billing information for New Common Carrier Interface #7 protocol signaling. The ICCSMDR option is datafilled in Table CUSTSMDR against a business group identifier. All calls in this business group produce a DE extension record.

Conditions

If package NTXH85AA is present, then

Recommended

(number of MDC lines where the custgrp has the ICCSMDR option)
X (percentage of MDC offhks that the office is engineered to handle)

Maximum

(number of MDC lines where the custgrp has the ICCSMDR option)
Advanced Intelligent Network (AIN)

The blocks provisioned by this pool are used to store data returned from the Service Control Point (SCP) during call processing. The following list illustrates the optional parameters that require an extension block when included in a response message. The number in parentheses indicates the maximum number of extension blocks that can be recorded for a single call.

- AMA service logic program identification module 039 (AMAslpID) (1)
  The first AMAslpID parameter is recorded in this extension block pool. This extension block also records the following parameters if they are received.
    - AMABusinessCustomerID
    - AMAAlternateBillingNumber
- AMALineNumber (2)
- AMADigitsDialedWC (6)

Conditions

If the AIN feature is present, then

Recommended

\[(\text{number of billable AIN calls}) + (\text{number of AIN calls with 1 AMALineNumber parameter}) + 2 \times (\text{number of AIN calls with 2 AMALineNumber parameters}) + (\text{number of AIN calls with 1 AMADigitsDialedWC parameter}) + 2 \times (\text{number of AIN calls with 2 AMADigitsDialedWC parameters}) + 3 \times (\text{number of AIN calls with 3 AMADigitsDialedWC parameters}) + 4 \times (\text{number of AIN calls with 4 AMADigitsDialedWC parameters}) + 5 \times (\text{number of AIN calls with 5 AMADigitsDialedWC parameters}) + 6 \times (\text{number of AIN calls with 6 AMADigitsDialedWC parameters})\]

*Note:* The number of AIN calls includes billable AIN calls as well as any unanswered AIN calls that are recorded as a result of datafill in tables AMAOPTS and BCCODES.

Maximum

A maximum value is not applicable in this case.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4294967295</td>
<td>100</td>
</tr>
</tbody>
</table>
CRS_SUBRU_POOL2_SIZE

Activation

Increase - immediate
Decrease - cold restart

Dependencies

The CRS_SUBRU_POOL2 extension block is controlled by this parameter.

Consequences

This parameter provisions a sub-recording unit pool. Failure to obtain a sufficient number of these units results in the loss of call recording data. This pool is critical in generating the AMA data outlined in the description of this parameter.

Verification

This parameter controls the extension block with an external identifier name of CRS_SUBPRU_POOL2 and an index of 97 for operational measurement (OM) group EXT.

Memory requirements

Each unit requires 16 words of memory.

Dump and restore rules

This parameter was introduced in BCS32.

This parameter replaces REVALL_NUMBER_OF_EXTENSION_BLOCKS and NUM_OF_MDR_EXT_BLOCKS which were deleted in BCS32.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 provisioning rules added for AIN
**CRS_SUBRU_POOL3_SIZE**

Parameter name

Call Recording Stream Sub-recording Unit Pool3 Size

**Functional description of parameter CRS_SUBRU_POOL3_SIZE**

This parameter controls the provisioning for the CRS_SUBRU_POOL3 extension block pool.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform created by Feature AF2755 (Increased Flexibility of AMA Software Platform). If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

**Provisioning rules**

This parameter applies only to Bellcore Automatic Message Accounting (AMA) offices.

A description of each application that requires an extension block from the pool controlled by this parameter is provided below as well as the conditions that determine the application's usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst case maximum value. The “engineered percentages” that are required for most of the recommended calculations are meant to aid in determining a reasonable number for a particular application. If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is better to use the recommended calculation than the maximum calculation even if certain percentages are not exactly known. The maximum value is provided for those operating companies that are unable to provide the information required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter may occur. In some cases, the maximum value is not appropriate and is not provided.

Some of these formulas include an estimated percentage of the billable calls involving the respective application. Note that the term “billable” includes all calls that generate a record. This includes the following types:

- AMA
- Station Message Detail Recording (SMDR) when Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in Table CUSTSMDR and SMDR is turned on for the office.

In some cases, a value of 5% is multiplied into the provisioning formulas. This takes into account the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the AMA record is released for formatting.
If the conditions for a particular application are met, the application’s usage must be determined based on the formula. The sum of these formulas is then used to determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the formulas, the default value should always be used. Never provision this parameter at a value less than that of the default.

Overseas operating center (OOC): AMA modernization
If parameter RECORD_PARTY_NAME is enabled in table TOPAMAOP and the calling name and/or the called name are available to be recorded, module code 038 is appended to the AMA record. Module code 038 requires an extension block from this pool. The subrecording unit is held for a short time because it is allocated just before the AMA record is released to the formatter. If the calling name and called name are both available, moduled code 038 is attached to the AMA record twice. This functionality is packaged in either NTX631AB (OOC Call Processing) or NTXH38AA (Global TOPS -- Basic).

Conditions
If package NTX631AB or NTXH38AA is present and RECORD_PARTY_NAME is set to Y in table TOPAMAOP, then

Recommended

5% X (estimate of the maximum number of simultaneous TOPS/OOC calls where the calling/called name is available)

Maximum

5% X (incoming TOPS/OOC capacity of the office based on engineering specifications)

Centrex AMA ISDN billing
The ISDN module codes 070, 071, and 073 use an extension block from this pool. Module codes 070 and 071 are known as the ISDN core modules. One of these is appended to every billable ISDN-originated call. If a service is used, module code 070 records the use of the service on the originating ISDN set. Module code 071 is the same as module code 070, but it does not record the usage of ISDN services. Module code 073 records billable services delivered to an ISDN functional set upon termination. These features are packaged differently for toll and local offices. For toll offices, package NTX098AA (Bellcore Cama Format) provides this functionality. For local offices, packages NTX753AB (ISDN Functional Mode Basic Rate Services) and NTX159AA (Bellcore LAMA format) provide these features. Module code 073 is never generated in a toll office, but all three module codes can be generated in a local office.
Conditions

If package NTX098AA is included in a toll office, then

**Recommended**

(engineded percentage of simultaneous trunk off hooks)
X (engineered percentage of ISDN traffic)
X (percentage of calls that are billable)
X (number of ISUP trkgrp members)

**Maximum**

(number of ISUP trkgrp members)

***OR***

Conditions

If packages NTX159AA and NTX753AB are included in a local office, then

**Recommended**

(engineded percentage of ISDN functional sets that can be off hook simultaneously)
X (percentage of calls that are billable)
X (percentage of non-billable calls that use a billable service)
X (number of ISDN functional sets that the office services)

**Maximum**

(number of ISDN functional sets that the office services)

**Centrex AMA TDMTT special billing**

This functionality is packaged in NTX165AA (Bellcore--IBN/ESN Detail Recording) along with Common Control Switching Arrangement (CCSA). The CCSA package must be present in order to apply option TDMTT to a line, trunk or Virtual Facility Group (VFG). A trunk can have a facility type (FACTYPE) of ETS, CCSA, FX, or TDMTT. If a call terminates to a trunk with a facility type of TDMTT, module code 101 is appended to the AMA record. Module code 101 requires an extension block from this pool. The extension block is held for the duration of the call. In addition, if a call terminates to a VFG with option TDMTT, module code 101 is appended to the AMA record.
Conditions

Package NTX165AA is present.

Recommended

\[(\text{engineered percentage of simultaneous trunk off hooks}) \times (\text{number of MDC trkgrp members with the option TDMIT}) + (\text{number of VFGs with the option TDMIT})\]

Maximum

\[(\text{number of MDC trkgrp members with the option TDMIT}) + (\text{number of VFGs with the option TDMIT})\]

CLASS billing

The subscriber usage-sensitive pricing (SUSP) option in table AMAOPTS controls all Custom Local Area Signaling Service (CLASS) SUSP billing. It must be active in order to bill CLASS display and Screening List Editing (SLE) features on a per usage basis. SLE features are packaged in NTXE56. CLASS display features are packaged in NTXA82AA (CLASS Line Office Data).

Residential enhanced services (RES) and MDC lines can be datafilled in table RESFEAT for CLASS display features. Each time the subscriber uses a SUSP display service, the service is pegged in order to keep track of the number of times it was delivered to the subscriber. The audit for these features is scheduled by the AMA option CIDSUSPAUD in table AMAOPTS. When the audit is run, the subscribers are billed for the services that they used. These AMA records require an extension block from this subrecording unit pool. The hold time for this block is short.

RES and MDC lines can be datafilled in table RESFEAT for SLE features. Each time a subscriber alters one of their screening lists associated with with a SUSP SLE feature, a record capturing this event is generated. These records require a subrecording unit from this pool. The hold time for this block is short.

An extension block is required from this pool when the AMA field in table RESFEAT is changed from AMA to NOAMA for CLASS SUSP display. The use of the pool for this purpose is negligible.

Conditions

Package NTXA82AA or NTXE56AA (CLASS Screening List Editing) is present.
Recommended

(number of lines with CLASS SUSP Display and/or SLE SUSP features)

Maximum

A maximum value is not applicable in this case.

Number Service Code (NSC) - Enhanced 800 (E800)

E800 service is provided by package NTX554AA (CCS7--E800/SSP) on a service switching point (SSP) and communicates with operating company databases using Signaling System 7 (SS7). The database query is used to obtain routing information as well as other call handling instructions. E800 service is supported by the following types of lines and trunks:

- DMS equal access end office (EAEO) - EAEO/SSP supports E800 calls originating from single or party POTS lines
- DMS access tandem (AT) - AT/SSP supports E800 calls originating from intertoll (IT) and Super CAMA (SC) trunks that use dial pulse (DP), multi-frequency (MF), or equal access (EA) signaling
- DMS TOPS - AT/SSP supports E800 calls originating from IT and SC trunks that use DP, MF, or EA signaling.

Two types of AMA records can be generated for an E800 Service call. The first has a call code of 141. It is generated when equal access is not involved in the call. The second record has a call code of 142. It is used for inter-local Access and Transport Area (interLATA) calls when an equal access carrier is involved. An extension block is required from this subrecording unit pool. It is held for the duration of the call.

Conditions

Package NTX554AA is present.

Recommended

(estimate of the number of simultaneous 800 calls that the office is engineered to handle)

***OR***

\[
((\text{number of TOPS trunks}) \times (\text{percentage of trunks used for E800 traffic}))
+ ((\text{number of IT trunks}) \times (\text{percentage of trunks used for E800 traffic}))
+ ((\text{number of SC trunks}) \times (\text{percentage of trunks used for E800 traffic}))
+ ((\text{number of lines}) \times (\text{estimate of E800 usage}))
\]
Maximum

The percentage in the second recommended calculation is 100 because the maximum formula must assume that all traffic is E800 traffic. Using the maximum calculation will likely lead to overprovisioning of this office parameter.

Number service code (NSC) - 800 PLUS

Package NTX555AB (800 PLUS) provides 800 service for SSP communication with operating company databases that are located at service control points (SCP). The 800 Plus feature is similar to E800 Service, but it supports the following services:

- Single Number Service - enables a subscriber to have one 800 telephone number serve two or more 800 line groups in several zones.
- Variable Call Routing - allows Single Number Service subscribers to specify terminating points for 800 Plus calls based on the time of day and the day of week.
- Out-of-Zone Calling - with basic 800 service, out-of-zone calls are automatically intercepted and the call cannot be completed. With Out-of-Zone Calling, calls that originate out of the subscribed zone are completed and charged at operator assisted rates.

The following lines and trunks support 800 Plus:

- DMS-200 SSP supports 800 Plus calls originating from single or party POTS lines.
- DMS-200 SSP supports 800 Plus calls originating from IT and SC trunks using DP or MF signaling.
- TOPS Toll SSP supports 800 plus calls originating from IT, SC, and TOPS trunks that use DP or MF signaling.

Two types of AMA records can be generated for an 800 Plus call. The first has a call code of 141. It is generated when equal access is not involved in the call. The second record has a call code of 142 and is used for interLATA calls when an equal access carrier is involved. An extension block is required from this subrecording unit pool. This block is held for the duration of the call.

Conditions

Package NTX555AB is present.
Recommended

(estimate of the number of simultaneous 800 Plus calls that the office is engineered to handle)

*** OR ***

\[
\text{(number of TOPS trunks) \times (percentage of trunks used for 800 PLUS traffic)}
\]
\[+
\text{(number of IT trunks) \times (percentage of trunks used for 800 PLUS traffic)}
\]
\[+
\text{(number of SC trunks) \times (percentage of trunks used for 800 PLUS traffic)}
\]
\[+
\text{(number of lines) \times (estimate of 800 Plus usage)}
\]

Maximum

The percentage in the second recommended calculation is 100 because the maximum formula must assume that all traffic is 800 Plus traffic. Using the maximum calculation will likely lead to vast overprovisioning of this parameter.

NSC - enhanced 008 (E008)

E008 is an inward call management feature that is packaged in NTXH84AA (Enhanced 008 for Australia). It is used when the office parameter UNIVERSAL_AMA_BILLING is enabled in table OFCENG. E008 service uses an SSP and an SCP to obtain call handling instructions from a query of the operating company database. The call is charged to the directory number that is returned by the SCP as the routing number. An AMA record with call code 142 is generated for all E008 calls.

Conditions

Package NTXH84AA is present.

Recommended

(estimate of the number of simultaneous E008 calls that the office is engineered to handle)

*** OR ***

\[
\text{(number of ATUP trunks) \times (percentage of trunks used for E008 traffic)}
\]
\[+
\text{(number of AISUP trunks) \times (percentage of trunks used for E008 traffic)}
\]
\[+
\text{(number of MDC lines) \times (estimate of E008 usage)}
\]
Maximum

The percentage in the second recommended calculation must be 100 because the maximum formula must assume that all traffic is E008 traffic. Using the maximum calculation will likely lead to vast overprovisioning of this parameter.

Call forwarding conditional (CFC)

The CFC feature gives subscribers to the German Intelligent Network (GIN) services the ability to forward incoming calls at the trunk level. A recording unit from this pool is required to hold information for a forwarding record. This block is required for the duration of the call.

Conditions

The CFC feature is present.

Recommended

(estimated maximum number of simultaneous CFC forwards)

Maximum

(estimated maximum number of simultaneous E008 calls)

Private virtual network (PVN)

PVN service uses the public and private switched networks to provide private network features and capabilities. It provides connections for customers within a LATA and, by way of interLATA carriers (IC), provides connections to other LATAs. PVN service is implemented by the operating company database located at the SCP. A query is made on all PVN calls to this database by the SSP by means of SS7 common channel signaling protocol. The database provides routing information for the call as well as other call handling instructions.

PVN is packaged in NTX983AB (Service Switching Point Private Virtual Networking). It can be applied to an AT or to an EAO. It supports access to PVN call translation from SC trunk groups signaling feature group D (FGD), IT trunk groups signaling FGD, MDC trunks, MDC Business, Group Stations, MDC attendant consoles, dedicated MDC stations and Remote access lines or trunks.
An AMA record is generated on all originating PVN calls if the billing indicators information is included in the response message from the SCP. The following call codes have been assigned for PVN services:

- 160 - ON-NET PVN call
- 161 - ON-NET PVN overflow call
- 162 - OFF-NET PVN call
- 163 - OFF-NET PVN overflow call
- 164 - PVN call using FGA
- 165 - PVN call using FX
- 166 - PVN call using OUTWATS
- 167 - PVN call using TIE trunks

Billable PVN calls require a subrecording unit from this pool. The extension block is held for the length of the call.

**Conditions**

Package NTX983AB is present.

**Recommended**

(estimate of the number of simultaneous PVN calls that the office is engineered to handle)

X  (percentage of PVN calls that are billable)

**Maximum**

(number of SC trkgrp members signaling FGD)
+ (number of IT trkgrp members signaling FGD)
+ (number of MDC trkgrp members)
+ (number of MDC Business Group Stations)
+ (number of MDC Attendant Consoles)
+ (number of MDC stations)
+ (number of Remote Access lines or trunks)

**Advanced intelligent network (AIN)**

In release 0.0 of AIN, it is defined as a network architecture that allows an operating company to design its own features and provide these features across the public and private network. Calls that require these features must trigger a query to the SCP, which is a centralized database in the Common Channel Signaling 7 (CCS7) network. Once a query is received from the SSP, the SCP returns information to the SSP that is necessary to process the call.

Access to the network is gained through the network access point (NAP) or the SSP. Triggers that are set up in the translations alert the SSP that the call
i s an AIN call that requires a query to the SCP. The following call types can
access the AIN network:

POTS and RES lines SC trunk groups signaling Feature Group D (FGD) IT
trunk groups signaling FGD MDC trunks MDC business group stations
MDC attendant consoles Dedicated MDC stations Remote access lines or
trunks

The SSP generates AMA records and appends AMA modules based on the
billing elements received from the SCP and/or AMA data gathered at the
SSP. An AMA record is generated whenever the SCP response message
includes billing information in the routing instructions.

AIN consists of feature packages NTX983AB (Service Switching Point
Virtual Networking) and NTXN28AA (Intelligent Network Billing
Attributes).

Conditions

Packages NTX983AB and NTXN28AA are present.

Recommended

(estimate of the number of simultaneous AIN calls that the office is
engineered to handle)

X  (percentage of AIN calls that are billable)

Maximum

(number of POTS and RES lines)
+ (number of SC trkgrp members signaling FGD)
+ (number of IT trkgrp members signaling FGD)
+ (number of MDC trkgrp members)
+ (number of MDC business group stations)
+ (number of MDC attendant consoles)
+ (number of MDC stations)
+ (number of remote access lines or trunks)

Meridian SuperNode (MSN)
The MSN feature is included in package NTXE75AB (Offnet Access
Services). This feature allows the recording of various call information
from a Meridian SuperNode switch. The MSN option is datafilled in table
CUSTSMDR against a business group identifier. All calls in this business
group produce a DB extension record.

Conditions

Package NTXE75AB is present.
CRS_SUBRU_POOL3_SIZE

**Recommended**

(number of MDC lines where the custgrp has the MSN option)

X  (percentage of MDC offhks that the office is engineered to handle)

**Maximum**

(number of MDC lines where the custgrp has the MSN option)

**Range information**

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<tr>
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</tbody>
</table>

**Activation**

Increase - immediate
Decrease - cold restart

**Dependencies**

The CRS_SUBRU_POOL3 extension block is controlled by this office parameter.

**Consequences**

This parameter provisions a subrecording unit pool. Failure to obtain a sufficient number of these units results in the incomplete collection of recording data. This pool is critical in generating the AMA data outlined in the description of this parameter.

**Verification**

This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL3 and an index of 98 for operational measurement (OM) group EXT.

**Memory requirements**

Each unit requires 26 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**

BCS36  provisioning rules for CFC added and CLASS provisioning rules modified

OFCENG-174  297-1001-455  Standard 22.02  March 1994
**Parameter name**

Call Recording Stream Sub-recording Unit Pool4 Size

**Functional description of parameter CRS_SUBRU_POOL4_SIZE**

This parameter controls the provisioning for the CRS_PRU_POOL4 extension block pool.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform. If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

**Provisioning rules**

A description of each application that requires an extension block from the pool controlled by this parameter is provided in the following pages as well as the conditions that determine the application's usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst case maximum value. The "engineered percentages" that are required for most of the recommended calculations are meant to aid in determining a reasonable number for a particular application. If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is better to use the recommended calculation than the maximum calculation even if certain percentages are not exactly known. The maximum value is provided for those operating companies that are unable to provide the information required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter may occur. In some cases, the maximum value is not appropriate and is not provided.

Some of these formulas include an estimated percentage of the billable calls involving the respective application. Note that the term "billable" includes all calls that generate a record, such as the following types:

- Automatic Message Accounting (AMA)
- Station Message Detail Recording (SDMR) when Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in table CUSTSDMR and SMDR is turned on for the office.

In one case, a value of 7% is multiplied into the provisioning formulas. This takes into account the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the AMA record is released to formatting.

If the conditions for a particular application are met, the application's usage must be determined based on the formula. The sum of these formulas is then used to determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the
formulas, use the default value. Never provision this parameter at a value less than that of the default.

Basic TOPS and Automatic Calling Card Service (ACCS)
A subrecording unit from this pool is required for all TOPS and ACCS billing. An extension block from this pool is important to TOPS AMA. These extension blocks are held for a short time because they are allocated just prior to releasing the AMA record to formatting. TOPS resides in feature package NTX188AA (TOPS--BCR AMA Format). ACCS resides in feature package NTXH48AA (Australian ACCS Support).

Conditions
Feature package NTX188 or NTXH48 is present.

Recommended
(engineered percentage of the number of simultaneous trunk offhooks)
\[
X \times \left(7\% \times \left(\text{TOPS\_NUM\_RU} \text{ in table OFCENG}\right)
+ \left(\text{OOC\_NUM\_RU} \text{ in table OFCENG}\right))\right)
\]

Maximum
\[7\% \times \left(\text{TOPS\_NUM\_RU} \text{ in table OFCENG}\right)
+ \left(\text{OOC\_NUM\_RU} \text{ in table OFCENG}\right)\]

BellCore frame relay service (FRS)
DataSPAN FRS is a connection-oriented “packet” data service in which an FRS subscriber is connected to a frame relay switch through an access channel on which multiple logical link connections to other subscribers may exist. FRS permits subscribers to communicate on one or more logical links simultaneously. FRS subscribers are billed on a usage basis. Counts of the actual data going through the frame relay interface unit (FRIU) are tabulated. The counts are then collected by the FRS billing controller and stored in the FRS billing internal storage. During the aggregation phase, the counts are retrieved and table lookups are done to obtain billing information required for the billing record.

BellCore frame relay recording is achieved by using a unique call code (089) and appending newly created modules with module code 069. The provisioning of CRS\_SUBRU\_POOL4\_SIZE must take into account one extension block per permanent logical link connection (PLLC). The number of PLLCs is equal to the number of tuples datafilled in subfield CONNECT in table PVDCUST plus the number of trunk-to-trunk connections datafilled in table FRSTRKCN. This capability is in feature package NTXQ35AA (Frame Relay LEC Billing).
Conditions

Feature package NTXQ35AA is present.

Recommended

(number of PLLCs)

Maximum

A maximum calculation is not applicable in this case.

DMS Packet Handler (DMS PH)

DMS PH is a packet handler for the DMS-100 product family that provides a full range of X.25 packet services for ISDN B and D channels. Packet handler provides detailed AMA records for the following call types:

- Intranetwork switched virtual circuit (SVC)
- Intranetwork SVC, long duration
- Internetwork SVC
- Internetwork SVC, long duration
- Internetwork permanent virtual circuit (PVC)
- Internetwork PVC

Chargeable usage for packet-mode calls varies from that of circuit-mode calls. Circuit-mode call recording is based primarily on elapsed time from connect to disconnect. Packet-mode recording is based on elapsed time as well as a count of packet segments sent and received from a chargeable interface. Four rate periods are assigned by the operating company through datafill. The packet AMA records contain four packet segment counts, one for each rate period. Note that there is no concept of elapsed time for PVCs because a PVC is a permanent nailed-up connection.

A virtual call attempt is always considered chargeable unless the call is blocked by the network or the X.25/X.75 link interface unit (XLIU) has been removed from service. The XLIU is part of the DMS PH architecture that determines and reports the elapsed time to call processing. The XLIU also reports the four rate period segment counts for recording. In addition, the XLIU can handle a maximum of 1000 virtual calls at one time.

The DMS-PH resides in feature package NTXP47AA (DMS Packet Handler Base).
CRS_SUBRU_POOL4_SIZE

**Conditions**

Package NTXP47AA is present.

**Recommended**

\(1000 \times \text{(number of XLIUs)}\)

**Maximum**

A maximum calculation is not applicable in this case.

**Range information**

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</thead>
<tbody>
<tr>
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<td>4294967295</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**

Increase - immediate  
Decrease - cold restart

**Dependencies**

The CRS_SUBRU_POOL4 extension block is controlled by this parameter.

**Consequences**

This parameter controls a subrecording unit pool. Failure to obtain sufficient resources for this pool results in the loss of billing for the application outlined in the Provisioning Rules section.

**Verification**

This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL4 and an index of 99 for Operational Measurement (OM) group EXT. For more information on OMs, see the Operational Measurements Reference Manual 297-1001-814.

**Memory requirements**

Each unit requires 40 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
C-side Link Alarm Thresholds

Functional description of parameter CSLINK_ALARM_THRESHOLDS
This parameter is required for a local or SL-100 switching unit. It specifies the threshold percentages for major and critical alarms for CSIDE failures on the following peripheral module types:
- line concentrating module (LCM)
- international line concentrating module (ILCM)
- ISDN line concentrating module (LCMI)
- line group controller (LGC)
- digital trunk controller (DTC)
- message switch and buffer 6 (MSB6)
- line trunk controller (LTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module (SMS)
- subscriber carrier module-100 urban (SMU)
- message switch and buffer 7 (MSB7)
- remote cluster controller (RCC)
- austrian digital trunk controller (ADTC)
- PCM-30 digital trunk controller (PDTC)
- international line group controller (ILGC)
- international digital trunk controller (IDTC)
- international line trunk controller (ILTC)
- ISDN access controller (IAC)

Once a link failure has been detected the raising of the alarm and its severity depends on the threshold percentage specified by this parameter. The alarm occurs if the percentage of lost C-side links is greater than or equal to the threshold percentage. The calculation of the percent of failed links rounds up to the nearest integer value. For example, if the major threshold is 34% and 3 out of 9 CSIDE links are lost then the alarm is raised.

Provisioning rules
Any percentage is allowed for a major alarm but the critical threshold must be greater than or equal to the major threshold.

This set of thresholds applies to the entire switching unit.

This parameter has two fields, the major and the critical threshold percentages, each with a value range of 1 to 100.
CSLINK_ALARM_THRESHOLDS

A value of 100% turns off the feature for that alarm level.

The default thresholds are 30% for a major alarm and 60% for a critical alarm.

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<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30 60</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter is new in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Data Class of Service

Functional description of parameter DATA_COS

This parameter is required for all switching units with the Integrated Business Network (IBN) and the DATAPATH or ESN feature.

Provisioning rules

If the switching unit is connected to an ESN switching unit, set the value of this parameter equal to the terminating NCOS number that indicates that the call is a digital data call.

In a non-ESN environment, set the value of this parameter equal to the NCOS value for all incoming digital calls.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Cold restart

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
CUSTOMER_GROUP_IBNGRP_OM_COUNT

Parameter name
Customer Group Integrated Business Network Group Operational Measurement Count

Functional description of parameter
CUSTOMER_GROUP_IBNGRP_OM_COUNT
This parameter allocates data store for the Integrated Business Network Group (IBNGRP) operational measurement group.

The value specified for this parameter must be a multiple of 32. (that is, 0, 32, 64, 96, etc.) This restriction is imposed so that the parameter will be changed infrequently. Frequent changes in the value of this parameter can lead to fragmentation of data store.

The value specified places an upper limit on the number of IBN customer groups that can be datafilled. Attempts to add new customer groups to table CUSTENG when this upper limit has been reached, are rejected.

Provisioning rules
Since consoleless customer groups are assigned customer group numbers starting from 256 (0 to 255 are reserved for customer groups that have consoles) by table control, consoleless customer groups can be created only if the parameter is greater than 256. Since the values are multiples of 32, the minimum value of the parameter which allows the use of consoleless customer groups is 288 (256 + 32 = 288).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4095</td>
<td>32</td>
</tr>
</tbody>
</table>

Activation
Cold restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
Not applicable

Consequences
Attempts to add new customer groups to table CUSTENG when this upper limit has been reached, are rejected.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
CUSTOMER_GROUP_IBNGRP_OM_COUNT

Dump and restore rules
This parameter was introduced in BCS14.
Copy the existing value of this parameter when doing a dump and restore

Parameter history
BCS36  NORESTARTSWACT activation added
**DB_MAX_SIZE**

Parameter name
Booked Call Data Base Maximum Size

**Functional description of parameter DB_MAX_SIZE**

The parameter determines the size of the booked call database.

It is associated with the ITOPS booked call database size increase feature that increases the maximum number of calls allowed to be stored at one time in the booked call database from 1280 to 5120.

**Provisioning rules**

Set the value of this parameter to the number of calls that are required to be in the Booked Call Database at one time.

The parameter will enforce the following values:

1280, 1408, 1536, 1664, 1792, 1920, 2048, 2176, 2304, 2432, 2560, 2688, 2816, 2944, 3072, 3200, 3328, 3456, 3584, 3712, 3840, 3968, 4096, 4224, 4352, 4480, 4608, 4736, 4864, 4992, 5120

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1280</td>
<td>5120</td>
<td>1280</td>
</tr>
</tbody>
</table>

**Activation**

Cold restart

**Dependencies**

Not applicable

**Consequences**

This parameter uses a large amount of data store.

**Verification**

Not applicable

**Memory requirements**

Each unit requires 153 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
DCH_BD_STATMUX_RATIO

Parameter name
D-channel Handler Bd Statistically Multiplexed Ratio

Functional description of parameter DCH_BD_STATMUX_RATIO
This parameter is required for a switching unit with the Integrated Services Digital Network (ISDN) feature. It controls the maximum number of logical terminals that can be statistically multiplexed onto one Bd channel to route the packet data to the Data packet network (DPN). It is required to allow the maximum ratio in a particular switching unit to be set.

This parameter directly controls the maximum number of Logical Terminal Identifiers (LTID) (BD or D) that can be mapped into the same Bd channel in table LTMAP.

Default mapping algorithms also use this value as a maximum.

The value should not be set to a value greater than 32 until the Packet Handler is upgraded to handle values greater than 32.

The value of this parameter indirectly controls the number of packet data LTIDs that can be data filled for each DCH.

The number of packet data LTIDs = Number of BD channels X the value of this parameter.

An estimate of the number of packet data LTID for each DCH can be evaluated as follows:
number of packet data LTIDs required = (number of packet data LTIDS expected per loop) X (number of BRA TDM DCH channels) X 4.

The number is related to the level of traffic expected, and to the types of terminal used. An indication of the traffic for an inservice DCH is indicated by the DCHBD OM and is accessible from the channels level of the MAP.

If the maximum number of LTIDs per Bd channel exceeds the value of this parameter the following message is displayed:
CAPACITY OF Bd CHANNEL Y ON DCH X EXCEEDED

Provisioning rules
Specify the maximum number of logical terminals that can be statistically multiplexed onto one Bd channel to route the packet data to the DPN.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>
**DCH_BD_STATMUX_RATIO**

**Activation**
Immediate

**Dependencies**
The type of packet data terminals in use, and the number of packet data terminals for each loops have will impact the value selected for this parameter.

**Consequences**
Overprovisioning of this parameter results in a slow response on packet data terminals.

Underprovisioning of this parameter results in a large number of Bd channels being required for each D-Channel Handler (DCH).

Underprovisioning is best illustrated by an example:
If there are 27 Basic Rate Access (BRA) TDM channels provisioned on a DCH, four loops are connected to each of the 27 TDM channels, (that is, 100 loops).

The loops can be displayed by entering QDCH DCH x.

If each loop has two packet data logical terminal provisioned:
4 Bd channels are required for each DCH if value of parameter is 50.
6 Bd channels are required for each DCH if value of parameter is 32.
8 Bd channels are required for each DCH if value of parameter is 16.

**Verification**
Set the value of this parameter, then attempt to ATTACH more than the desired value of packet data LTIDs to loops connected to the same DCH, using the same value as the DCHCHNL option.

See OM GROUP DCHBD for the operational measurements associated with this parameter.

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Dual Tone Multi Frequency Calling Number Delivery Timers

Functional description of parameter DCND_TIMERS

This parameter is required in a switching unit with Japan ISDN User Part (ISUP) trunks. It specifies timeout values for the Dual Tone Multi Frequency Calling Number Delivery (DCND) timers.

DCND provides a method of delivering the calling line identifier (CLID) to the customer premise equipment (CPE) of the called party by way of DTMF transmission.

Provisioning rules

The function and range of values for this parameter are outlined in table 1. Note that all values are given in increments of 10 ms. For example, a value of 8 specifies a time interval of 80 ms.

<table>
<thead>
<tr>
<th>Parameter field</th>
<th>Function</th>
<th>Range of values</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCND_ON</td>
<td>duration of each digit during DCND transmission (excluding the first DTMF A)</td>
<td>1 to 10</td>
</tr>
<tr>
<td>DCND_OFF</td>
<td>interdigit time for the DCND transmission</td>
<td>1 to 10</td>
</tr>
<tr>
<td>DCND_A</td>
<td>duration of initial DTMF A</td>
<td>50 to 100</td>
</tr>
<tr>
<td>DCND_T2</td>
<td>duration of silent period following the DTMF A and before the DCND transmission</td>
<td>1 to 10</td>
</tr>
<tr>
<td>DCND_T3</td>
<td>minimum length of the silent period between the last digit transmitted and the start of physical ringing</td>
<td>1 to 10</td>
</tr>
</tbody>
</table>

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>385</td>
<td>66</td>
</tr>
</tbody>
</table>

Activation

Immediate

New data is dynamically updated in all affected peripheral modules.

Dependencies

Not applicable
DCND_TIMERS

Consequences
This parameter should not be modified unless the DCND transmission using the default timing values cannot be detected by the CPE.

Verification
To verify that this parameter is set and working, make a call to a DCND customer and measure the resulting transmission.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced on BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter introduced
Parameter name
Data Call Tester Memory Limit

Functional description of parameter DCT_MEM_LIMIT
This parameter is required in a DMS-100 or DMS-200 switch with the Data Call Tester (DTC) feature. It specifies the amount of memory, in Kbytes, that can be used to store DCT results.

The recommended value is 1024 which specifies 1 Mbyte of memory.

Provisioning rules
The maximum amount of memory required for DCT test results depends on the number of days that the results are kept and the number of concurrently running integrated bit error ratio tests (IBERT). For a summary size of 90 bytes and a bin size of 18 bytes, table 1 shows the typical memory usage for DCT test results generated by an IBERT for each day.

<table>
<thead>
<tr>
<th>Duration</th>
<th>Number of tests</th>
<th>Maximum number of bins/test</th>
<th>Storage required</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 s</td>
<td>5760</td>
<td>1</td>
<td>607 Kbyte</td>
</tr>
<tr>
<td>15 min</td>
<td>96</td>
<td>3</td>
<td>13 Kbyte</td>
</tr>
<tr>
<td>30 min</td>
<td>48</td>
<td>6</td>
<td>9 Kbyte</td>
</tr>
<tr>
<td>1 h</td>
<td>24</td>
<td>12</td>
<td>7 Kbyte</td>
</tr>
<tr>
<td>2 h</td>
<td>12</td>
<td>20</td>
<td>5 Kbyte</td>
</tr>
</tbody>
</table>

The amount of memory required is decreased as duration increases as shown in table 1. Although tests with a duration of 15 s require a large amount of memory, repeating such a test is not usually done. Tests with short durations (less than 15 min) should be considered separately.

The following formula is used to estimate the maximum storage requirement:

\[ M = (13 \times \text{days} \times \text{ibert}) \]

where

- \( M \) is the amount of memory required for DCT information storage in Kbyte
- \( \text{days} \) is the number of days results are kept
- \( \text{ibert} \) is the number of IBERTs running DCT
DCT_MEM_LIMIT

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4096</td>
<td>1024</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

As the value of this parameter is increased, more DTC test results can be stored.

Verification

The following messages are displayed when this office parameter is modified.

Test results data restructure is re-initialized

This message indicates that the whole data structure is deallocated and re-initialized in the case where the limit is decreased.

New limit is set to <limit> KBytes

This message confirms that the new limit is set whether it has increased or decreased.

***There are tests in progress***

This message is displayed when the user is trying to modify the value of this parameter while there are still tests running or pending tests to be executed. A change to the value of this parameter is rejected at this time.

***There are active DCT MAP sessions***

This message is displayed when the user is trying to decrease this parameter value while there are active MAP sessions using DCT (that is, selected a testbook ID). A change to the value of this parameter is rejected at this time.

***Resources shortage***

This message is displayed when the user is trying to decrease the value of this parameter and some resources cannot be allocated during the re-initialization of test results. A change to the value of this parameter is rejected at this time.
***Command is rejected***

This message is displayed in conjunction with other error messages to confirm that the command to change the value of this parameter has been aborted.

**Dump and restore rules**

This parameter was introduced in BCS36

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**

**BCS36** parameter description added
DEBUG_HUNT_SWERRS

Parameter name
Debug Huntgroup Audit Software Errors

Functional description of parameter DEBUG_HUNT_SWERRS
This parameter is required for switching units with one or more hunt groups.

There have been instances of software errors (SWERR) being generated from the hunt audit. These SWERRS are difficult to trace.

The SWERR identifies the terminating agent, but not the originating agent involved.

If the value of this parameter is set to Y (yes), the information on the saved originating agent is displayed as a SWERR that occurs at the same time as the SWERR from the hunt audit. Its text displays the originating agent, that assists in the debugging of SWERRS that are generated from the hunt audit.

Hunt members added after the parameter is set to Y are not debugged, unless the office parameter is first reset to the default value N (no) and then reset to the value of Y.

Provisioning rules
Activation of this office parameter should be administered by Northern Telecom (NT) technical assistance (TAS) personnel.

It should only be set to Y, when there are SWERRS from the hunt audit occurring, that must be debugged.

The value of this parameter should be set to N when debugging has been completed so that the memory required can be deallocated.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable
Verification
If the value of the parameter is set to Y, the next SWERR from the hunt audit that occurs will be accompanied by a second SWERR with text indicating the originating agent.

Memory requirements
The following memory is allocated when the value of the parameter is set to Y.

99 words + 3 X (highest numbered huntgroup) + 2 X (sum of groupsize of every datafilled huntgroup)

Dump and restore rules
This parameter was introduced in BCS26.

Always leave the parameter at the default value during dump and restore.
DEF_AMR5_CAT_CODE

Parameter name
Default AMR5 Category Code

Functional description of parameter DEF_AMR5_CAT_CODE
This parameter is required for toll and combined local/toll switching units with AMR5 signaling.

The default category code is used when an automatic number identification (ANI) must be regenerated and the incoming category code defines the call type as ANIFAIL.

Provisioning rules
Set the value of this parameter to the two or three-digit default category code.

The default category code must be one of the category codes listed in table AMRCAT.

When the route in the AMRCAT table for the default category code is equal to NIL, all ANIFAIL calls are routed to the CAMA position in the Position table.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>999</td>
<td>000</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The default category code must be one of the category codes listed in table AMRCAT.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Default Bearer Capability

Functional description of parameter DEFAULT_BEARER_CAPABILITY

This parameter defines the default bearer capability (BC) of the office. In cases where the originator cannot supply a BC, this office parameter determines the BC that is assigned to that call.

If termination checking is done based on bearer capability, this parameter determines the BC for terminating agents that do not have an explicit BC datafilled against it.

Provisioning rules

For current network applications, it is recommended that this parameter remain set at the default value of SPEECH.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SPEECH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(This value is the same as the fixed default that existed prior to BCS31)</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Changing this parameter to a value of 3_1KHZ may have a severe impact on call completion.

If the value of this parameter is changed from SPEECH to 3_1KHZ, the translations associated with ISDN bearer capability routing must be considered. Table RTECHAR must be investigated for any entries using a BC of SPEECH. Entries with a BC of SPEECH may cause all POTS traffic on the switch to route through ISDN Bearer Capability translations. If table OFCENG parameter NUM_RC_EXT_BLKS has not been engineered to accept this traffic load, calls will be blocked.

It should be noted that a potential problem exists in the fact that the public network and several types of ISDN telephones have not been programmed to accept calls with a Bearer Capability of 3.1KHz.

It is recommended that a value of 3_1KHZ be used only within a controlled environment.
DEFAULT_BEARER_CAPABILITY

Verification

If ISDN User Part (ISUP) is in the office, the user can verify the value of this parameter by making an ISUP call from a POTS line or IBN line. The information transfer capability field in the outgoing IAM message should correspond to the DEFAULT_BEARER_CAPABILITY that has been datafilled.

If Integrated Services Digital Network (ISDN) is in the office, the user can verify the value of this parameter by making a Primary Rate Access (PRA) call from a POTS line or IBN line. Ensure that the BC field in the Q.931 setup message corresponds to the DEFAULT_BEARER_CAPABILITY that has been datafilled.

Similarly, a call can be made from a line to a Basic Rate Access (BRA) set with firmware release greater than BCS29, with a PVC issue other than 0 datafilled in table LTDEF, and which does not have the NOVBD option in table LTDEF. The BC in the Q.931 setup message going to the BRA functional set should correspond to the DEFAULT_BEARER_CAPABILITY that has been datafilled.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter is new with software release BCS31.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Default Carrier or Treatment

Functional description of parameter DEFAULT_CARRIER_OR_TREAT

This parameter is required for an Equal Access End Office and specifies the carrier name or treatment that is used when a subscriber dials a toll call without having a PIC (Preferred INTER–LATA Carrier) or dialing a 10XXX prefix.

Provisioning rules

If the call is to be routed to a carrier, enter C and then the carrier name to which the call must be routed. The C and the carrier name must be separated by a blank space.

If the call is to be routed to a treatment, enter T and then the treatment name to which the call must be routed. The T and the treatment name must be separated by a blank space.

The default value is T DACD, which routes calls made without a PIC or 10XXX to the treatment DIAL ACCESS CODE (DACD) in the appropriate treatment table.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T DACD</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
DEFAULT_COMMANDCLASS

Parameter name
Default Command Class

Functional description of parameter DEFAULT_COMMANDCLASS
This parameter appears only if the parameter ENHANCED_COMMAND_SCREENING in table OFCOPT is set to Y (yes), and the switching unit has software package NTX292AB (Enhanced Security – with Password Encryption).

Provisioning Rules
Specify the command class to which all commands that have been automatically captured into the table CMDS during datafill are defaulted.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>30</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

If this parameter is changed, only those commands placed in the CMDS table by subsequent calls to ADDCOMMAND or ADDCIBINCOM will have the new default command class. All other entries in the CMDS table will be unaffected.

Dependencies
This parameter appears only if the parameter ENHANCED_COMMAND_SCREENING in table OFCOPT is set to Y (yes), and the switching unit has software package NTX292AB (Enhanced Security – with Password Encryption).

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter.
DEFAULTLANGUAGE

Parameter name
Default Language

Functional description of parameter DEFAULTLANGUAGE
This parameter is required for switching units with the Bilingual Man Machine Interface feature.

Provisioning rules
This parameter specifies the language of the user interface when the language has not been specified as input through the Permit Users command.

The value can be either ENGLISH, FRENCH, GERMAN, or SPANISH.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ENGLISH</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
There are no memory requirements associated with this parameter.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**DIRP_PFILE_AUDIT**

**Parameter name**
Device Independent Recording Package Processed File Audit

**Functional description of parameter DIRP_PFILE_AUDIT**
This parameter specifies the time that the Device Independent Recording Package (DIRP) PFILE reclamation process will begin. When the audit process is scheduled to begin, all processed DIRP disk files will be deleted. A processed DIRP disk file is preceded by the letter “P” (Processed). After deletion, this reclaimed space can be reused by DIRP for new files if necessary.

**Provisioning rules**
PFILE reclamation uses system resources. It is recommended that the DIRP_PFILE_AUDIT be set to run at a time of low switch activity.

This parameter has three separate ranges of values as outlined in table 1:

<table>
<thead>
<tr>
<th>Field</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONOFF</td>
<td>Y or N</td>
</tr>
<tr>
<td>HOUR</td>
<td>0 to 23</td>
</tr>
<tr>
<td>MINUTE</td>
<td>0 to 59</td>
</tr>
</tbody>
</table>

The default value is N 3 30. This means that the on/off flag is set to N (off) and the default time is set for 3:30 am. In order to have this audit begin running at this time, set the on/off flag to Y (on).

If a different time is preferred for the start of the PFILE audit, set the on/off flag to Y and change the hour and minute fields accordingly.

If this audit is not desired, leave the on/off flag set to N.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N 3 30</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable.
Consequences
Not applicable.

Verification
Not applicable.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS33.
Copy the existing value of this parameter when doing a dump and restore.
**DISC_TIME_BILLED**

**Parameter name**

Disc Time Billed

**Functional description of parameter DISC_TIME_BILLED**

This parameter is required for all switching units with Automatic Message Accounting (AMA) tape units and indicates whether the conversation time recorded on the AMA records should be corrected for called party disconnect timing.

**Provisioning rules**

- If this parameter is set to N (no), the value of parameter LONG_TIMEDRELEASE_DISC_TIME or SHORT_TIMEDRELEASE_DISC_TIME in table OFCENG will be subtracted from the conversation time on the AMA record.
- If this parameter is set to Y (yes), the time on the AMA record will include the disconnect timing.

The value of this flag is determined by the downstream processor for the AMA tapes.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

See office parameters LONG_TIMEDRELEASE_DISC_TIME and SHORT_TIMEDRELEASE_DISC_TIME in table OFCENG.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

Copy the existing value of parameter.
Parameter name

Disconnect Timeout Value

Functional description of parameter DISCTO_TIMEOUT_VALUE

This parameter is required in an Integrated Business Network (IBN) Private Branch Exchange (PBX) (SL-100) or in a Plain Ordinary Telephone Service (POTS)/CENTREX (local) switching unit that has the DATAPATH feature.

DATAPATH provides switched data service to a customer equipped with Data Units (DU). The DUs can be interfaced to terminals, mainframes, printers, front-end communications processors, and other devices.

Some devices take a significant amount of time to clear a call in their software (that is, the disassociation between the application task and a communication port is not done immediately after call take down). Because of this delay, it is possible for an immediate subsequent call to that port to gain direct access to the application task that is still associated with that port. This is a serious security loop-hole since the caller bypasses all password checking and gains unauthorized access to the application.

The DISCTO (disconnect timeout) feature is required (for security reasons) to hold a DU line in an unavailable state for a datafillable time after call take down. This is an optional feature assigned on a per line basis.

This feature is available on the following types of DUs:

- LS (low speed)
- HS (high speed)
- CCU (control coax unit)
- AILC (async interface line card)
- DAVLC (data above voice line card)
- OPEN (any class).

This parameter specifies the disconnect timeout value, in 1 second intervals. All of the above DUs with the DISCTO feature will have the same timeout value.

The feature cannot be applied to DPX, CPI and DTI DUs, but works with LIU-DTU loop extension.

Provisioning rules

Specify the disconnect timeout value, in 1 second intervals.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>600</td>
<td>15</td>
</tr>
</tbody>
</table>
DISCTO_TIMEOUT_VALUE

Activation
Immediate

Dependencies
A DU requiring this feature must be assigned line option DISCTO in table KSETLINE.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Digital Modem Hit Time

Functional description of parameter DM_HIT_TIME
This parameter is used during the initialization sequence of the digital modem card (NT3X02) when first connected to any of the following operator positions in a DMS-200 TOPS office:
- Traffic Operator Position System (TOPS)
- Auxiliary Operator Services System (AOSS)
- Overseas Operating Centre (OOC).

It specifies the length of time that the modem carrier can remain undetected by the modem card before the modem is required to report the carrier loss to the DMS central control (CC). This parameter is expressed in units of 10 milliseconds, so that a parameter value of 20 causes a modem to ignore a carrier outage of less than 200 milliseconds.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>255</td>
<td>40</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter is not affected by other parameters. It affects the number of available test circuits, amount of system time spent doing diagnostic maintenance, held incoming circuits waiting in queue for operators that are out of service, and available modems for connection to operator positions when carrier outages are being experienced.

Consequences
When under provisioned, operator positions will more likely be taken out of service for carrier conditions that are not service affecting.

When over provisioned, operator positions will more likely be left in service for carrier conditions that are service affecting.

Verification
The value of this parameter can be verified by causing a carrier outage in the demodem signal path for a period greater than that which the parameter represents. This should cause the connected position to be taken out of service by the system. A TOPS, AOSS, or OOC log, indicating the lost carrier, should be generated in the system maintenance logs.
DM_HIT_TIME

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS31. It replaces TOPS_DM_HIT_TIME, OOC_DM_HIT_TIME, and AOSS_DM_HIT_TIME as of BCS 31.

When performing a dump and restore from BCS30 or lower to BCS31 or higher, set this parameter to the value of AOSS/OOC/TOPS_DM_HIT_TIME from the old load.

Copy the existing value of this parameter when doing a dump and restore from software release BCS31 to software release BCS31 or higher.
DM_PCM_ENCODING

Parameter name

Digital Modem Pulse Code Modulation Encoding

Functional description of parameter DM_PCM_ENCODING

This parameter is required for switching units with NT3X02CA digital modems (DM). It specifies the type of pulse code modulation (PCM) encoding scheme that is required.

The DM is designed to handle communications between the DMS Central Central Control (CC) and Traffic Operator Position System (TOPS) positions and devices, Auxiliary Operator Services System (AOSS) positions and devices and the attendant consoles.

The NT3X02/3X03 DM provides Bell 108 and 202 communication protocols. The NT3X02CA DM provides the Bell 212 communication protocol.

Provisioning rules

If the switching unit is located in Europe and one or more NT3X02CA DMs are provided, set the value of this parameter to DM_A_LAW.

If the switching unit is located in North America, leave the value of this parameter at the default of DM_MU_LAW.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DM_MU_LAW</td>
</tr>
</tbody>
</table>

Activation

Cold restart

Dependencies

Field CARDCODE in table DMODEM specifies the code of the DMs.

Tables AOSSDEV, AOSSPOS, TOPSDEV and field PROTOCOL in table TOPSPOS specifies the communication protocol for each of the AOSS and TOPS positions.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS22.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
DMS-BUS Poll Frequency

Functional description of parameter DMSBUS_POLL_FREQUENCY
This parameter specifies the frequency at which the DMS-CORE polls the DMS-BUS. This poll is used as an audit to determine the sanity of each DMS-BUS.

A sanity poll query is sent to each DMS-BUS after the number of seconds specified by the value of this office parameter.

Provisioning rules
Set the value of this parameter to 1.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Immediate

The new polling value is applied as soon as the last poll has been completed.

Dependencies
Not applicable

Consequences
If the parameter is set too low, there will be an impact on realtime usage. If it is set too high, there may be an inordinate delay in detecting a DMS-BUS failure.

With an insufficient polling frequency, network wide routing loops may appear if the routing tables in the affected DMS-BUS cannot be updated and the condition of the faulty node is not known.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
**DNLPIC_MAX_NUM_DN_TUPLES**

**Parameter name**
Table DNLPIC Maximum Number Of Directory Number Tuples

**Functional description of parameter DNLPIC_MAX_NUM_DN_TUPLES**
This parameter specifies the number of tuples, in multiples of 10,000 that can be datafilled in table DNLPIC.

**Provisioning rules**
Specify the maximum number of tuples to be provisioned in table DNLPIC in multiples of 10,000.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100</td>
<td>5</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Table DNLPIC holds the directory numbers of subscribers choosing to select a Primary IntraLATA carrier.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Table DNPIC Maximum Number of Directory Number Tuples

Functional description of parameter DNPIC_MAX_NUM_DN_TUPLES
This parameter is required in a Bell Operating Company (BOC) switching unit with the Traffic Operator Position System (TOPS) feature.

This parameter specifies the maximum number of entries that can be datafilled in table DNPIC (Directory Number Primary Interlata Carrier).

Provisioning rules
Specify the maximum number of tuples that can be datafilled in table DNPIC. The parameter value is expressed in 10,000 line units with a maximum of one million directory numbers. For example, a value of 5 allows a maximum of 50,000 entries in table DNPIC.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>5</td>
</tr>
</tbody>
</table>

Activation
Reload restart

Dependencies
Table DNPIC contains information that associates a directory number with a primary Interlata Carrier (IC). It provides a greater flexibility to TOPS Interlata Carrier Service (TICS). It allows InterLATA calls to have the ability to obtain the IC based on the calling party’s directory number instead of the incoming trunk group data.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
DRAM BARGE IN

Parameter name
Digital Recorded Announcement Machine Barge In

Functional description of parameter DRAM_BARGE_IN
This parameter allows the immediate connection to the broadcasting of Digital Recorded Announcement Machine (DRAM) announcements. It is valid for both Automatic Call Distribution (ACD) lines and Inter-Exchange Trunk (IET) trunks.

Provisioning rules
If this parameter is set to OFFRING, each call that is connected to a broadcast announcement receives audible ringing until the announcement begins a cycle.

If this parameter is set to OFFSILENT, each call that is connected to a broadcast announcement receives silence until the announcement begins a cycle.

If this parameter is set to ONRING, the first call that is connected to a broadcast announcement receives a very short burst of audible ringing while the DRAM is being connected. All subsequent calls are immediately connected.

If this parameter is set to ONSILENT then the first call that is connected to a broadcast announcement receives silence until the announcement is ready. All subsequent calls are immediately connected.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ONSILENT</td>
</tr>
</tbody>
</table>

Activation
Immediate
It is recommended that the parameter be modified on initial office datafill. However, further changes to the parameter will be reflected without requiring a restart.

Dependencies
Not applicable.

Consequences
Not applicable.

OFCENG-212 297-1001-455 Standard 22.02 March 1994
Verification

To verify that DRAM_BARGE_IN is properly set and working, perform the following:

1. Select a broadcast DRAM announcement.
   a. Make sure that the announcement is operational.

2. Choose a first terminal and connect it to the announcement. The announcement should then work as specified for the first terminal.

3. While the first terminal is connected, connect a second terminal to the announcement. The announcement should then work as specified for the second terminal.

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
DTSR_AUTO_DEACTIVATION_ENABLE

Parameter name
Dial Tone Speed Recording Automatic Deactivation Enable

Functional description of parameter DTSR_AUTO_DEACTIVATION_ENABLE
This parameter controls the ability of Dial Tone Speed Recording (DTSR) to deactivate itself when system resources are at a premium.

Provisioning rules
If this parameter is set to Y (yes), DTSR deactivates itself when certain system resources become scarce. In BCS19, digitone receivers are the only system resource monitored. If a RCVRQ overflow occurs, DTSR deactivates itself. It will reactivate itself 15 minutes later if system resources are available again. If the system resources are still at a premium, DTSR continues to try to reactivate itself until it is successful. A log is produced when DTSR deactivates or reactivates itself (DTSR100 & DTSR101 respectively).

If the value of this parameter is set to N (no), the DTSR does not deactivate itself when digitone receivers are scarce.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Dump and restore rules
This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
E2A Link Equipped

Functional description of parameter E2ALINKEQP
This parameter specifies whether a DMS SuperNode switch is equipped with E2A telemetry links. It is required to activate the computing module (CM) maintenance software that monitors the E2A link status.

Provisioning rules
Set this parameter to Y (yes) to enable the monitoring of the E2A link status by an audit process. The CM MAP level CI command E2ALINK is also enabled.

Set this parameter to N (no) to disable the monitoring of the E2A link status. The E2ALINK command is also disabled.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Change office parameter E2ALINKEQP if the E2A telemetry equipment is added to or removed from the reset system of the DMS SuperNode switch.

Consequences
Incorrect provisioning of this parameter results in either the generation of erroneous logs and alarms for E2A link status or the loss of the E2A link status monitoring facilities.

Verification
To verify that this parameter has been set correctly, issue the CI commands: TABLE OFCENG; POS E2ALINKEQP.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS33.

Copy the existing value of this parameter when doing a dump and restore.
E911_AUD_RING_FROM_PSAP

Parameter name
E911 Audible Ringing From Public Safety Answering Point

Functional description of parameter E911_AUD_RING_FROM_PSAP
This parameter is associated with E911 which provides a centralized emergency service through a DMS-100 or 100/200 switch functioning as an E911 tandem.

This parameter allows for the choice of audible ring-back from either the DMS or the Public Safety Answering Point (PSAP) equipment.

Provisioning rules
Set the value of this parameter to N (no) to allow audible ringing to originate from the DMS.

Set this parameter to Y (yes) to allow the audible ringing to originate from the PSAP equipment.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
Not applicable.

Verification
To verify the functionality of this parameter, remove the audible ringing card from the customer equipment. The audible ringing will no longer exist unless generated by the DMS equipment.

Memory requirements
This parameter value requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
E911 Line Appearance On A Digital Trunk Public Safety Answering Point Software Status

Functional description of parameter E911_LDT_PSAP_SW_STATUS
This parameter is associated with E911 which provides a centralized emergency service through a DMS-100 or 100/200 switch functioning as an E911 tandem. It allows the forwarding of either a tone or on-hook signal to a line appearance on a digital trunk (LDT) public safety answering point (PSAP) when the calling party goes on-hook.

Provisioning rules
The parameter may take either of two values: ONHK_TO_LDT_PSAP or TONE_TO_LDT_PSAP.

When the parameter value is set to ONHK_TO_LDT_PSAP, an ONHK is forwarded to the LDT PSAP.

If the parameter value is TONE_TO_LDT_PSAP, a tone is presented to the PSAP attendant whenever the calling party goes on-hook. The tone remains audible to the PSAP attendant until one of the following events occurs:
- a conference is invoked
- ringback is invoked
- the calling party returns off-hook

The tone is presented at any time during which no speech path exists between an agent and an E911 caller and the RINGBACK feature is not active.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ONHK_TO_LDT_PSAP</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable
Memory requirements
Each unit requires 8 words of memory.

Dump and restore rules
This parameter was introduced in BCS32.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

E911 Local Access Receiver Off-hook Tone Time

Functional description of parameter E911_LOCAL_ACCESS_ROH_TONE_TIME

This parameter is used in a switch that acts as an E911 tandem and contains software packages NTXP58 and NTXN59. It specifies the time that receiver off-hook (ROH) tone lasts during any local access 911 call (line to E911 Virtual Facility Group to Public Safety Answering Point), if the PSAP agent invokes ROH.

Provisioning rules

The recommended value for this parameter is 500 (5 seconds). E911 call scenarios that rely on a DMS to DMS environment, where the call is outgoing from the end office on an OP trunk, use this value.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1000</td>
<td>500</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

To verify that this parameter is operational, make an E911 local access call and have the PSAP apply ROH to the caller's line. The duration of ROH tone (in seconds) multiplied by 100 will equal the value of this parameter.

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**E911_NUMBER_OF_FDBS**

**Parameter name**

E911 Number Of Feature Data Blocks

**Functional description of parameter E911_NUMBER_OF_FDBS**

This parameter replaces E911_NUMBER_OF_EXT_BLOCKS in BCS34. E911_NUMBER_OF_FDBS specifies the number of E911 feature data blocks (FDB) that are reserved for an office. E911 FDBs hold data during the various stages of an emergency call.

Any DMS switch acting as an E911 tandem and containing software packages NTX447AA (E911-Tandem) and NTXF61AA (DMS Integrated E911 PSAP Functionality) uses this parameter.

E911 FDB usage begins when a call terminates to a public safety answering point (PSAP) or Automatic Call Distribution (ACD) queue. The use of the E911 FDB continues until all parties in the call go on hook.

**Provisioning rules**

Use the following formula to determine the value for this parameter:

\[(\text{# ACD/Line/LDT PSAP agents}) + (\text{# slots in ACD PSAP queue}) \times 2\]

Where:

- **ACD** = Automatic Call Distribution
- **LDT** = Line appearance on a digital trunk
- **PSAP** = public safety answering point

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>20000</td>
<td>400</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

The value of this parameter must be smaller than or equal to the value of office parameter NO_OF_CRITICAL_FTR_DATA_BLKS in table OFCENG.

**Consequences**

Overprovisioning of this parameter decreases the memory resources that are available for other activities.

Underprovisioning of this parameter results in the possibility of features being unable to function. The following features at risk are at risk:
- Originhold, Switch-hook Status Tone
E911_NUMBER_OF_FDBS

- E911212 logs, Disconnect Timing
- Remote Call Event Records (RCER)
- Automatic Number Identification (ANI)
- Automatic Link Intelligence (ALI)
- Ringback.

If an FDB is unavailable, an E911224 log is generated.

Verification

After the value of this parameter has been changed, the generation of an E911223 log indicates that this change has not been effective.

Memory requirements

No memory requirement is associated with this office parameter. It uses the FDBs that are allocated by office parameter NO_OF_CRITICAL_FTR_DATA_BLOCKS.

Dump and restore rules

This parameter was introduced with software release BCS34.

If performing a dump and restore from software release BCS33 or lower to BCS34 or higher, the parameter E911_NUMBER_OF_EXT_BLOCKS is converted to E911_NUMBER_OF_FDBS. The formula for converting is:

E911_NUMBER_OF_FDBS = E911_NUMBER_OF_EXT_BLOCKS \times 2

Copy the existing value of this parameter when doing a dump and restore from software release BCS34 to software release BCS34 or higher.
Parameter name
Equal Access Common Channel Interoffice Signaling No.6 Tandem Billing

Functional description of parameter EA_CCIS6_TANDEM_BILL
This parameter is required in a DMS-100 equal access end office or a DMS-200 office access tandem switch.

This parameter specifies whether 119 terminating access billing records are produced for calls originating on Common Channel Interoffice Signaling No.6 (CCIS6) trunks.

Switching units that use CCIS6 trunks to interconnect with the InterLATA carriers (IC) or International Carriers (INC), and require a 119 terminating access record to be produced for calls incoming from the IC or INC, must use this parameter.

119 Terminating Access Record billing is only supported for calls originating on CCIS6 trunks and terminating to the following:
• CCIS6
• intertoll (IT)
• SuperCAMA (SC) (2-way)
• Traffic Operator Position System (TOPS) (2-way) trunks and lines

Provisioning rules
Enter Y (yes) followed by a carrier name (for example CARR1) to activate the 119 terminating access record billing.

Leave the value of this parameter at the default of N (no) if 119 terminating access record billing is not required.

If an attempt is made to datafill NILC for the carrier name, the following error message is displayed:
NILC NOT PERMITTED FOR CARRIER

All calls originating on CCIS6 trunks are subject to billing.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter has no effect on CCIS6 billing unless feature package NTX204AA02 (CCIS Banded Signaling) is present.
The carrier name must be datafilled in table OCCNAME.

In order to define the contents of the IC/INC prefix field in the billing record, and also to control the format of the billing record produced (that is short or long format), table OCCINFO must be datafilled.

If table OCCINFO is not datafilled with the carrier name specified, a default prefix code of 000 is placed into the IC/INC prefix field of the billing record. Also, the long format 119 Terminating access records are produced by default.

**Consequences**

Not applicable

**Verification**

With this parameter set to Y followed by a carrier name, a 119 terminating access record should be produced for CCIS6 trunk origination calls.

With this parameter set to N, no 119 Terminating Access Record should be produced for CCIS6 trunk origination calls.

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
EA_OCS_AND_DP_OVLP_NEEDED

Parameter name

Equal Access Overlap Carrier Selection And Dial Pulse Overlap Needed

Functional description of parameter EA_OCS_AND_DP_OVLP_NEEDED

This parameter is required for a switching unit with the Equal Access feature. It specifies whether the features Overlap Carrier Selection (OCS) and Dial Pulse (DP) trunk overlap outpulsing can both exist in the same switching unit.

If only OCS is needed in a switching unit, the real-time impact can be greatly reduced on non-OCS calls.

Provisioning rules

If this parameter is set to a value of Y (yes), both the OCS and DP features can exist in the same switch.

If the value of this parameter is set to N (no) and office parameter EA_OVERLAP_CARRIER_SELECTION in table OFCENG is set to Y, line to DP trunk overlap outpulsing is not available.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

Activation

To activate a change to the value of this parameter, BSY the individual peripheral modules (PM), reload the static data and then return to service (RTS) the PM.

 Dependencies

Not applicable

Consequences

If the parameter is left at the default value of Y, both forms work but there is no real-time savings.

 Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
**EA_OCS_DIGCOL_METHOD**

**Parameter name**
Equal Access Overlap Carrier Selection Digit Collection Method

**Functional description of parameter EA_OCS_DIGCOL_METHOD**
This parameter is required in an equal access end office (EAEO) with the Overlap Carrier Selection (OCS) feature. It determines the method of digit collection for the OCS feature.

**Provisioning rules**
This office parameter determines the sequence of opcodes for digit collection that are sent to the line module (LM) when returning the LM to service. Depending on the value of this parameter, the digit collection follows one of the algorithms listed below. For the sake of simplicity, when digits reported to the central control (CC) are mentioned, the prefix digits are excluded. The prefix digits are always reported in the first digits message.

There are four different methods of digit collection for the OCS feature. Set this parameter to a value of NOAMBI, PFXALL, PFXAMB, or TIMING as described below.

**No ambiguous codes (NOAMBI)**
This value is required if the switch does not have any ambiguous codes.

Since there are no ambiguous codes in the switch, any N0/LX three-digit combination is treated as a numbering plan area (NPA). After determining that the first three digits collected represent an NPA, three more digits can be collected and these six digits can be reported to the CC so that OCS can be started if necessary.

The second digits message contain the last four digits.

If the three-digit code collected is of the form NNX, this implies a seven-digit code. If OCS is to apply to this three-digit code, as determined by a lookup into table LMOVCODE, these three digits are reported to the CC.

The second digits message contains the last four digits. If OCS does not apply to these three digits, four more digits are collected. All seven digits are reported in one digits message.

**Ambiguous codes (PFXALL)**
This value is required if the switch has ambiguous codes and all ten-digit numbers must be dialed with a prefix and all seven-digit numbers must not be dialed with a prefix, regardless of whether the call is ambiguous.

The switch contains ambiguous codes, but this is not a problem because all ten-digit calls have the prefix 0 or 1 and seven-digit calls do not. If a prefix
is dialed, the first digits message contains six digits and the second contains the last four digits in case OCS is required. If no prefix is dialed, this is a seven-digit call and, depending on whether OCS applies, either seven digits are reported in one message, or three digits are reported in the first message followed by four in the second message.

**Ambiguous codes (PFXAMB)**

This value is required if the switching unit has ambiguous codes and the prefix method is used for resolving ambiguities. It does not imply that non-ambiguous ten-digit calls must be dialed with a prefix nor that seven-digit non-ambiguous calls must be dialed without a prefix.

Since the switch has ambiguous codes and a prefix cannot be used to determine whether three digits dialed represents an NPA or an NXX if it is of the form N0/1X, all ten-digit calls require four digits messages to the CC and all ambiguous seven-digit calls that require OCS need three digits messages to the CC. This is because the first message reports the first three digits. It is necessary in case a is a seven-digit call that requires OCS.

The next message contains the next three digits in case it is a ten-digit call that requires OCS.

The next digits message contains the seventh digit since it may be a seventh-digit call. It is not desirable to apply a timeout after the seventh digit.

The fourth digits message for ten-digit calls consists of the remaining three digits.

For the codes that are not in the form N0/1X, only one digits message is required if OCS does not apply. Two digits messages will be necessary if OCS does apply, that is, one message for reporting the first three digits and the second message for reporting the last four digits.

**Timing**

This method is required if the switch has ambiguous codes and the timing method is used to resolve ambiguities. OCS will not apply to ambiguous calls using this method.

The switch uses the timing method to resolve ambiguities. A prefix cannot be relied upon to give any information.

For codes in the form N0/1X, three digits messages are required.

The first reports six digits in case it is a non-ambiguous NPA that requires OCS.
The next message reports the seventh digit in the case where this is an ambiguous seventh digit call. The CC must impose the short timing at this time, since the LM is still in long timing mode.

The next message contains the last three digits for ten-digit calls, or a timeout with a last digits message for seventh-digit ambiguous calls. It is not required to report after the first three digits because OCS is not compatible with the timing method of resolving ambiguities.

If the first three digits collected are not of the form NO/1X, this is a non-ambiguous seven-digit call. If OCS applies to these three digits, two digits messages are needed, and if OCS does not apply, only one digits message is needed.

Summary
In order to achieve the least number of redundant digits messages, the ideal situation is either a switch that has no ambiguous codes or a switch that has ambiguous codes and forces all users to dial a prefix on ten-digit calls and does not allow the prefix on seven-digit calls.

The most inefficient mode of digit collection exists in those switches that have ambiguous codes that are resolved by the prefix method, but do not force a prefix on non-ambiguous ten-digit calls and do not force the absence of a prefix on seven-digit non-ambiguous calls. In other words, it is inefficient in those switching units that do not impose a uniform method of dialing.

Table 1 shows a summary of the digits messages required for each of the different cases mentioned above. The numbers in brackets indicate after which digit a digits message is reported to the CC:

<table>
<thead>
<tr>
<th>OCS/ non-OCS</th>
<th>Number of digits</th>
<th>NOAMBI</th>
<th>PFXALL</th>
<th>PFXAMB</th>
<th>TIMING</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCS</td>
<td>7</td>
<td>2 messages (3,7)</td>
<td>2 messages (3,7)</td>
<td>3 messages if NO/1X code (3,6,7)</td>
<td>3 messages if NO/1X code (6,7,timeout)</td>
</tr>
<tr>
<td>OCS</td>
<td>10</td>
<td>2 messages (6,10)</td>
<td>2 messages (6,10)</td>
<td>4 messages (3,6,7,10)</td>
<td>3 messages (6,7,10)</td>
</tr>
</tbody>
</table>

---continued---
Table 1
Digit message summary (continued)

<table>
<thead>
<tr>
<th>OCS/ non-OCS</th>
<th>Number of digits</th>
<th>NOAMBI</th>
<th>PFXALL</th>
<th>PFXAMB</th>
<th>TIMING</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-OCS</td>
<td>7</td>
<td>1 message (7)</td>
<td>1 message (7)</td>
<td>3 messages if NO/1X code (3,6,7)</td>
<td>3 messages if NO/1X code (6,7,timeout)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 message if NNX code (7)</td>
</tr>
<tr>
<td>non-OCS</td>
<td>10</td>
<td>2 messages (6,10)</td>
<td>2 messages (6,10)</td>
<td>4 messages (3,6,7,10)</td>
<td>3 messages (6,7,10)</td>
</tr>
</tbody>
</table>

End

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAMBI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation

To activate a change in the value of this parameter, busy (BSY) the individual LM/LTCs, reload the static data and then return to service (RTS) the LM/LTC.

Dependencies

Parameter EA_OVERLAP_CARRIER_SELECTION in table OFCENG must be set to a value of Y.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS17.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Equal Access Operator Services System Hold Timeout In Minutes

**Functional description of parameter EA_OSS_HOLD_TIMEOUT_MINS**
This parameter is required for a local equal access end office (EAEO), software package NTX186AA, and for the optional exchange access operator services signaling (EAOSS) feature, software package NTX888AA.

EAOSS provides the operator services system (OSS) with all the information necessary to process calls arriving on a single combined trunk group. This trunk group can contain calls requiring any subset or all of operating company (OC), interexchange carriers (IEC) toll and assistance (TA), OC directory assistance (DA), OC intercept, OC and IEC new services, and OC and IEC direct distance dialing (DDD).

**Provisioning rules**
This parameter specifies the EAOSS hold time-out, in 1-min intervals.

This parameter is provided to prevent a trouble condition on a call requiring the hold function from holding a line out of service for an extended period of time. The timing is used when a line goes on-hook and the IEC is in an off hook condition. If the line remains on-hook and neither an on-hook or an expanded inband signal is received from the IEC within this timeout interval, the connection is released and a TRK121 record is produced.

If an expanded inband signal is received, the timeout interval is reinitiated.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If the TRK121 LOG is generated, it indicates that there might be problems with the line being out of service or that the timeout value specified for this parameter is too low.

If the log is generated and there does not appear to be anything wrong with the line, increase the value of this parameter.
EA_OSS_HOLD_TIMEOUT_MINS

The value of this parameter is only applicable to calls originating from the EAEO and routed over a trunk group, with trunk group type OP, using EA OSS signaling. All other calls are not affected.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
**EA_OVERLAP_CARRIER_SELECTION**

Parameter name

Equal Access Overlap Carrier Selection

**Functional description of parameter EA_OVERLAP_CARRIER_SELECTION**

This parameter is required in an equal access end office (EAE0) with the Overlap Carrier Selection (OCS) feature. It determines the type of digit collection performed by the line module (LM).

**Provisioning rules**

If the value of this parameter is set to N (no), normal digit collection is performed.

If the value of this parameter is set to Y (yes), the LM performs digit collection for equal access overlap carrier selection.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**

To activate a change in the value of this parameter, BSY the individual LM/LTC, reload the static data and then return to service (RTS) the LM/LTC.

**Dependencies**

A call uses OCS only if the entry in subtable STDPRT of table STDPRTCT for the digits dialed has the EA selector and fields RTEPRSNT and OCS set to Y and the data in table OCCINFO for the carrier has field OVERLAP set to Y.

Feature OCS allows outpulsing of digits before the subscriber completes dialing. Domestic calls begin OCS when there are four digits left to be dialed. International calls begin OCS after the country code has been dialed.

The office parameter for the DP overlap outpulsing feature MIN_NUMBER_OF_DIGS_RPTD_ON_OVERLAP is not applicable to OCS.

See parameter EA_OCS_AND_DP_OVLP_NEEDED in table OFCENG for assigning both OCS and DP overlap outpulsing.

Table LMOVCODE contains the codes to which OCS is not applicable.

Setting this parameter to Y affects almost all calls in an EAE0 (whether they are equal access or not). The impact is that of an additional digits message it would not get if the parameter was set to N. Calls using OCS save between 2 and 4 seconds of post dial delay per call.
**EA_OVERLAP_CARRIER_SELECTION**

The parameter EA_OCS_DIGCOL_METHOD in table OFCENG specifies the method of digit collection for the OCS feature.

**Consequences**

This parameter must never be set to Y in a non-EAEO switching unit. If it is set to Y, many digit sequences supported by the line module digit collection scheme will be invalid or handled incorrectly.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS17.

Copy the existing value of this parameter when doing a dump and restore.
EA_TAB_CICSIZE4_OBSOLETE

Parameter name
Equal Access Table CICSIZE4 Obsolete

Functional description of parameter EA_TAB_CICSIZE4_OBSOLETE
This parameter is used in a DMS-100 or DMS-200 switch. It specifies whether table CICSIZE4 is required to specify which trunk groups use four-digit carrier identification codes (CIC).

Provisioning rules
Set the value of this parameter to Y (yes) if the office uses only three-digit CICs. This specifies that table CICSIZE4 is unnecessary (obsolete). Table CICSIZE4 will not be datafilled in this case.

Leave the value of this parameter at the default of N (no) if the office uses both three-digit and four-digit CICs. This specifies that table CICSIZE4 contains a list of all trunk groups that use four-digit CICs. All other trunk groups use three-digit CICs.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
When this parameter is set to N table CICSIZE4 will not be datafilled.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS34.
Copy the existing value of this parameter when doing a dump and restore.
EA_WITH_CD

Parameter name
Equal Access With Circle Digit

Functional description of parameter EA_WITH_CD
This parameter specifies whether the switching unit has the Circle Digit (CD) and the Equal Access (EA) feature.

Provisioning rules
If the value of this parameter is set to Y (yes), the following applies:
- Circle digit 0 (CD0) cannot be used as an option on eight-or-ten party lines.
- Service orders system (SERVORD) prohibits the addition of the CD0 option in table LENLINES to ten party lines. This limits ten-party lines to only having 9 members on the line.
- If the user tries to add CD0 to a line, the message “CD0 incompatible with EA_WITH_CD” appears and disallows a change to the line.
- Lines with a circle digit can make 10XXX calls to go through Interlata Carriers (IC).
- Lines with a circle digit can have pre subscribed interLATA carriers (PIC).
- Parameter SPDD_DIGIT in table OFCENG cannot be set to 10.
- A circle digit can be used for these types of equal access calls:
  - 1 + CD + 7 or 10 digits
  - 0 + CD + 7 or 10 digits
  - 10XXX + 1 + CD + 7 or 10 digits
  - 10XXX + 0 + CD + 7 or 10 digits
  - 10XXX + 0 + CD
  - 10XXX + 0 + CD + #
- does not support any international call types or operator call types that are blocked from completing:
  - 10XXX+00
  - 00

If the value of this parameter is set to N (no), the following applies:
- option CD0 (circle digit zero) can be assigned to eight-and-ten-party lines in table LENLINES.
- lines with a circle digit cannot make 10XXX calls. They are routed to vacant code (VACT) treatment.
- lines with a circle digit can have PICs.
- the office parameter SPDD_DIGIT in table OFCENG can be set to a value from 0 to 10.
Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**EADAS24H_BUFFER_SIZE**

**Parameter name**
Engineering and Administrative Data Acquisition System 24-hour Buffer Size

**Functional description of parameter EADAS24H_BUFFER_SIZE**
This parameter is required for a switching unit with the Engineering and Administrative Data Acquisition System interface (EADAS) feature. It specifies the number of words of data store that are allocated for the buffer that collects the 24-hour data for EADAS.

**Provisioning rules**
This parameter must be datafilled with a value greater than or equal to 12 and less than or equal to 32000 for a switching unit that has the EADAS feature.

If this function is not required, leave the value of this parameter at the default of 0 (zero).

A simplified formula for determining the value of this parameter is as follows:

\[ PV = 100 + (7 \times \text{notorval}) \]

where

- \( PV \) is the parameter value
- \( \text{notorval} \) is the value of parameter NO_OF_TFAN_OM_REGISTERS in table OFCENG

The following is an example of the formula for a switching unit that has 2048 Traffic Separations Measurement System (TSMS) intersections:

\[ 100 + (7 \times \text{ebf}) = 14436 \]

where

- \( \text{ebf} \) is the EADAS24H_BUFFER_SIZE, which is equivalent to 2048 TSMS intersections

The following message is displayed if a value less than 12 or greater than 32000 is specified:

*BUFFER SIZE MUST BE GREATER THAN OR EQUAL TO 12 AND LESS THAN OR EQUAL TO 32000*

For more information regarding EADAS buffer provisioning, see *EADAS Interface Administration Guide*, 297-1001-335.
EADAS24H_BUFFER_SIZE

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>32000</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Reload restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies

This parameter must be datafilled before any OM or EADAS class.

This parameter should be datafilled early and a reload restart done immediately afterwards.

If parameters EADAS30M_BUFFER_SIZE and EADAS60M_BUFFER_SIZE in table OFCENG and EADAS_SHORT_XFER_ALLOWED in table OFCOPT are datafilled at the same time as this parameter, only one reload restart is required.

Consequences

Unlike many data structures, the EADAS buffers are contiguous blocks of store and can be up to 32000 words in size. Frequent reallocation can cause store fragmentation problems that can prevent successful subsequent reallocation. Reallocation should not be considered a substitute for proper buffer size calculations and generous initial allocation. It should be used as a means of coping with unexpected office growth between BCSs.

Verification

Not applicable

Memory requirements

If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to N (no), the total number of words required is equal to the value of this parameter.

If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to Y (yes), two blocks of data are provided and the total number of words required is equal to two times the value of this parameter.

Dump and restore rules

This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
EADAS24H_BUFFER_SIZE

Parameter history

**BCS36** reference to *EADAS Interface Administration Guide*, 297-1001-335, added for provisioning purposes

- NORESTARTSWACT activation added
**Parameter name**

Engineering and Administrative Data Acquisition System 30-minute Buffer Size

**Functional description of parameter EADAS30M_BUFFER_SIZE**

This parameter specifies the number of words of data store that are allocated for the buffer that collects the 30-min data for the Engineering and Administrative Data Acquisition System (EADAS).

**Provisioning rules**

This parameter must be datafilled with a value between 12 and 32000 for a switching unit that has the EADAS feature.

If this feature is not required, leave this parameter at the default value of 0 (zero).

The value for this parameter is derived from the following formula:

\[
PV = 15862 + (89 \times custgrp) + (23 \times custsgrp) + [20 \times (trkgrp + lcm)]
+ (5 \times vfgrp) + (11 \times ac) + [4 \times (huntgrp + mpc)]
+ [8 \times (ucdgrp + xpmlcd + vpu)] + (17 \times acdgrp)
+ [47 \times (mpc + nacd)]
+ (18 \times friu) + (42 \times eiu) + [7 \times (eiu + liu)] + (6 \times enet)
+ (21 \times maxadmin)
\]

For offices with ISDN, add to the above formula

\[
8 \times custgrp + (32 \times dch \times 6) + 59 \times dch
\]

For offices with CCS7, add to the above formula

\[
1000 + 53 \times a + 101 \times b + 16 \times c
\]

*where*

- **PV** is the parameter value
- **custgrp** is the number of customer groups
- **custsgrp** is the number of customer subgroups
- **trkgrp** is the number of trunk groups
- **lcm** is the number of line concentrating modules (LCM)
- **vfgrp** is the number of virtual facility groups
- **ac** is the number of attendant consoles (AC)
- **huntgrp** is the number of huntgroups
- **mpc** is the number of multiprotocol controllers (MPC)
- **ucdgrp** is the number of uniform call distribution (UCD) groups
- **xpmlcd** is the number of XMS-based peripheral modules (PM) equipped with line concentrating devices (LCD)
EADAS30M_BUFFER_SIZE

vpu is the number of voice processor units (VPU)
acdgq is the number of Automatic Call Distribution (ACD) groups
mpca is the number of MPC applications
nacd is the number of Network ACD (NACD) groups
friu is the number of frame relay interface units (FRIU)
eiu is the number of Ethernet interface units (EIU)
liu is the number of link interface units (LIU)
enet is the number of enhanced networks (ENET)
maxadmin is the maximum admin number in use
dch is the number of D-channel handlers (DCH)
a is the number of entries in table C7RTESET
b is the number of entries in table C7LINKS
c is the number of entries in table C7GTWLKS

For more information regarding EADAS buffer provisioning see the EADAS Interface Administration Guide 297-1001-335.

This parameter must be datafilled before any OM or EADAS class.

This parameter must be datafilled early and a reload restart done immediately afterwards.

If parameters EADAS24H_BUFFER_SIZE and EADAS60M_BUFFER_SIZE in table OFCENG and EADAS_SHORT_XFER_ALLOWED in table OFCOPT are datafilled at the same time as this parameter, only one reload restart is required.

This parameter can only be changed from a 0 (zero) to a nonzero value between 12 and 32000.

If a value less than 12 or greater than 32000 is input, the following message appears at the MAP:

BUFFER SIZE MUST BE GREATER THAN OR EQUAL TO 12 AND LESS THAN OR EQUAL TO 32000.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>32000</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Reload restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies

Not applicable
Consequences
Changing the value of this parameter must be done carefully. Unlike many data structures, the EADAS buffers are contiguous blocks of store, and can be up to 32,000 words in size. Frequent reallocation can cause store fragmentation problems, which can prevent successful subsequent reallocation. Reallocation should not be used as a substitute for proper buffer size calculations and generous initial allocation. It should be used as a means of coping with unexpected office growth between BCSs.

Verification
Not applicable

Memory requirements
If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to N (no), the number of words required is equal to the value of this parameter.

If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to Y (yes), two blocks of data are provided and the number of words is equal to two times the value of this parameter.

Dump and restore rules
This parameter was introduced in BCS19.

Copy the existing value of the parameter when doing a dump and restore.

Parameter history
BCS36  NORESTARTSWACT activation added
**EADAS60M_BUFFER_SIZE**

**Parameter name**

Engineering and Administrative Data Acquisition System 60-minute Buffer Size

**Functional description of parameter EADAS60M_BUFFER_SIZE**

This parameter is required for a switching unit with the Engineering and Administrative Data Acquisition System interface (EADAS) feature. It specifies the number of words of data store that are allocated for the buffer that collects the 60-min data for EADAS.

**Provisioning rules**

This parameter must be datafilled with a value greater than or equal to 12 and less than or equal to 32000 for a switching unit that has the EADAS feature.

If this feature is not required, leave the value at the default of 0 (zero).

A simplified formula for determining the value of this parameter is as follows:

\[
\text{value} = 100 + (7 \times \text{value of parameter NO_OF_TFAN_OM_REGISTERS in table OFCENG})
\]

The following is an example of a switching unit that has 2048 TSMS intersections:

\[
\text{EADAS60M_BUFFER_SIZE} = 100 + (7 \times 2048) = 14436
\]

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32000</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Reload restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**

The datafill of this parameter must precede the datafill of any operational measurement (OM) or EADAS class.

This parameter should be datafilled early and a reload restart done immediately afterwards.

If parameters EADAS30M_BUFFER_SIZE and EADAS24H_BUFFER_SIZE in table OFCENG and option EADAS_SHORT_XFER_ALLOWED in table OFCOPT are datafilled at the same time as this parameter, only one reload restart is required.
EADAS60M_BUFFER_SIZE

Consequences
Unlike many data structures, the EADAS buffers are contiguous blocks of store and can be up to 32,000 words in size. Frequent reallocation can cause store fragmentation problems that in turn may prevent successful reallocation at a later time. Reallocation should not be used as a substitute for proper buffer size calculations and generous initial allocation. It should be used as a means of coping with unexpected office growth between BCSs.

Verification
Not applicable

Memory requirements
If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to N (no), the number of words required is equal to the value of this parameter.

If office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to Y (yes), two blocks of data are provided and the number of words is equal to two times the value of this parameter.

Dump and restore rules
This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36  NORESTARTSWACT activation added
**EAEO_FOUR_DIGIT_CIC_STATUS**

**Parameter name**
Equal Access End Office Four Digit Carrier Identification Code Status

**Functional description of parameter EAEO_FOUR_DIGIT_CIC_STATUS**
This parameter is used in a DMS-100 switch. It is required to support the implementation of feature group D (FGD) carrier identification code (CIC) expansion for multifrequency (MF) and Signaling System 7 (SS7) at end offices (EO) and access tandems (AT).

The CIC expansion feature is implemented in phases. This parameter controls line module (LM) digit collection in the transition phases through the three available values. The final phase of this transition is a full expansion to four-digit CICs in the series 5XXX and 6XXX and seven-digit carrier access codes (CAC) in the form 101XXXX.

**Provisioning rules**
Leave the value of this parameter at the default value of THREEDIG to allow three-digit CICs and five-digit CACs (10XXX).

Set the value of this parameter to PERMISSIVE to allow five-digit CACs (10XXX) and seven-digit CACs (1010XXX, 1015XXX, and 1016XXX) during the permissive dialing period.

Set the value of this parameter to FOURDIG so that only four-digit CICs and seven-digit CACs (101XXXX) are valid.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>THREEDIG</td>
</tr>
</tbody>
</table>

**Activation**
To activate a change in the value of this parameter, BSY the individual Peripheral Modules (PM), reload the static data and then RTS the PM.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter requires 1 word of memory.

---

OFCENG-244 297-1001-455 Standard 22.02 March 1994
Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Electronic Business Sets Buzz Splash On

**Functional description of parameter EBS_BUZZ_SPLASH_ON**

This parameter is required for a switching unit with Electronic Business Sets (EBS). It specifies whether an EBS receives a short buzz tone when it has call forwarding active (and ring splash is turned on) or when it has the make set busy feature active.

**Provisioning rules**

Leave value of this parameter at the default value of Y (yes) if buzz tone is required on an EBS.

Set the value of this parameter to N (no) if buzz tone is not required on an EBS.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter is new with software release BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Electronic Business Sets To Trunk Timed Release Disconnect Time

**Functional description of parameter EBS_TO_TRUNK_TRD_TIME**
This parameter is required for a switching unit with electronic business sets (EBS). It allows the operating company to modify the duration of timed release disconnect (TRD) timing performed on EBS-to-trunk calls.

The operating company can use this parameter to eliminate call cut-offs on EBS-to-trunk calls caused by trunk on-hook transients.

**Provisioning rules**
If the TRD timing performed on EBS-to-trunk calls is greater than the default value of 500 ms, specify the TRD timing in 10-ms intervals.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>250</td>
<td>50</td>
</tr>
<tr>
<td>16 (with Meridian OffNet Access)</td>
<td>32767 (with Meridian OffNet Access)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
A reload of the LM/LTC execs must be performed to activate changes to the value of this office parameter.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Verify that this parameter is working by placing an EBS-to-trunk call and check that the TRD timing is what the parameter indicates.

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Emergency Stand Alone Entry

**Functional description of parameter ESAENTRY**
This parameter is required for all switching units with remote operation and feature package NTX025AA (Emergency Stand Alone Operation).

The value of this parameter represents the delay between link failure and the remote line module (RLM) dropping into Emergency Stand Alone (ESA) mode.

The time is defined in 10 second intervals. For example, the default value of 6 indicates a delay of 60 s.

**Provisioning rules**
Specify the delay between link failure and the (RLM) dropping into ESA mode in 10 s intervals.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>100</td>
<td>6</td>
</tr>
</tbody>
</table>

**Activation**
Done at the time of the ESA load.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Enhanced Dead System Alarm

**Functional description of parameter ENHANCED_DEAD_SYSTEM_ALARM**
This parameter specifies the type of dead system alarm (DSA) required for the switching unit.

There are two types of DSAs; the regular DSA and the enhanced DSA. The enhanced DSA can detect the lack of call processing or severe problems with call processing. The enhanced DSA causes the same audible and visual alarms to be raised as the DSA with the addition of a software alarm.

**Provisioning rules**
If the value of this office parameter is left at the default of N (no), the regular DSA is used.

If the value of this office parameter is set to Y (yes), the enhanced DSA is used.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**ESAEXIT**

**Parameter name**
Emergency Stand Alone Exit

**Functional description of parameter ESAEXIT**
This parameter is required for all switching units with remote operation and feature package NTX025AA (Emergency Stand Alone Operation).

The value of this office parameter represents the delay between links being restored and the remote line module (RLM) coming out of emergency stand alone (ESA) mode.

**Provisioning rules**
Specify the delay between links being restored and the RLM coming out of ESA mode.

The value is defined in 10-s intervals. For example, the default value of 2 indicates a delay of 20s.

A value of 0 (zero) indicates that a manual RTS (return to service) must be performed.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
Copy the existing value of this parameter when doing a dump and restore.
**EXPIRED_PASSWORD_GRACE**

**Parameter name**
Expired Password Grace

**Functional description of parameter EXPIRED_PASSWORD_GRACE**
This parameter appears only if ENHANCED_PASSWORD_CONTROL in table OFCOPT is set to Y (yes).

It specifies the number of logons for which a password may be used if the password is older than the value of parameter PASSWORD_LIFETIME.

If this feature is not required, set this parameter to the maximum value (32767 logons).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32767</td>
<td>3</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
Copy the existing value of parameter, unless it is an extension and the operating company has specifically requested a change to the value of this parameter.
FEATURE_ADMIN_CHARGE

Parameter name
Feature Administration Charge

Functional description of parameter FEATURE_ADMIN_CHARGE
This parameter is required in a local or toll switching unit with international translations. It specifies whether feature charging is to be done for administration activities (table control).

For table control operations, if features or options are added to a line, the software automatically attempts to charge for feature or option assignment. There is no differentiation for dump and restore that does the same table control operations.

The value of this office parameter is examined before this charge is attempted.

Provisioning rules
If the value of this parameter is set to N (no), no charge is made.

If the value of the parameter is set to Y (yes), the charge is made.

The operating company should set the value to N when doing operations for which the subscriber has already been charged (for example, reissuing service orders instead of applying the journal file). If the journal file is being applied, the software can tell the difference. Otherwise, the subscriber is charged twice for feature assignment.

The operating company must reset the value of this parameter to Y when these operations are finished, or no assignment charges take place for any new service orders.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The features to which charging is applied are stored in table FEATCHG.

Consequences
Not applicable

Verification
Not applicable

OFCENG-252 297-1001-455  Standard 22.02  March 1994
FEATURE_ADMIN_CHARGE

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.
Leave the parameter value at the default when doing a dump and restore.
FLOW_CONTROL_TIMEOUT

Parameter name
Flow Control Timeout

Functional description of parameter FLOW_CONTROL_TIMEOUT
This parameter is required in all switching units and specifies the timeout or reset value, in 160-ms intervals, of the one-at-a-time trunk module (TM) or digital carrier module (DCM) trunk attempt threshold.

New traffic that cannot be handled by the central control (CC) in heavy periods, is blocked until the one at a time flag is reset. Every attempt starts this timing in the TM or DCM that is reset when the CC accepts the origination message. If the message is not acknowledged in the interval specified by this parameter, the flag is reset. Immediate start (IM) trunks are exempt from this flow control.

Provisioning rules
Specify the interval for acknowledgment of the origination message before the one-at-a-time flag is reset. The value of this parameter is expressed in 160-ms units. For example, the default value of 6, represents an interval of 960 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>6</td>
</tr>
</tbody>
</table>

Activation
If the peripheral module (PM) is not connected to a line trunk controller (LTC), an activation of a change to this parameter is done by issuing a busy (BSY) and return to service (RTS) on the PM.

If the PM is connected to an LTC, activation of a change to this parameter is done by putting the LTC through an RTS sequence. Either BSY and RTS the entire peripheral (both sides) or perform a double warm SWACT to update both the active and inactive sides.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.
FLOW_CONTROL_TIMEOUT

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
**FRR_ROUTING_RULES_OVERRIDE**

**Parameter name**
Flexible Reroute Routing Rules Override

**Functional description of parameter FRR_ROUTING_RULES_OVERRIDE**

This parameter gives the network manager the capability to select whether the Network Management (NWM) Flexible Reroute (FRR) controls use the FRR routing rules when re-routing a call over a VIA route.

Prior to BCS30, the routing rules employed to reroute a call by the FRR controls were based on the call type of the rerouted call. These rules are called FRR routing rules. They determine the digits to prefix, the digits to delete and the digits to substitute.

The FRR routing rules are made up of the following two rules:
- standard routing
- in-chain routing.

With standard routing, all digits in the digit register after the prefix fence are outpulsed over the VIA route. This is the same as the definition for the standard routing selector in table OFRT and the RTEREF subtables.

The following are examples of calls using the standard routing rule when routing over the VIA route:
- intra-lata
- feature group A (FGA)
- feature group B (FGB)
- feature group C (FGC)
- feature group D (FGD) calls routed over an ATC trunk group
- OCC calls.

With in-chain routing the same rule is applied to route over the VIA route as is used to route over the in-chain route.

The following are examples of calls using the in-chain routing rule when routing over the VIA route:
- FGD not routed over an ATC trunk group
- Traffic Operator Position System (TOPS)
- Integrated Business Network (IBN)
- international calls.
Provisioning rules
Set the parameter to Y (yes) to override (on an office-wide basis) the FRR routing rules employed to re-route calls over VIA routes.

When the parameter is set to N (no), FRR controls work as they did before the introduction of this parameter.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
When the override is in effect, re-routed calls use the in-chain routing rule over VIA routes with the exception of FGD calls. When FGD calls reroute from an intertoll trunk group to an ATC trunk group the standard routing must be used. FGD signaling would be violated if in-chain routing was used.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
**FTRQ0WAREAS**

**Parameter name**
Feature Queue 0 Word Areas

**Functional description of parameter FTRQ0WAREAS**
This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) or Residential Enhanced Services (RES) feature, or in a local (international) switching unit with universal translations.

The value of this parameter is expressed in blocks of 10 FTRQ0WAREAS. For example, a value of 10 indicates that 100 FTRQ0WAREAS are provisioned.

**Provisioning rules**
The parameter should be left at the default value of 1.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 for NT40</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 for SuperNode</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Increase – immediate
Decrease – cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
To verify that sufficient software resources provided by this parameter have been allocated use CI command OMSHOW FTRQ ACTIVE 1 and read the following entry:

```
  FTRQ0SIZE  FTRQ0VFL  FTRQ0HI
  1  FTRQ0WAREAS  10
   0       0       0
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual, 297-1001-814* for a description of OM group FTRQ.
Memory requirements
The number of words of memory required by this office parameter is determined by the following calculation:
the value of this parameter \( \times 40 \)

Dump and restore rules
This parameter was introduced in BCS14.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed
FTRQ0WPERMS

Parameter name
Feature Queue 0 Word Permanent Blocks

Functional description of parameter FTRQ0WPERMS
This parameter is required for Meridian Digital Centrex (MDC) and Residential Enhanced Services (RES) features.

This parameter specifies, in multiples of 10, the number of FTRQ0WPERMS blocks allocated in data store.

Provisioning rules
Leave the value of this parameter at the default of 1.

These call processing blocks are used for long term information holding. Data may be held in these blocks for up to 60 days.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
Not applicable

Consequences
Not applicable

Verification
To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ:

```
FTRQ  FTRQSEIZ  FTRQOVFL  FTRQHI
FTRQ0WPERMS  0  0  0
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.
Memory requirements
Each block requires 6 words of memory. Each increment of the parameter value requires 60 words. For example, a value of 3 requires 180 words of memory.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed
FTRQ16WAREAS

Parameter name
Feature Queue 16 Word Areas

Functional description of parameter FTRQ16WAREAS
This parameter is required in a Meridian Digital Centrex (MDC) switching unit.

These blocks are required for the following features:
- Ring Again (RAG) or Network Ring Again
- Query Busy Set (QBS)
- Digital Private Network Call Back When Free
- Stored Program Control Call Management Service (SPC-CMS)
- Automatic Call Distribution (ACD)
- ACD Extended Call Management (CompuCALL)

One block is required for each simultaneous RAG or Network RAG request. The block is held from the time a request is queued until it is deleted (due to RAG recall answer, timeout, cancellation, or error).

Integrated Business Network (IBN) lines with the network RAG feature can use the Last Number Redial (LNR) feature. This increases the provisioning requirement for FTRQ8WAREAS based on the number of IBN lines with Network RAG that do not have the LNR feature. Once an LNR FTRQ block has been allocated against an IBN line that has the Network RAG feature, removal of the Network RAG feature does not cause deallocation of the LNR FTRQ block. Only a restart deallocates the LNR FTRQ block in this situation.

Digital Private Network Signaling System (DPNSS) is a United Kingdom (UK) form of Common Channel Signaling (CCS). Call Back When Free (CBWF) is a service that allows a call across the DPNSS network to be completed automatically, if the original attempt encounters a busy signal. In order for CBWF to function correctly, sufficient 16-word FTR blocks must be provisioned. One area is required for each active CBWF request (originating or terminating).

This parameter is associated with the SPC-CMS feature that enables Stored Program Control (SPC) switches to be included in the Call Management Service (CMS) network to provide One-Way CMS. One-Way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS) and Call Screening to the DMS subscribers, but not to the SPC subscribers.

Each agent position needs one of these blocks in order to become active in an ACD group and receive ACD calls. The value of this parameter should
be greater than the maximum number of ACD agent positions that exist at any given time.

Potentially, some agents are not able to become active in an ACD group if there are not enough of these blocks allocated. The worst case scenario occurs when all agent positions datafilled in the switching unit want to be active at the same time. To ensure that this does not happen, the following checks are made when new INCALLS keys are datafilled in table KSETLINE, by either Service Orders or table control.

If the total number of INCALLS keys datafilled in the switching unit exceeds 75% of the value of this parameter, the tuple is added but the following warning is generated:

WARNING--POTENTIAL FTRQ16WAREA PROBLEM--MORE THAN 75% USED BY ACD.

If the above message is generated, the user should increase the value of this parameter.

If the total number of INCALLS keys datafilled in the switching unit already equals the value of this parameter, the tuple is not added and the following warning is generated:

ERROR--NO FTRQ16WAREAS AVAILABLE

If the above message is generated, this parameter must be increased before any more INCALLS keys can be datafilled.

One block is required for every ACD agent included in an ACD group that is associated with a host computer through CompuCALL.

Provisioning rules

This parameter represents the number of FTRQ16WAREA blocks provided in groups of 10. For example, a value of 60 represents 600 FTRQ16WAREA blocks.

Use the following formula to determine the number of FTRQ16WAREA blocks required:

((# of simultaneous monitored LENs with QBS active + 9) + (2 X the number of busy hour ACB and AR feature attempts) + (number of simultaneous CBWF attempts) + (maximum number of ACD agents) + ((# of entries in table SPCTRKS / average holding time in seconds of a call in busy hour) X SPCCLITIMEOUT value))

To determine the value of this parameter, divide the number derived from the above formula by 10.
FTRQ16WAREAS

See table KSETFEAT for feature QBS. See table IBNLINES for options ACB or AR. See tables IBNFEAT and KSETLINE for ACD agents. See parameter SPCCLITIMEOUT in table OFCENG. For MDC switching units without the QSB or ACD feature, a RES switching units without the ACB and AR feature or a switching unit in the United Kingdom without the DPNSS feature, leave at the default value.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (Supernode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

increase – immediate
decrease – cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”).

Dependencies

At extension time, the value of this parameter must change, if the number of MDC or RES lines with the above features changes or the number of ACD agents changes.

Consequences

When an overflow condition exists on this software resource, due to insufficient quantity of blocks, calls requesting a FTRQ16WAREA block are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

If the value of this parameter is overprovisioned, memory is wasted.

Verification

To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ.

<table>
<thead>
<tr>
<th>FTRQ</th>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTRQ16WAREAS</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.

Any nonzero value in FTRQOVFL indicates underprovisioning.
Memory requirements
Each block requires 20 words of memory. Because the blocks are provisioned in groups of 10, the total memory used by this parameter is the value multiplied by 200.

Dump and restore rules
This parameter was introduced in BCS21.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed
**FTRQ16WPERMS**

**Parameter name**  
Feature Queue 16 Word Permanent Blocks

**Functional description of parameter FTRQ16WPERMS**  
This parameter is required for Meridian Digital Centrex (MDC) and Residential Enhanced Services (RES) features.

The parameter specifies, in multiples of 10, the number of FTRQ16WPERM blocks allocated in data store.

These call processing blocks are used for long-term information holding. Data may be held in these blocks for up to 60 days.

**Provisioning rules**  
Leave the value of this parameter at the default value of 1.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**  
Increase - immediate  
Decrease - cold restart or NORESTARTSWACT  
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**  
Not applicable

**Consequences**  
Not applicable

**Verification**  
To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ:

```
FTRQ  FTRQSEIZ  FTRQOVFL  FTRQHI
FTRQ16WPERMS  0  0  0
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual, 297-1001-814* for a description of OM group FTRQ.

OFCENG-266  297-1001-455  Standard 22.02  March 1994
Memory requirements
Each block requires 22 words of memory. Each increment of the value of the parameter requires 220 words. For example, a value of 10 requires 2200 words of memory.

Dump and restore rules
This parameter was introduced in BCS29.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36  activation requirement changed
FTRQ2WAREAS

Parameter name
Feature Queue 2 Word Areas

Functional description of parameter FTRQ2WAREAS
This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) or Residential Enhanced Services (RES) feature, or a local (international) switching unit with universal translations.

This parameter specifies the maximum number of FTRQ 2 word areas required for the engineering interval.

The value of this parameter multiplied by 10 represents the number of FTRQ2WAREAS blocks provided.

The number of blocks required is equal to the maximum number of the sum of the following simultaneous types of calls or requests:
- number of call hold calls
- number of camp-on calls
- number of call forward busy (CFB) and call forward don’t answer (CFDA) calls
- number of network ring again (RAG) requests
- number of call back queuing requests (block is required from the time when a request is queued until it is deleted due to RAG recall answer, timeout, cancellation, or error)
- maximum number of messages stored for the message waiting feature
- number of DN appearances with the last number redial feature where the last call involved dialing 1 to 7 digits
- number of business sets with the business set indicator feature activated and the QBS key depressed (for information on feature QBS, refer to table KSETFEAT)

Multiple position hunt
A FTRQ2WAREA block is required for each line in a multiple position hunt group.

Multiple position hunt (MPH) with queue allows calls to be distributed evenly across multiple non-data link attendant consoles (AC). Calls are presented to the ACs in the order that they arrive at the DMS-100 switch. Calls that cannot be presented to any console are enqueued in the DMS-100 until a console is available to serve that call.

For MPH, the FTRQ2WAREAS blocks are permanently associated with the stations.
Network-wide ring again

This parameter is used by the network-wide ring again (RAG) feature. IBN lines with the network RAG feature can perform last number redial (LNR). LNR increases the provisioning requirement for FTRQ2WAREAS based on the number of IBN lines with network RAG that do not have the LNR feature.

Once an LNR FTRQ block has been allocated against an IBN line that has the network RAG feature, removal of the network RAG feature does not cause deallocation of the LNR FTRQ block. Only a restart deallocates the LNR FTRQ block in this situation.

This parameter is also used by the automatic call distribution (ACD) feature. One FTRQ2WAREA is required for each Answer Agent Key if the ACD/Management Information System (MIS) software is present, whether or not MIS is assigned to the ACD groups.

If a customer group has the ring again recall (RAGRCALL) option assigned in table CUSTSTN, one block should be assigned for each 10 electronic business sets (EBS) that have the RAG option assigned in table KSETLINE.

Provisioning rules

For a new switching unit with North American translations for which traffic figures are not available, the recommended value for this parameter is the lesser of 3277 for an NT-40 switching unit or 6544 for a SuperNode switching unit or 7 for every 100 IBN, RES or KSET lines.

\[ + \left( \text{the number of lines on non-data link consoles in an MPH arrangement} \right) / 10 + \left( X - Y \right) / 10 \]

where \( X = \) number of IBN lines to which network RAG is available and \( Y = \) number of IBN lines to which network RAG is available and already have the LNR option

For a local (international) switching unit with universal translations, leave this parameter at the default value.

The maximum number is the maximum number required for the engineering interval.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT-40)</td>
<td>6553</td>
</tr>
<tr>
<td></td>
<td>(SuperNode)</td>
<td>1</td>
</tr>
</tbody>
</table>

Office Parameters Reference Manual, volume 1 of 2 BCS36 and up OFCENG-269
FTRQ2WAREAS

Activation
Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
At extension time, the value of this parameter should change if the number of IBN, RES, or KSET lines increase.

Consequences
Underprovisioning of this parameter prevents calls from being dequeued and terminated on non-data link consoles.

Verification
OM group FTRQ provides the operational measurements for this software resource. The format of OM group FTRQ is as follows:

<table>
<thead>
<tr>
<th>FTRQ</th>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTRQ2WAREAS</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.

See OM group CALLFWD for the operational measurements associated with the Call Forwarding feature.

See OM group MWTCAR for the operational measurements associated with the message waiting feature.

See OM group LNREDIAL for the operational measurements associated with the last number redial feature.

See OM group CALLHOLD for the operational measurements associated with the call hold feature.

Memory requirements
Each FTRQ2WAREA requires 60 words of memory.

Dump and restore rules
This parameter was introduced in BCS14.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed

OFCENG—270 297-1001-455 Standard 22.02 March 1994
Parameter name
Feature Queue 2 Word Permanent Blocks

Functional description of parameter FTRQ2WPERMS
This parameter is required in a switching unit with North American translations and the Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES) features, or a DMS-100 world switch with universal translations.

The parameter specifies, in multiples of 10, the number of FTRQ2WPERMS blocks allocated in data store. For example, the default value of 1 represents an allocation of 10 FTRQ2WPERMS.

Message waiting
FTRQ2WPERMS blocks are associated with message waiting features.

Station message waiting, (MWT) also known as call request (CAR), provides a system where the originating party of a call can leave a message indication for the terminating party of a call if the terminating party is absent or busy.

The message waiting is indicated by the lighting of a lamp (on an electronic business set), the lighting of a LINK lamp (on a LINK set), or by providing stuttered dial tone (on a 2500 set). The party that receives the message indication can then retrieve the message.

MWT maintains the queued messages against the stations during cold restarts.

For this parameter, MWT refers to all features that can leave messages on a user station, including Attendant Message Waiting, Station Message Waiting, and Electronic Business Set as a Message Center.

The FTRQ2WPERM block is designed for long term information holding. This block is held for up to 60 days.

Provisioning rules
The value for the parameter can be determined based on the following equation:

\[
\text{value} = \left( \frac{A \times B + 9}{10} \right)
\]

where

\[
A = \text{total number of IBN lines (2500 and MBS) and RES lines with MWT assigned.}
\]

\[
B = \text{average number of messages}
\]

The recommended value for B is 0.7.
FTRQ2WPERMS

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
Not applicable

Consequences
Not applicable

Verification
To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ by using the CI command OMSHOW FTRQ ACTIVE 8:

```
FTRQ  FTRQSEI2  FTRQOVFL  FTRQHI
FTRQ2WPERMS  0        0         0
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.

Memory requirements
Each block requires 8 words of memory. Each increment of the parameter value requires 80 words.

Dump and restore rules
This parameter was introduced in BCS29.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed
Parameter name
Feature Queue 32 Word Areas

Functional description of parameter FTRQ32WAREAS
This parameter is included as part of the standard feature processing environment.

This parameter is associated with the Network Message Waiting Indication (NMWI) feature and is required for the support of business lines (non-ACD) with CompuCALL services.

NMWI
NMWI enables a message service on one node to activate and deactivate the message waiting indicator of a subscriber located on a different node, provided the two nodes support transaction capability application part (TCAP) communication between them.

CompuCALL
CompuCALL provides an intelligent communications link between the switch and a customer’s computing environment. This link enables services that combine the switch voice processing with the customer’s data processing for business and ACD lines. These business lines require the extended call management (ECM) line option to enable association with a host computer through CompuCALL.

Provisioning rules
Set the parameter value according to the following formula:

\[
\text{value} = \frac{(\text{the number of Network MWI subscribers}) + (\text{the number of lines with the ECM option})}{10}
\]

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
Any increase in the number of lines that subscribe to network message services (NMS) must result in an increase in the value of this parameter.

Consequences
Underprovisioning of this parameter results in users of NMS features being unable to save any message information. This also indicates that the Call
FTRQ3WAREAS

Request Retrieval (CRR) feature is ineffective. Underprovisioning of this parameter can also result in the failure of the customer’s host computer to associate an ECM line with CompuCALL based services.

Overprovisioning of this parameter wastes data store.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW FTRQ ACTIVE 6 and read the following entry:

<table>
<thead>
<tr>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in FTRQOVFL indicates underprovisioning.

Measurement FTRQHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each unit requires 360 words of memory.

Dump and restore rules

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  activation requirements changed
Parameter name

Feature Queue 32 Word Permanent Blocks

Functional description of parameter FTRQ32WPERMS

This parameter is used in the following environments:

- DMS-100
- DMS-200 with featured ISDN user part (ISUP)
- centralized private branch exchange (PBX)
- SL-100
- Plain Ordinary Telephone Service (POTS)

It only appears in an office if the FTRQPSUB subsystem is loaded.

This parameter is associated with the Network Message Waiting Indication (NMWI) and Call Logging features.

NMWI

NMWI enables a message service on one node to activate and deactivate the message waiting indicator of a subscriber located on a different node, provided the two nodes support transaction capability application part (TCAP) communication between them.

NMWI uses TCAP and the connectionless class 0 (basic) service provided by the signaling connection control part (SCCP) of the Common Channel Signaling 7 (CCS7) network.

Call logging

The Call Logging feature uses the blocks provisioned by this parameter to store network entries in a subscriber’s incoming callers list (ICL). One block is required for each network entry in the subscriber’s ICL. Each call logging subscriber can potentially store a maximum of 32 entries. This worst case maximum is considered in the provisioning rules below.

Provisioning rules

Set the parameter according to the following formula:

\[
\text{Parameter value} = \text{(the number of subscribers to NMWI)} + \frac{32 \times \text{the number of lines with Call Logging}}{10}
\]

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>3277 (NT-40)</td>
<td>6553 (SuperNode)</td>
<td>1</td>
</tr>
</tbody>
</table>
FTRQ32WPERMS

Activation
Increase - immediate
Decrease - c old re start or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies
Any increase in the number of lines that subscribe to network message services (NMS) requires an increase in the value of this parameter.

Consequences
Underprovisioning of this parameter results in the failure of NMS features to save message information. The Call Request Retrieval (CRR) feature will be ineffective.

Overprovisioning of this parameter wastes data store.

Verification
To verify that sufficient recording units have been allocated, use CI command OMSHOW FTRQ ACTIVE and read the following entry:

<table>
<thead>
<tr>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>FTRQ32WPERMS</td>
<td>0 0 0</td>
</tr>
</tbody>
</table>

Any nonzero value in FTRQOVFL indicates underprovisioning.

Measurement FTRQHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each unit requires 360 words of memory. For example, a value of 2 requires 720 words of memory.

Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirement changed
Parameter name
Feature Queue 4 Word Areas

Functional description of parameter FTRQ4WAREAS
This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) feature or Residential Enhanced Services (RES) feature or in a local switching unit (international) with universal translations.

The value of this parameter is expressed in units of 10 FTRQ4WAREAS. For example, the default value of 1 represents allocation of 10 FTRQ4WAREAS.

Automatic call distribution management information system
One FTRQ4WAREA is required for each secondary directory number (SDN) assigned to an Automatic Call Distribution position if ACD Management Reports or ACD Management Information System (MIS) software is present in the switching office.

Call park
If the switching unit has the Call Park (PRK) feature, one FTRQ4WAREA is required for each active call park.

Agent status lamp
One FTRQ4WAREA is required for each secondary DN monitored by the enhanced Agent Status Lamp (ASL) feature.

Last number redial
These blocks are required for the Last Number Redial (LNR) feature. One FTRQ4WAREA is required for each directory number (DN) appearance with the LNR feature where the last call involved dialing 8 to 15 digits. An additional FTRQ4WAREA is required for each DN appearance with the LNR feature where the last call involved dialing 1 to 7 digits and no FTRQ2WAREAS were available. The LNR feature attempts to obtain one of these blocks if no FTRQ2AREAS are available. Overprovisioning of these blocks is recommended.

Network-wide ring again
This parameter is used by the network-wide Ring Again (RAG) feature. IBN lines with the network RAG feature can use the LNR feature. This increases the provisioning requirement for FTRQ4WAREAS based on the number of IBN lines with the network RAG that do not have feature LNR.

Once an LNR FTRQ block has been allocated against an IBN line that has the network RAG feature, removal of the network RAG feature does not cause deallocation of the LNR FTRQ block. Only a restart deallocates the LNR FTRQ block in this situation.
Provisioning rules

For all new switching units with North American translations (excluding Bell Canada), for which traffic figures are not available, the recommended value for this parameter is equal to:

the lesser of \( 6.5 \times \) (Maximum number of IBN, RES or KSET lines required for the engineering interval) /100
+ \( \frac{X - Y}{10} \)
+ \( \frac{\text{number of ACD lines}}{10} \) (if ACD Management Reports or MIS software is present)
+ \( \frac{0.1 \times \text{number of ACD lines}}{10} \) (if enhanced ASL feature is present)

where \( X = \) number of IBN lines to which network RAG is available and \( Y = \) number of IBN lines to which network RAG is available and already have the LNR option.

or 3277 for an NT-40 switching unit or 6553 for a SuperNode switching unit.

Round the result up to the next highest integer.

For a local (international) switching unit with universal translations, leave this parameter at the default value.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT-40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies

For an extension to an existing switching unit, the value of this parameter is the maximum number of IBN, KSET, or RES lines required for the engineering interval.

Consequences

Not applicable
**Verification**

To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ. Use CI command OM SHOW FTRQ ACTIVE 3.

<table>
<thead>
<tr>
<th>FTRQ</th>
<th>FTRQ4WAREAS</th>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual*, 297-1001-814 for a description of OM group FTRQ.

Any non-zero value on FTRQOVFL indicates underprovisioning.

See OM GROUP LNREDIAL for the operational measurements associated with the Last Number Redial feature.

When an overflow condition exists on this software resource, all calls requesting a FTRQ4WAREA are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

**Memory requirements**

Each increment of this parameter requires 80 words of memory. For example a value of 100 requires 8000 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS14.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**

BCS36 activation requirements changed
**FTRQ4WPERMS**

**Parameter name**
Feature Queue 4 Word Permanent Blocks

**Functional description of parameter FTRQ4WPERMS**
This parameter is required for the Meridian Digital Centrex (MDC) and Residential Enhanced Services (RES) features.

The parameter specifies, in multiples of 10, the number of FTRQ4WPERMS blocks allocated in data store.

These call processing blocks are used for long term information holding. Data may be held in these blocks for up to 60 days.

**Provisioning rules**
Leave the value of this parameter at the default value of 1.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM GROUP FTRQ:

```
FTRQ  FTRQSEIZ  FTRQOVFL  FTRQHI
9  FTRQ4WPERMS  0  0  0
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.

**Memory requirements**
Each increment of this parameter value requires 100 words. For example, a value of 2 requires 200 words of memory.
Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 activation requirements changed
**FTRQ8WAREAS**

**Parameter name**
Feature Queue 8 Word Areas

**Functional description of parameter FTRQ8WAREAS**
This parameter is required in a switching unit with the Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES) feature, or in a local world switch (international).

The value of this parameter is specified in units of 10 FTRQ8WAREAS blocks. For example, the default value of 1 represents an allocation of 10 FTRQ8WAREAS.

These blocks are required for the features described below.

**Ring again and network ring again**
One block is required for each simultaneous Ring Again (RAG) or Network-wide Ring Again request.

The holding time begins when a request is queued and ends when it is deleted due to RAG recall answer, time out, cancellation, or error.

IBN lines with the network RAG feature can use the last number redial (LNR) feature. This increases the provisioning requirement for FTRQ8WAREAS based on the number of IBN lines with network RAG that do not have the LNR feature.

Once an LNR FTRQ block has been allocated against an IBN line that has the network RAG feature, removal of the network RAG feature does not cause deallocation of the LNR FTRQ block. Only a restart deallocates the LNR FTRQ block in this situation.

**Automatic call distribution**
One FTRQ8WAREA is required for the Automatic Call Distribution (ACD) Observe Agent (OBS) feature for each agent being observed by a supervisor.

One FTRQ8WAREA is required for each ACD agent that receives an inbound or outbound ACD call while extended call management (ECM) is actively reporting information for that agent. As soon as the call ends, the FTRQ8WAREA is released. If no ECM link is active (that is, no information messages are being reported to the host on behalf of that agent), no FTRQ8WAREA is used.

**Uniform call distribution**
The number of blocks provided for this feature should be equal to the number of agents that are members of a uniform call distribution group at any one point in time.
**Last Number Redial**

These blocks are required for the LNR feature. One block is required for each directory number (DN) appearance with the LNR feature where the last call involved dialing more than 15 digits. An additional block is required for each DN appearance with the LNR feature where the last call involved dialing 8 to 15 digits and no FTRQ4WAREA blocks were available. A block is also required for each DN appearance with the LNR feature where the last call involved dialing 1 to 7 digits and no FTRQ2WAREA or FTRQ4WAREA blocks were available.

The LNR feature attempts to obtain one of these blocks if no FTRQ2WAREAS or FTRQ4WAREAS blocks are available. It is recommended to over provision these type of blocks.

See operational measurement (OM) group LNREDIAL_LNRPOVFL for the OMs associated with this parameter and the LNR feature.

**Authorization Codes**

One of these blocks is required for each call entering authorization codes that are routed to a call back queue (CBQ) queueable route, whether they queue or not.

**Call Forward Validation**

Call Forward Validation uses one of these blocks for a maximum of 2 min for each validation attempt. The block is only required if the attempt was unsuccessful.

Whenever a member of an MVP group programs call forwarding to a number outside of the MVP group and that number is busy, a request is queued on this agent. When a user in a centrex office hits a busy line a request is queued on this agent. The number of blocks should be increased by the following:

\[
\text{max no. of users programming call forwarding at any one time) / 10}
\]

The 10 represents the probability of hitting a busy line. This is high, but is offset by the fact that in MVP groups, if the forwarded station is within the MVP group, call forwarding is active regardless of the busy or idle status of the line.
**Simplified Message Desk Interface**

These blocks are required for the Simplified Message Desk Interface (SMDI) feature.

The number of blocks required for this feature is determined by the following formula:

\[ \text{BLOCKS} = \left( \frac{\text{number of calls to SMDI UCD groups during average busy season busy hour}}{3600} \right) \times (\text{maximum time lag between UCD group line and data presented to the data link}) \]

Assume a time lag of two seconds.

**SPC-CMS**

This parameter is also associated with the SPC-CMS feature that enables SPC (Stored Program Control) switches to be included in the Call Management Service (CMS) network to provide one-way CMS. One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to the DMS subscribers but not to the SPC subscribers.

SPC switches are Stored Program Control switches, specifically SP-1/2W and #1ESS, that are not capable of transmitting calling line information through the standard per trunk signaling (PTS) trunking.

For SPC maintenance messages, a FTRQWAREA block is required.

**Provisioning rules**

For a new switching unit with North American translations for which traffic figures are not available the recommended value for this parameter is the lesser of 3277 for an NT40-based switching unit or 6553 for a SuperNode switching unit or the following:

\[
\left(0.03 \times \text{the number of IBN, RES or KSET lines}\right) + \left(\left(\text{max number of maintenance calls per second} \times \text{SPCCLITIMEOUT value}\right) / 10\right) + \left(\text{X-Y} / 10\right)
\]

where

- \(X\) = number of IBN lines to which network RAG is available
- \(Y\) = number of IBN lines to which network RAG is available and already have the LNR option
- + (number of supervisors with OBS Feature) / 10
- + (maximum number of ACD ECM agents active on calls at one time) / 10
where number of ACD ECM agents = total number of ACD agents belonging to MDC customer groups with the ECM option

See office parameter SPCCLITIMEOUT in table OFCENG.

Note that the MDC customer groups have the ECM option assigned in table CUSTNTWK. To determine which agents are in ECM-assigned MDC customer groups, see table IBNLINES (for 2500 sets) and table KSETLINE (for Meridian business sets).

For a local world system (international) switching unit the value for this parameter is the lesser of 3277 for an NT40-based switching unit or 6553 for a SuperNode switching unit or the following:

0.2 X the number of simultaneous Ring Again requests
+ ((max number of maintenance calls per second x SPCCLITIMEOUT value) / 10)

Round the result up to the next highest integer.

The maximum number is the maximum number required for the engineering interval.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (Supernode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies

At extension time the value of this parameter must be changed if the number of IBN, RES, KSET lines, SMDI calls, or SPC trunks increases.

Consequences

If an overflow condition exists on this software resource due to underprovisioning, all calls requesting a FTRQ8WAREA are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

If the value of this parameter is overprovisioned, data store is wasted.
FTRQ8WAREAS

Verification
To verify that sufficient software resources provided by this parameter have been allocated, use the CI command OMSHOW FTRQ ACTIVE 4 and read the following:

<table>
<thead>
<tr>
<th>FTRQ</th>
<th>FTRQSEIZ</th>
<th>FTRQOVFL</th>
<th>FTRQHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>FTRQ8WAREAS</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in field FTRQOVFL indicates underprovisioning.

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.

Memory requirements
Each increment of this parameter requires 120 words of memory. For example, a value of 3 requires 360 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history

| BCS36 | activation requirements changed |
Parameter name

Feature Queue 8 Word Permanent Blocks

Functional description of parameter FTRQ8WPERMS

This parameter is used by Executive Message Waiting (EMW) features in the following environments:

- DMS-100
- DMS-200 with featured ISDN user part (ISUP)
- centralized private branch exchange (PBX)
- SL-100
- Plain Ordinary Telephone Service (POTS)

Associated features include Leave Messaging (LVM), Message List Editing (MLE), Call Covering (CCV), Executive Message Waiting (EMW) Message Waiting (MWT), and Call Request (CAR).

LVM allows a party to leave a message against a base station to return a call. The base station can then use the MWT retrieval capability to return the call to the party that activated the feature.

CCV allows a third party to answer a redirected call and activate CCV to leave a message for the base station on behalf of the calling party.

MLE provides the capability to inspect, delete, or return selected messages.

The Call Logging feature also uses the blocks provisioned by this parameter. FTRQ8WPERM blocks are used to store nodal entries in a subscriber's incoming callers list (ICL). One block is required for each nodal entry in the subscriber’s ICL.

A Call Logging subscriber can have a maximum of 32 recorded numbers at any given time. Each subscriber can require 32 FTRQWPERMS. This worst-case maximum is included in the provisioning rules.

The parameter specifies, in multiples of ten, the number of FTRQ8WPERM blocks allocated in data store. FTRQ8WPERM blocks are used for long term information storage. Information is held in these blocks for as long as 60 days.
FTRQ8WPERMS

Provisioning rules

Use the following calculation to determine the value of this parameter:

\[ \text{Value} = ((\text{# of lines with EMW}) \times (\text{Avg num of msg per line})) + 9) + (32 \times \text{the number of lines with Call Logging}) / 10 \]

Where:

- \( \text{# of lines with EMW} \) = total number of IBN lines (2500 and MBS) with EMW assigned.
- \( \text{Avg num of msg per line} \) = average number of messages queued per line.

Each display set with EMW can potentially hold 31 FTRQ8WPERM blocks. These blocks remain queued against a user’s set for as long as 60 days.

Each set has an average of two queued messages.

For 1000 display sets, 28000 words of store are required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

Dependencies

Not applicable

Consequences

Not applicable

Verification

To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM Group FTRQ.

\[
\begin{array}{cccc}
\text{FTRQ} & \text{FTRQ8WPERMS} & \text{FTRQSEIZ} & \text{FTRQOVFL} & \text{FTRQHI} \\
0 & 0 & 0 & 0 & 0 \\
\end{array}
\]

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group FTRQ.
Memory requirements
Each increment of this parameter value requires 120 words of memory. For example, a value of 20 requires 2400 words of memory.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation requirements changed
Parameter name
Feature Queue Agents

Functional description of parameter FTRQAGENTS
This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) or Residential Enhanced Services (RES) feature, or a local (international) switching unit with universal translations.

The implementation of Multiple Position Hunt with Queueing requires extra provisioning of FTRQAGENTS.

This parameter is also associated with the SPC-CMS feature.

The value of this parameter is expressed in FTRQAGENT areas of ten. For example, the default value of 1 represents 10 FTRQAGENT areas.

This parameter specifies the number of agents that can have the following features waiting or active at any given time:
- Automatic Call Back or Recall
- Automatic Call Distribution
- Call Back Queuing
- Call Forward Busy
- Call Forward Don’t Answer
- Call Forward Validation Terminating
- Call Hold
- Call Park
- Camp on
- Last Number Redial
- Message Waiting/Call Request
- Query Busy Station
- Ring Again
- Station Message Desk Interface
- Uniform Call Distribution
- SPC-CMS
- Multiple Position Hunt with Queue
If the switching unit has the Automatic Call Distribution (ACD) feature, each agent position needs an FTRQ agent area in order to become active in an ACD group and receive ACD calls.

There should be one FTRQAGENT area for each potential ACD agent position.
One FTRQAGENT is required for each secondary directory number (DN) that is assigned to an ACD agent position. One FTRQAGENT is required for each answer agent key when the ACD/Management Information System (MIS) software is present (independent of whether or not MIS is assigned to the ACD groups).

Potentially, some agents will not be able to become active in an ACD group if there are not enough FTRQ agent areas allocated. The worst case scenario occurs when all agent positions datafilled in the switching unit require activation at the same time. To ensure that this does not happen, the following checks are made when new INCALLS keys are datafilled in table KSETLINE, by either service orders or table control:

- if the total number of INCALLS keys datafilled in the switching unit exceeds 75% of the number of FTRQ agent areas allocated, the tuple is added but the following warning is generated:
  WARNING--POTENTIAL FTRQ AGENT AREA PROBLEM--MORE THAN 75% USED BY ACD

If the above message is generated the operating company should increase the value of this parameter.

- if the total number of INCALLS keys datafilled in the switching unit already equals 100% of the number of FTRQ agent areas allocated, the tuple is not added and the following error message is generated:
  ERROR--NO FTRQ AGENT AREAS AVAILABLE

If the above message is generated, the operating company must increase the value of this parameter before this or another tuple can be added.

This parameter is also associated with the SPC-CMS feature that enables SPC (Stored Program Control) switches to be included in the Call Management Service (CMS) Network to provide one-way CMS. One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to the DMS subscribers but not to the SPC subscribers.

SPC switches are Stored Program Control switches, specifically SP-1/2W and #1ESS, which are not capable of transmitting calling line information through the standard per trunk signaling (PTS) trunking.

Each calling line information (CLI) message associated with SPC-CMS requires 1 FTRQAGENTS block.
FTRQAGENTS

Provisioning rules

The value of this parameter is the lesser of 3277 for an NT-40 based switching unit and 6553 for a SuperNode based switching unit or the following:

\[
\frac{(\text{number of lines with ACD} + \text{number of lines with UCD} + \text{number of lines with LNR})}{10} + 0.03 \times (\text{lines with Call Back Queuing} + \text{lines with CFB} + \text{lines with CFDA} + \text{lines with Call Forward Validation Terminating} + \text{lines with Call Hold} + \text{lines with Call Park} + \text{lines with Camp On} + \text{lines with Message Waiting/Call Request} + \text{lines with SMDI + KSET Ring Again Keys} + \text{Query Busy Station Keys}) + (2 \times \text{the number of busy hour Automatic Call Back and Automatic Ringback feature attempts}) / 10 + \frac{((\text{No. of entries in table SPCTRKS} / \text{average holding time in sec of a call in busy hour}) \times \text{SPCCLITIMEOUT value})}{10} + (\text{lines on a non-data link console when a Multiple Position Hunt arrangement is employed}) + (\text{number of SDN keys assigned to ACD agent positions} / 10) + (\text{number of AAK when ACD MIS software is present} / 10)
\]

For a new switching unit, excluding Bell Canada, with North American translations for which traffic figures are not available, the recommended value for this parameter is the lesser of 3,277 for a NT40 based switching unit or 6,553 for a SuperNode switching unit or

\[
\frac{(\text{maximum number of RES lines} + \text{maximum number of IBN lines} + \text{maximum number of KSET lines} + \text{maximum number of ACD lines} + \text{maximum number of RAG requests})}{10} + \frac{((\text{No. of entries in table SPCTRKS} / \text{average holding time in sec of a call in busy hour}) \times \text{SPCCLITIMEOUT value})}{10} + \text{lines on a non-data link console when a Multiple Position Hunt arrangement is employed}
\]
For a Bell Canada switching unit, the value for this parameter is the lesser of 3,277 for an NT40-based switching unit or 6,553 for a SuperNode switching unit or

\[
\text{minimum number of RES lines + maximum number of IBN lines + maximum number of KSET lines) / 10 + (No. of entries in table SPCTRKS / average holding time in sec of a call in busy hour) x SPCCLITIMEOUT value) / 10 + lines on a non-data link console when a Multiple Position Hunt arrangement is employed}
\]

For a local switching unit (international) with universal translations, the value for this parameter is the lesser of 3,277 for an NT40-based switching unit or 6,553 for a SuperNode switching unit or the maximum number of simultaneous Ring Again requests / 10.

The maximum number is the maximum number required for the engineering interval.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3277 (NT40)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6553 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**

Increase - immediate
Decrease - cold restart or NORESTARTSWACT
(Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**

At extension time, the value of this parameter should be changed, if the number of IBN, RES, or KSET lines, or SPC trunks increases.

**Consequences**

Underprovisioning of this parameter prevents calls from being dequeued and terminated on a non-data link console.

**Verification**

To verify that sufficient software resources provided by this parameter have been allocated, use the CI command OMNSHOW FTRQ ACTIVE 0 and read the following entry:

\[
\begin{array}{llll}
\text{FTRQSEIZ} & \text{FTRQOVFL} & \text{FTRQHI} \\
0 & \text{FTRQAGENTS 10} & 0 & 0 \\
\end{array}
\]

Any nonzero value in FTRQOVFL indicates underprovisioning.
FTRQAGENTS

Measurement FTRQHI records the maximum number of feature queue areas in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual* 297-1001-814 for a description of OM group FTRQ.

Memory requirements

To determine the amount of memory required by this office parameter use the following formula:

\[
\text{FTRQAGENTS value} \times 70
\]

Dump and restore rules

If doing dump and restore from software release BCS29 to software release BCS29 or higher, increase the parameter value by the following:

\[
\frac{\text{(average holding time in sec of a call in busy hour} \times \text{SPCCLITIMEOUT value)}}{10}
\]

Parameter history

BCS36  activation requirements changed
**Parameter name**
Feature Queue Audit

**Functional description of parameter FTRQAUDIT**
This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) or Residential Enhanced Services (RES) feature or a switching unit (international) with universal translations.

This parameter specifies the audit pause time, in 1-min intervals for the feature queing software resources (FTRQ) audit.

**Provisioning rules**
This parameter should be left at the default value of 10.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>10</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS14

Copy the existing value of this parameter when doing a dump and restore.
**FXOGS_REMBSY_BITS**

**Parameter name**
Foreign Exchange Remote Make Busy Bits

**Functional description of parameter FXOGS_REMBSY_BITS**
This parameter is required in a switching unit that has foreign exchange (FX) trunks. It specifies what type of supervision is required for busying FX trunks with the option REMBSY (remote make busy). Supervision is provided to maintain a constant seizure so that when the line is reconnected the far end views this line as being seized.

This parameter allows the operating company to specify what type of supervision is needed for busying FX trunks with REMBSY = Y.

**Provisioning rules**
The values for this parameter are A_OFF_B_OFF_HK, and A_ON_B_OFF_HK.

If this parameter is set to A_ON_B_OFF_HK the supervision is loop closed, ring ground.

Leave the value of this parameter at the default value of A_OFF_B_OFF_HK if loop open, ring ground is the type of supervision required for busying out FX trunkns with option REMBSY set to Y.

Set the value of this parameter to A_ON_B_OFF_HK if loop closed, ring ground is the type of supervision required for busying out FX trunkns with option REMBSY set to Y.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>A_OFF_B_OFF_HK</td>
<td></td>
<td>A_OFF_B_OFF_HK</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Option REMBSY is datafilled in table TRKSGRP.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

OFCENG-296 297-1001-455 Standard 22.02 March 1994
Dump and restore rules

This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
GLOBAL_CUTOFF_ON_DISCONNECT

Parameter name
Global Cutoff On Disconnect

Functional description of parameter GLOBAL_CUTOFF_ON_DISCONNECT
This parameter provides the operating company with the ability to supply an open battery signal at call disconnect to either the originating or terminating agent (depending on which remains offhook) in a call on every standard line in a DMS-100 switching unit. The length of the open battery signal can vary from 500 ms to 10s.

This parameter also specifies when the cutoff relay is operated (relative to disconnect). The operating company can supply an open battery signal as the first operation in processing permanent signal and partial dial (PSPD) subscriber line conditions.

Provisioning rules
This parameter contains three fields.

Field GC_PRESENCE_BOOL specifies whether an open battery signal at disconnect is applied to the agent in the call that remains offhook after the network connection for the call is released.

If this field is set to Y (yes), an open battery signal is sent. If this field is set to N (no), an open battery signal is not sent.

Field GC_RELAY_OPEN_TIME specifies the length of the open battery signal if field GC_PRESENCE_BOOL is set to Y.

Specify the length of the open battery signal in 10-ms units. For example, the default value of 80 specifies an open battery signal of 800 ms. The signal length can be from 500 ms to 10 s (values 5 to 1000). If field GC_PRESENCE_BOOL is set to N, leave the value of this field at the default.

Field GC_DELAY_RELAY_OPEN specifies whether the cutoff relay is operated before or after disconnect timing is initiated.

If the value of this field is set to Y, the cutoff relay is operated after normal disconnect. If the value of this field is set to N, the cutoff relay is operated immediately, followed by disconnect timing.

If this feature is not required, leave the value at the default of N 80 N.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N 80 N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GLOBAL_CUTOFF_ON_DISCONNECT

Activation

For a change to this parameter to take effect, all line peripherals must have their EXECS resent. For line modules (LM) and remote line modules (RLM), busy (BSY), load (LOADPM) and return to service (RTS) the peripheral. For XPM-based peripherals (LTC, LGC, and so on), BSY and RTS the inactive unit and perform a warm swact on the peripheral.

Dependencies

See parameter COPP_RELAY_OPEN_TIME in table OFCENG for the time that is associated with the permanent signal and partial dial open battery.

This feature does not affect the actions performed by the line feature Cutoff On Disconnect (COD). In any situation where this parameter is active and a line has the line feature COD, the actions performed by the line feature COD take precedence over those actions performed by this parameter.

Consequences

The value of this parameter should be set to N 80 N when the switching unit is in the cut state using the LMCUT software program.

Problems can be encountered when running a load box if the value of this parameter is set to Y and the switching unit is in the cut state.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
**GOS_NUM_RU**

**Parameter name**
Global Operator Services Number Of Recording Units

**Functional description of parameter GOS_NUM_RU**
This parameter defines the number of recording units that are allocated for use by Traffic Operator Position System (TOPS) calls in an open numbering plan environment.

**Provisioning rules**
The following formula is recommended for a stand-alone TOPS or a TOPS host operator centralization switching unit, excluding Bell Canada.

\[
\text{Quantity} = (\% \text{ of MCCS calls} + \% \text{ of ACTS calls} + \% \text{ of CAMA calls} \\
\quad + \% \text{ of 0+ and 0- calls}) \\
\quad \times (\text{number of TOPS trunk group members}) \\
\quad + (\text{number of TOPS Positions} + \text{TOPS waiting Q size})
\]

The following formula is recommended for a TOPS remote operator centralization switching unit, excluding Bell Canada.

\[
\text{Quantity} = (\text{number of incoming calls} + \% \text{ of ACTS calls} + \% \text{ of CAMA calls} \\
\quad + \% \text{ of 0+ and 0- calls}) \\
\quad \times (\text{number of TOPS trunk group members}) \\
\quad + (3 \times \text{number of Voice Links})
\]

The following formula is recommended for a Bell Canada switching unit.

\[
\text{Quantity} = (\text{number of TOPS incoming trunks} \times 0.75) \\
\quad + (\text{number of TOPS positions} \times 2) \\
\quad + (\text{number of voice links} \times 3)
\]

The value must not exceed the number of TOPS trunk group members.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Increase - immediate
Decrease - cold restart

**Dependencies**
Global Operator Services (GOS) recording units are used only if the value of field NUMBERING_PLAN in table TOPSPARM is set to a value of OPEN_NUMBERING.

**Consequences**
Overprovisioning of this parameter results in wasted data store.
If this parameter is underprovisioned, calls intended for operator service can be routed to treatment.

**Verification**
Not applicable

**Memory requirements**
Each GOS recording unit requires 387 words of memory for SuperNode.
Each GOS recording unit requires 194 words of memory for NT40.

**Dump and restore rules**
This parameter was introduced in BCS34.
Copy the existing value of this parameter when doing a dump and restore.
GROUND_START_DELAY

Parameter name

Ground Start Delay

Functional description of parameter GROUND_START_DELAY

This parameter is required for a switching unit with ground start lines. It specifies the length of delay before the system activates the tip relay on the line card and digit collection can begin. This feature works only with Digitone receivers.

The value of this parameter is expressed in 10-ms intervals. For example, a value of 4 represents 40 ms.

The default value of 4 is sufficient for most switching units.

This parameter need only be altered for the few switching units that require greater delays due to hardware configurations.

Provisioning rules

If the ground start delay is greater than 40 ms, set the value of the parameter to the required ground start delay.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>50</td>
<td>4 (40 ms)</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

If this value is not set correctly, calls from ground start lines do not complete.

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
**GUARANTEED TERMINAL CPU SHARE**

**Parameter name**
Guaranteed Terminal Central Processing Unit Share

**Functional description of parameter GUARANTEED TERMINAL CPU SHARE**
This parameter is required in all switching units to set the central processing units (CPU) percentage of real time that is given to guaranteed terminals. Changes to this parameter affect the percentage of real time for call processing.

**Provisioning rules**
The CPU reserves 9% of its processing time for overhead and 8% for background activities such as low priority audits, MAP terminals, and log devices. The remaining 83% of the CPU time is available for engineerable events. The 83% can be fully utilized for call processing. 83% is the call processing capacity of the CPU.

This parameter specifies the fraction of the remaining 83% of CPU in percentage form that is offered to guaranteed terminals. The recommended values are 2 to 16 in increments of 1.

In a signal transfer point (STP) offices there is no call processing software. Therefore, the recommended value for this parameter in an STP office is the maximum of 16.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 (STP offices only)</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Any value for this parameter above 2% means that the call processing capacity is reduced from the usual 83%.

The new call processing capacity can be found using the following:
% call processing = 85 – GUARANTEED TERMINAL CPU SHARE

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.
GUARANTEED_TERMINAL_CPU_SHARE

Dump and restore rules

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  new STP default value and recommended value added
**IMMEDIATE_RING_ENABLE**

**Parameter name**
Immediate Ring Enable

**Functional description of parameter IMMEDIATE_RING_ENABLE**
This parameter is required for a local switching unit with North American translations or a local international switching unit with universal translations.

This parameter specifies whether or not the switching unit has immediate ringing.

With immediate ring, the beginning of the ringing of the subscriber’s line is at any point in the ringing cycle rather than only at the beginning of a new cycle. This is accomplished by applying a short burst of ringing to the line at the time of connection, even if this is during the silent period of the ringing cycle.

Immediate ring is not available for four, eight, and ten party lines with coded or superimposed ringing.

**Provisioning rules**
Set the value of this parameter to Y (yes) if immediate ring is required.

Leave the value of this parameter at the default of N (no) if immediate ring is not required.

For a local international switching unit with universal translations, the recommended value is as follows.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Universal translation values by country</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>Caribbean Expansion Programme (CEP)</td>
<td>Y</td>
</tr>
<tr>
<td>China</td>
<td>N</td>
</tr>
<tr>
<td>Turkey</td>
<td>Y</td>
</tr>
</tbody>
</table>

The value should be set to Y for a switching unit in Morocco if immediate ringing is required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**IMMEDIATE_RING_ENABLE**

<table>
<thead>
<tr>
<th>Activation</th>
<th>Immediate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependencies</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Consequences</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Verification</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Memory requirements</td>
<td>This parameter has no memory impact.</td>
</tr>
<tr>
<td>Dump and restore rules</td>
<td>Copy the existing value of this parameter when doing a dump and restore.</td>
</tr>
</tbody>
</table>
IMP_DELAY

Parameter name

Inbound Modem Pooling Delay

Functional description of parameter IMP_DELAY

This parameter is used to start a timer in the Inbound Modem Pooling (IMP) feature (on Data Unit (DU) terminations) after the DU has answered. The timer is used while waiting for an inband_sync message from the DU.

Provisioning rules

Inband sync cannot be achieved before T-Link handshaking has started. Since the office parameter TLINK_DELAY in table OFCENG will delay the starting of the T-Link Handshaking, the delay used in the IMP feature must be increased by the length of the parameter TLINK_DELAY. This change will be implemented in software so the operating company need not modify the existing value of this parameter. Note that the actual length of the timer used in the IMP feature will be the sum of the two parameters IMP_DELAY and TLINK_DELAY.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

See office parameter TLINK_DELAY in table OFCENG.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
INTL_GATEWAY_OFFICE

Parameter name
International Gateway Office

Functional description of parameter INTL_GATEWAY_OFFICE
This parameter is only visible to the administration in an international switching unit with the INTLGTSB subsystem. It specifies whether the switching unit has international translations with gateway attributes.

Provisioning rules
Set the value of this parameter to Y (yes), if the switching unit has feature package NTX496AA03 (Gateway Access) and requires the following gateway attribute:

Determination of KP2 Signals
The KP (start-of-pulse) forward signal is sent to indicate that transmission of the address signals is about to start. In an international context variant KP signals are used as follows:

- KP1 = terminating
- KP2 = transit call

If this parameter is not required, leave the value at the default of N (no).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
International Local Office

**Functional description of parameter INTL_LOCAL_OFFICE**
This parameter appears only in a local (international) switching unit with universal translations. It specifies that the switching unit is an international local switching unit (that is, it uses international specific software and hardware).

**Provisioning rules**
Leave the value of this parameter at the default value of Y.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Cold restart

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was new with software release BCS19.
Copy the existing value of this parameter when doing a dump and restore.
**INTRALATA_DEFAULT_USE_TRKLATA**

**Parameter name**
IntraLATA Default Use TRKLATA

**Functional description of parameter INTRALATA_DEFAULT_USE_TRKLATA**
This parameter is used to determine if default routing through Table TRKLATA occurs when no entry for a subscriber is found in table DNLPIC.

**Provisioning rules**
Set the value of this parameter to Y (yes) to allow default routing to occur when no subscriber entry is found in table DNLPIC.

Set the value of this parameter to N (no) if this function is not required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
See the *TOPS Customer Data Schema 297-2271-451* for a description of table DNLPIC.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
Each unit requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
### INWATS_CCIS_OSO_ENABLE

**Parameter name**
- Inward Wide Area Telephone Service Common Channel Interoffice Signaling Originating Serving Office Enable

**Functional description of parameter INWATS_CCIS_OSO_ENABLE**
This parameter is required for switching units with the enhanced inward wide area telephone service (INWATS) originating serving office (OSO) function (feature package NTX157AA) using the direct signaling capability of Common Channel Interoffice Signaling (CCIS).

**Provisioning rules**
To enable this feature the value of the parameter must be set to Y (yes).

If this feature is not required, leave the value of this parameter at the default of N.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
If this parameter is set to Y, table INWSNPA must be datafilled. See the *Toll Customer Data Schema 297-2201-451* for a description of table INWSNPA.

**Consequences**
Not applicable

**Verification**
Not applicable

**Dump and restore rules**
This parameter was introduced in BCS14.

Copy the existing value of this parameter when doing a dump and restore.
INWATS_LOCAL_TERMINATION

Parameter name
Inward Wide Area Telephone Service Local Termination

Functional description of parameter INWATS_LOCAL_TERMINATION
This parameter provides the capability for INWATS calls to complete from the local source.

Provisioning rules
If this parameter is set to N (no) only the following INWATS calls are allowed to complete:

- Incoming INWATS calls through incoming toll trunk group are completed and allowed to terminate on an INWATS line.
- Incoming INWATS calls are completed if the non-local (field ORIGSOURCE equal to NLCL in table IBNXLA) option is assigned to the Extended Area Service (EAS) trunk group.
- Calls through incoming test trunk (trunk group type TD) to INWATS line for line testing
- INWATS calls for the test desk are also completed if the trunk group (trunk group type TD) is assigned the non-local (field ORIGSCRE equal to NLCL) option.
- Calls from co-located lines to INWATS line. In order to permit test calls to the INWATS lines, a loop around outgoing trunk (trunk group type TO) and incoming trunk (trunk group type TI) arrangement can be used. The non-local (field ORIGSOURCE equal to NLCL in table IBNXLA) option must be assigned to the incoming trunk group (trunk group type TI).

If this parameter is set to Y, the following INWATS calls are also allowed to complete:

- Calls originated in the same switching unit. This eliminates the use of loop around arrangement for test calls to the INWATS lines.
- INWATS calls through incoming trunks with local (field ORIGSOURCE equal to LCL in table IBNXLA) option as their originating source.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable
Consequences

If this parameter is set to N, the INWATS calls originated in the same switching unit and the calls through incoming trunks to the INWATS line with the local (field ORIGSOURCE equal to LCL in table IBNXLAA) option as their originating source are blocked routed to Unauthorized INWATS Call treatment (UNIN) in the appropriate treatment table.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
INWATS_ON_AMA

Parameter name
Inward Wide Area Telephone Service On Automatic Message Accounting Tape

Functional description of parameter INWATS_ON_AMA
This parameter is required for all switching units with Automatic Message Accounting (AMA) tape units. It specifies whether inward wide area telephone service (INWATS) calls are to be recorded on AMA tape.

Provisioning rules
Set the value of this parameter to Y (yes) to enable the recording of INWATS calls on AMA tape.

Leave the value of this parameter at the default of N (no) if recording of INWATS calls on AMA tape is not required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
If this parameter is set to Y, ensure that the INWATS tuple in table AMAOPTS is set to ON.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Integrated Services Digital Network Data Packet Network Packet Handler Generic

Functional description of parameter ISDN_DPN_PH_GENERIC
This office parameter allows multiple logical terminal identifier (LTID) groups on a single Bd channel.

If the value of this parameter is 27 or greater, multiple LTID groups are allowed on a single Bd channel. Otherwise, all LTIDs on a Bd channel must be from the same LTID group.

Provisioning rules
Set the value of this parameter to match the packet handler’s SW generic in the Data Packet Network (DPN).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100</td>
<td>25</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
When the value of this parameter is 27 or greater, logical terminals from more than one group can be mapped to a Bd channel in LTMAP.

Verification
2. Add LTIDs from the same group to a Bd channel.
3. Add LTICs from different group to a Bd channel.

In this case, the LTIDs from different groups should not be allowed.

1. Set ISDN_DPN_PH_GENERIC to 27 or greater.
2. Add LTIDs from different groups to a BD channel

In this case, the LTIDs from different groups should not be allowed.

Memory requirements
This parameter has no memory impact.
**Dump and restore rules**

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Integrated Services Digital Network 1A Interworking

Functional description of parameter ISDN_NET_1A_INTERWORKING
This parameter is used to configure the Integrated Services Digital Network (ISDN) basic rate interface (BRI) and ISDN user part (ISUP) interworking software to accommodate connection to a 1A switch. It is for use with feature AG2001 (TR444 Comprehensive Compliance) and configures the software as either TR compliant or non-TR compliant.

ISDN_NET_1A_INTERWORKING is required for all switching units that are equipped with feature AG2001, yet wish to interwork with a non-TR compliant 1A.

Provisioning rules
If the switch supports BRI terminals and is connected to a 1A switch with ISUP trunks, activate non-TR compliance by setting this parameter WORKAROUND_1A.

To maintain TR compliance with feature AG2001, set this parameter to TR_COMPLIANT.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TR_COMPLIANT</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
If the value of this parameter is WORKAROUND_1A, the BRA-ISUP interworking software will not be TR compliant.

If the value of this parameter is TR_COMPLIANT and a BRI functional set on the switch terminates a call to a 1A “Freecall” number (over ISUP trunks), the call will be dropped if not answered before expiry of the terminals T310 timer.

Verification
The parameter value is visible through table control procedures acting on table OFCENG. Positioning on ISDN_NET_1A_INTERWORKING displays the current value.
ISDN_NET_1A_INTERWORKING

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
ISDN Service Group Operational Measurement Block Size

Functional description of parameter ISGBDOM_BLKSIZE
This parameter is associated with the ISDN service group (ISGBD) operational measurement that is used to monitor the Bd channel performance on D-Channel Handlers (DCH). The term ISG refers to the 32 channels associated with a DCH.

This parameter controls the size of the block where ISGBDOM store is allocated and deallocated. It is required to allow smaller offices (those that are not equipped with many DCHs) to optimize their store allocation.

Range information

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>31</td>
<td>16</td>
</tr>
</tbody>
</table>

Activation
Immediate

Provisioning rules
Set the value of this office parameter equal to the expected number of Bd channels.

If the parameter is set to 10 and there are 11 Bd channels in the office, data will be allocated for 20 channels, resulting in store for nine extra.

For quick response when datafilling, set the parameter’s value in the range of 16 to 31 to quicken the allocation and deallocation operations. The parameter can be lowered after initial datafill to optimize the unused store requirements.

Dependencies
Not applicable

Consequences
If the value of this parameter is underprovisioned, the process of adding Bd channels will be slow because the code attempts to find a free index (one that was allocated and then deleted) in the tables and, if it cannot, it allocates more store if possible.

Every time more than the parameter value of Bds are datafilled, the code executes the relatively long resize routines. The process of deleting Bd channels is also slow but very efficient in maintaining only the store that the situation needs.
ISGBDOM_BLKSIZE

If the value of this office parameter is overprovisioned the process of adding Bds is fast. A large block is allocated and any subsequent Bd datafills find a free index in the tables and the resize routines are called less often. However, overprovisioning wastes data store.

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
ITOPS_ACCOUNT_CODES

Parameter name
International Traffic Operator Position System Account Codes

Functional description of parameter ITOPS_ACCOUNT_CODES
This parameter enables the operating company to restrict toll access to subscriber lines by assigning an authorization access code (account code) to each line. Lines without an associated account code are denied toll services. The operator must validate account code numbers. Specific call details cannot be keyed in by the operator until a valid account code number is entered.

This parameter specifies whether the account code feature, display and Automatic Message Accounting (AMA) facilities are operative. Fields DISPLAY and AMA are added with BCS32 to provide this optionality.

Provisioning rules
To activate the account code feature (field ACTIVE), display (field DISPLAY), or AMA (field AMA) set the appropriate sub-field to Y. Otherwise, set it to N. When an option is set to N, the existing ITOPS functionality is maintained. The three fields of this parameter are outlined in table 1.

<table>
<thead>
<tr>
<th>Field</th>
<th>Range of values</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVE</td>
<td>Y or N</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Y or N</td>
</tr>
<tr>
<td>AMA</td>
<td>Y or N</td>
</tr>
</tbody>
</table>

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>N</td>
<td>N N N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable
ITOPS_ACCOUNT_CODES

Memory requirements

There is no memory usage associated with this parameter.

Dump and restore rules

This parameter was introduced in BCS31.

When doing a dump and restore from BCS31 to BCS32 or higher, the value of ITOPS_ACCOUNT_CODES is automatically copied into the ACTIVE field. Fields DISPLAY and AMA appear at the default values.

Copy the existing value of this parameter when doing a dump and restore from BCS32 to BCS32 or higher.
Parameter name
International Traffic Operator Position System Enhanced Automatic Call Distribution

Functional description of parameter ITOPS_ENHANCED_ACD
The enhanced Automatic Call Distribution (ACD) system has been developed to increase the flexibility of and to simplify the call queueing system. This enhanced system takes the calls destined to operator services, analyzes their call properties and assigns them to the appropriate operators or call queues.

This parameter specifies whether the old or the enhanced queueing system is activated.

Provisioning rules
Set the value of this parameter to Y (yes) to use the enhanced queueing system.

Leave the value of this parameter at the default of N (no) to use the old queueing system.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
There is no memory usage associated with this parameter.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
ITOPS_HIGH_TRAFFIC_START_TIME

Parameter name
International Traffic Operator Position System High Traffic Start Time

**Functional description of parameter ITOPS_HIGH_TRAFFIC_START_TIME**
This parameter is required for a switching unit with the International Traffic Operator Position System (ITOPS). It allows the operating company to switch from the low queue to the high queue threshold tables at the hour specified by this parameter.

The high queue threshold tables are used when the operating company prefers the calls to be handled faster.

Tables QTTIDXH, QT0H, QT1H, QT2H, QT3H, QT4H, and QT5H contain the high queue threshold values associated with the related average work time value.

Because the traffic can vary according to the environment, the customer is free to have any low and high traffic start times. There is no restriction that, for example, high traffic start time must be later than the low traffic start time.

**Provisioning rules**
Specify the hour (0 to 23) to switch from the low to the high queue threshold tables.

If only one set of tables is required, leave this parameter value at the default of 0 (zero).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
If only one set of tables is required, set the value of this parameter and parameter ITOPS_LOW_TRAFFIC_START_TIME in table OFCENG to 0. In this situation, only low traffic tables are active all the time.

**Consequences**
Not applicable

**Verification**
Not applicable
Memory requirements
   This parameter has no memory impact.

Dump and restore rules
   This parameter was introduced in BCS25.
   Copy the existing value of this parameter when doing a dump and restore.
ITOPS_LOW_TRAFFIC_START_TIME

Parameter name
International Traffic Operator Position System Low Traffic Start Time

Functional description of parameter ITOPS_LOW_TRAFFIC_START_TIME
This parameter is required for a switching unit with the International Traffic Operator Position System (ITOPS). It allows the operating company to switch from the high queue to the low queue threshold tables at the hour specified by this parameter.

The low queue threshold tables are used when the operating company is willing to let the calls wait in the queue for a longer period of time.

Tables QTTIDXL, QT0L, QT1L, QT2L, QT3L, QT4L and QT5L contain the low queue threshold values associated with the related average work time value.

Because the traffic can vary according to the environment, the customer is free to have any low and high traffic start times. There is no restriction that, for example, high traffic start time must be later than the low traffic start time.

Provisioning rules
Specify the hour (0 to 23) to switch from the high to the low queue threshold tables.

If only one set of tables is required, leave the value of this parameter at the default of 0 (zero)

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
If only one set of tables is required, set the value of this parameter and parameter ITOPS_HIGH_TRAFFIC_START_TIME in table OFCENG to 0. In this situation, only low traffic tables are active all the time.

Consequences
Not applicable

Verification
Not applicable
Memory requirements
   This parameter has no memory impact.

Dump and restore rules
   This parameter was introduced in BCS25.

   Copy the existing value of this parameter when doing a dump and restore.
ITS_NUM_CONCURRENT_SESSIONS

Parameter name
Integrated Testing System Number of Concurrent Sessions

Functional description of parameter ITS_NUM_CONCURRENT_SESSIONS
This parameter defines the resources that a DMS-100 must allocate to support the integrated testing system (ITS) translations language 1 (TL1) interface and testing requirements.

The ITS TL1 system uses an X.25 data link to perform line testing. For a DMS-100 to perform testing, a number of resources must be allocated. These resources are buffers, parameter and result storage, and control storage to perform the actual testing.

The ITS TL1 system is driven by the ITS operations system (OS) that also requires storage resources to handle testing.

The resources determined by the ITS OS support ITS TL1 on the DMS-100.

Provisioning rules
Set the value of this parameter to the number of test sessions that can be run concurrently as determined by the operating company test facilities and the number of concurrent tests that they can support.

The default value is 10. This represents a reasonable allocation of resources for the initial requirements of ITS TL1. Only ISDN TL1 is supported at this time.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Overprovisioning of this parameter results in unnecessary resource allocation.

Underprovisioning of this parameter results in ITS TL1 commands being rejected, even though the ITS OS has a larger provisioned capability.
ITS_NUM_CONCURRENT_SESSIONS

**Verification**
This parameter reflects the number of test sessions that can be run concurrently. ITS TL1 commands requesting more than this allowed number are rejected.

**Memory requirements**
This parameter uses 5000 bytes overhead plus 1893 bytes per unit. For the default setting of 10 the memory calculation is as follows:

\[ 5000 + (10 \times 1893) = 23930 \text{ bytes} \]

**Dump and restore rules**
This parameter was introduced in BCS33.

Copy the existing value of this parameter when doing a dump and restore.
**KSET_INTER_GRP_DISP**

**Parameter name**

Business Set Inter-group Display

**Functional description of parameter KSET_INTER_GRP_DISP**

This parameter determines whether calls arriving from outside the customer group have their information displayed on the terminator’s display set.

**Provisioning rules**

If this parameter is set to Y (yes), calls arriving from outside the customer group have their information displayed on the terminator’s display set.

This parameter should only be set to Y, if a customer has display sets that are spread over more than one customer group.

If the value of this parameter is left at the default value of N (no), inter-group calls are not displayed.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

The display shows the short CLLI code on the display business set if the call is from an incoming IBN trunk and the call is flagged as intragroup. This requires the INTRAGROUP field in the trunk group data to be set to Y.

If the intragroup field in the trunk data is set to N, or the translator selector, in table IBNXLA, used to translate the digits received from the trunk has the intragroup field set to N, or the terminating business set belongs to a private customer group or family, the display will show “******”.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS15.

If the value of this parameter is equal to Y (yes), copy the existing value of parameter when doing a dump and restore.

If the value of this parameter is equal to N (no), and this feature is being added by the operating company, the value of this parameter should be changed to Y (yes). If the feature is not added, copy the existing value of the parameter.
**Parameter name**
Business Set Key Short Hunt Extension Blocks

**Functional description of parameter KSHUNT_EXT_BLOCKS**
This parameter determines the number of extension blocks allocated for the Business Set Key Short Hunt feature.

**Provisioning rules**
One of these extension blocks is required for each call that terminates on a short hunt group.

For the assignment of the Business Set Key Short Hunt feature to business stations see table KSETFEAT.

For switching units in the U.S. market, set the parameter to a constant value of 300.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Activation**
Increase - immediate
Decrease - cold restart

**Dependencies**
At extension time the value of this parameter must change if the number of calls to short hunt groups increases or decreases.

**Consequences**
If this parameter is overprovisioned, memory is wasted.

**Verification**
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 34 and read the following entry:

```
34  KEY_SHORT_HUNT_EXT
1000  0  0  0  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
For operational measurements associated with this parameter, see OM group KSHUNT.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM groups EXT and KSHUNT.

Memory requirements
Each unit requires 6 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**LCDI_SYNC_BURST**

**Parameter name**
ISDN Line Concentrating Device Synchronization Burst

**Functional description of parameter LCDI_SYNC_BURST**
This parameter is required in a switching unit with the integrated service digital network (ISDN).

This parameter is required for 500/2500 line interface using the integrated service line module (ISLM). It is also required for the Layer 1 Basic Line Monitoring (BLM) feature as it applies to enhanced ISDN line concentrating module (LCME) supported two binary – one quaternary (2B1Q) loops.

This parameter specifies the number of lines that are audited on each synchronization cycle before holding for the delay period specified by office parameter LCDI_SYNC_DELAY.

**Provisioning rules**
Set the value of this parameter as required to control synchronization auditing for non-LCME ISDN loops and Layer 1 BLM auditing of LCME-based 2B1Q loops. If no auditing is required, set the value of this parameter to 0 (zero).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
See parameter LCDI_SYNC_DELAY in table OFCENG for the delay, in 1-s intervals, between each synchronization cycle.

**Consequences**
If this parameter is set to 0, the audit does not run and synchronization mismatches in non-LCME ISDN loops are not detected. Layer 1 BLM mismatches between the central control (CC) and LCME-based 2B1Q loops are not detected.

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS30. Prior to BCS30, LCDI_SYNC_BURST was called ISLML_SYNC_BURST.

Copy the existing value of this parameter when doing a dump and restore.
**LCDI_SYNC_DELAY**

**Parameter name**

ISDN Line Concentrating Device Synchronization Delay

**Functional description of parameter LCDI_SYNC_DELAY**

This parameter is required in a switching unit with the integrated service digital network (ISDN).

This parameter is required for 500/2500 line interface using the integrated service line module (ISLM). It is also required by the Layer 1 Basic Line Monitoring (BLM) audit as applied to enhanced ISDN line concentrating module (LCME) supported two binary – one quaternary (2B1Q) loops.

This parameter specifies the delay between each synchronization cycle in 1-s intervals.

**Provisioning rules**

Set the value of this parameter as required to control synchronization auditing for non-LCME ISDN loops as well as Layer 1 BLM auditing for LCME-based 2B1Q loops.

If this audit is not required, set the parameter value to 300.

**Range information**

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60</td>
<td>6000</td>
<td>60</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

See parameter LCDI_SYNC_BURST in table OFCENG for the number of lines that can be audited during each synchronization cycle. Set the values of parameters LCDI_SYNC_DELAY and LCDI_SYNC_BURST so that all ISDN loops are audited in an appropriate period of time.

**Consequences**

If the value of this parameter is underprovisioned, the synchronization audit uses too much of the available audit class CC CPU time.

If the value of this parameter is overprovisioned, the amount of time required to audit all ISDN loops is excessive.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
LCDR_SEC_ANI_TEST

Parameter name
Local Call Detail Recording Second Automatic Number Identification Test

Functional description of parameter LCDR_SEC_ANI_TEST
This parameter specifies whether a second automatic number identification (ANI) test is performed on local calls from a two or four party line with the Local Call Detail Recording feature.

The second ANI test is always performed on toll calls.

Provisioning rules
If the value of this parameter is set to Y (yes), the second ANI test is performed on local calls.

If the value of this parameter is set to N (no), the second ANI test is not performed on local calls.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Line Concentrating Module Synchronization Burst

Functional description of parameter LCML_SYNC_BURST

This parameter is required for 500/2500 line interface using the Line Trunk Controller (LTC) peripheral module. It specifies the number of lines that are audited on each synchronization cycle.

Provisioning rules

Specifies the number of lines to be audited on each synchronization cycle.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
LCML_SYNC_DELAY

Parameter name
Line Concentrating Module Synchronization Delay

Functional description of parameter LCML_SYNC_DELAY
This parameter is required for 500/2500 line interface using the Line Trunk Controller (LTC) peripheral module and specifies the delay in seconds between each synchronization cycle.

Provisioning rules
Specify the delay in seconds between each synchronization cycle.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6000</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**LN_LONG_PARTIAL_DIAL_TIME**

**Parameter name**

Line Module Long Partial Dial Time

**Functional description of parameter LN_LONG_PARTIAL_DIAL_TIME**

This parameter is required in a local switching unit and specifies the time, in 160-ms intervals, the line module will wait after a digit is dialed before reporting an end of dialing condition (if no more digits are dialed) when instructed to perform long timing. Digit collection is stopped and translation and routing is done with the digits collected so far. This may result in call completion or partial dial treatment.

For information on partial dial treatment (PDIL), see table TMTCNTL.

Long timing is used in the following instances:

- When the switching unit has 0+ and 0– dialing, long timing is used after the second to seventh and ninth to tenth digits.
- 1+ calls are timed with long timing after the first to seventh and ninth to tenth digits.
- For ambiguous code calls, long timing is used after the first to sixth and eighth and ninth digits.
- International calling (01 or 011+) uses long timing after the first to fifth digits after the access code of 01 or 011.
- The line module uses long timing after the first to seventh digit dialed when the field DGCOLSEL in table DIGCOL is equal to COL and field TMODE has the value of L for the initial digit dialed.

The dialing of an octothorpe (#) indicates end of dialing and the line module immediately reports to the central control (CC) for translation.

This parameter can be used in an SL100 in the United Kingdom to reduce the post dial delay (PDD) for an incoming Digital Private Network Signaling System (DPNSS) call on a DMS PBX.

**Provisioning rules**

Specify the time, in 160-ms intervals, for the line module to wait after a digit is dialed before reporting an end of dialing condition (if no more digits are dialed) when instructed to perform long timing.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>255</td>
<td>63 (10 seconds)</td>
</tr>
</tbody>
</table>
LN_LONG_PARTIAL_DIAL_TIME

Activation
For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

Dependencies
The long and short timing data that is downloaded into the line module is dependent upon the value of parameter DIGIT_COL_OFFICE_CODE in table OFCSTD and the data stored in table DIGCOL.

The value of this parameter is used as a long digit timeout prior to receiving minimum digits.

The minimum number of digits is specified in the datafill for a valid route in the IBN translation tables.

This only applies to valid routes which specify minimum digits in the datafill.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of the parameter.

Parameter history
BCS36  corrected activation information
Parameter name
Line Permanent Signal Time

Functional description of parameter LN_PERM_SIG_TIME
This parameter is required in a local or combined local and toll switching unit and specifies the time, in 160-ms intervals, that the switch waits to receive the first digit when a line goes off-hook.

Provisioning rules
If no digits are received within the time period specified by the value of this parameter, the line is routed to permanent signal treatment (PSIC).

For information on treatments, see table TMTCNTL.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>255</td>
<td>125 (20 seconds)</td>
</tr>
</tbody>
</table>

Activation
For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 corrected activation information
LN_SHORT_PARTIAL_DIAL_TIME

Parameter name
Line Module Short Partial Dial Time

Functional description of parameter LN_SHORT_PARTIAL_DIAL_TIME
This parameter is required in a local switching unit and specifies the time, in 160-ms intervals, that the line module will wait after a digit is dialed before reporting an end-of-dialing condition (if no more digits are dialed) when instructed to perform short timing. Digit collection is stopped and translation and routing is done with the digits collected so far. This may result in call completion or partial dial treatment.

For information on partial dial treatment (PDIL), see table TMTCNTL.

The long and short timing data which is downloaded into the line module is dependant upon the value of parameter DIGIT_COL_OFFICE_CODE in table OFCSTD and the data stored in table DIGCOL.

Short timing is used in the following instances:
- When switching unit has 0+ and 0– dialing short timing is used after the first and eighth digit when the first digit dialed is a 0 (zero).
- 1+ calls are timed with short timing after the eighth digit.
- For ambiguous code calls, short timing is used after the seventh digit.
- When setting up a Speed Call number, the digits following the two-digit access code use short timing.
- International calling (01 or 011+) use short timing after the sixth to twelfth digits after the access code 01 or 011.
- The dialing of an octothorpe (#), indicates end-of-dialing, and the line module immediately reports to the central control (CC) for translation.
- The line module uses short timing after the first and second digit dialed when field DGCOLSEL in table DIGCOL is equal to RES for the first digit dialed.
- The line module uses short timing when field DGCOLSEL in table DIGCOL is equal to COL and field TMODE has the value of S for the initial digit dialed.

This parameter can be used in an SL100 in the United Kingdom to reduce the post dial delay (PDD) for an incoming Digital Private Network Signalling System (DPNSS) call on a DMS PBX.

Provisioning rules
Specify the time, in 160-ms intervals, for the line module to wait after a digit is dialed before reporting an end-of-dialing condition (if no more digits are dialed) when instructed to perform short timing.
**Range information**

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>255</td>
<td>25</td>
<td>(4 seconds)</td>
</tr>
</tbody>
</table>

**Activation**

For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

**Dependencies**

The value of this parameter is used as a short digit timeout after receiving minimum digits and before receiving maximum digits.

The minimum and maximum number of digits are specified in the datafill for a valid route in the IBN translation tables.

This only applies to valid routes that specify minimum and maximum digits in the datafill.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**

BCS36  corrected activation information
LOG_PRIORITIZATION

Parameter name
Log Prioritization

Functional description of parameter LOG_PRIORITIZATION
This option enables or disables the critical message prioritization feature.

Provisioning rules
If this parameter is set to a value of Y (yes), the feature is enabled and all devices in table LOGDEV that have field PRIORITY set to Y, will have critical messages printed before messages of a lower priority. Logs will be prioritized starting from the time of initialization of a device. Logs that were created before the initialization time will not be printed.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Activation is not allowed while any log devices are started.

It is recommended that the following steps be taken when activating this parameter:
1. Stop all log devices.
2. Change value of parameter.
3. Change the PRIORITY field in table LOGDEV appropriately for each log device. Those devices on which prioritization is required should set this field to Y.
4. Start required log devices.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
LONG_TIMED_RELEASE_DISC_TIME

Parameter name
Long Timed Release Disconnect Time

Functional description of parameter LONG_TIMED_RELEASE_DISC_TIME
This parameter specifies the time, in 10-ms intervals, for which a called party on-hook is timed before releasing the connection to the calling party.

This disconnect timing is used for the following types of calls which have a potentially high setup cost:
- Line or TOPS-to-trunk (trunk group types TO, TOPS, IT, and SC)
- Trunk-to-line (trunk group types SC, TI, and IBN)
- Trunk (trunk group type TI) to trunk (trunk group type TO)
- Trunk (trunk group type SC) to trunk (trunk group types TO, TOPS, IT, OC, OP, A5, P2, and PX).
- Trunk- (ISDN PRA) to-trunk (ISDN PRA)

For calls from trunk (trunk group type SC) to trunk (trunk group types PX and P2), no disconnect timing is done for joint hold and called party hold calls.

Provisioning rules
The recommended value is 1600 (16 s). This higher value gives subscribers more latitude for calls with a high setup cost.

When the value of this parameter is changed, the central control (CC) uses the new value immediately in the billing compensation procedures. However, the peripheral module (PM) uses the old values in calculating the call duration times until the static data is reloaded.

The PMs should be reloaded immediately or billing discrepancies can occur as the values for this parameter are different in the CC and PM.

The following message is issued when making a change to this parameter.

WARNING: A RELOAD OF THE LM/LTC STATIC DATA MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4080</td>
<td>1600 (16 s)</td>
</tr>
<tr>
<td></td>
<td>32767</td>
<td>(with Meridian OffNet Access)</td>
</tr>
</tbody>
</table>

OFCENG-348 297-1001-455 Standard 22.02  March 1994
Activation
For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was new in BCS15.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 corrected activation information
LOWSPR_ALARM_ON_CARD_SPR_BASIS

Parameter name
Lowspare Alarm On Card Spare Basis

Functional description of parameter LOWSPR_ALARM_ON_CARD_SPR_BASIS
This parameter controls the activation of the memory low spare minor and memory low spare major alarms (LowSpr and LOWSpr respectively) and their associated logs.

Provisioning rules
If this parameter is set to the value of Y (yes), the low spare alarms are activated if there are not enough spare blocks to spare out an entire card (of each memory card size). For example, when the memory goes below 24 Mbyte for NT9X14 cards, a low spare alarm is activated.

If this parameter is set to the value of N (no), the low spare alarms are activated only if there are no spare blocks left (for each memory card module size). For example, the low spare alarm is activated when the last 8 Mbyte are allocated for NT9X14 cards.

The default value of Y is the recommended value for non-SuperNode SE offices. The system produces the low spare alarms and logs when an audit determines that there are insufficient memory blocks to spare out an entire card.

On SuperNode SE, where there may not be sufficient memory cards equipped for sparing on a per card basis, this parameter must be set to N.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
With this parameter set to N, there are no low spare alarms generated until there are no spare blocks left (for each memory module size that is equipped on the switch). This implies that memory faults that affect more than one module or an entire memory card may not be able to have the entire memory card spared out.
LOWSPR_ALARM_ON/Card_SPR_BASIS

Verification
If the switch is equipped with insufficient spare memory blocks to spare out an entire card, the low spare alarm and corresponding log should be present with this parameter set to Y.

With this parameter set to N, the alarms and logs are generated only when there are no spare memory blocks left (for each memory module size that is equipped on the switch).

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS33.
Copy the existing value of this parameter when doing a dump and restore.
LSCMSYNC_BURST

Parameter name
LSCM Synchronization Burst

Functional description of parameter LSCM_SYNC_BURST
This parameter is associated with the CLASS Message Waiting Indicator (CMWI) feature that allows a Message Waiting (MWT) subscriber equipped with a CLASS set with a message waiting lamp and/or a display device to know if messages have been queued. Messages can be queued in the switch or at a message center.

Associated with this feature are lamp audits which run periodically to attempt to keep all lamps in sync with the state that the CC expects. For sets with a message waiting lamp, the lamp audit process verifies if at least one message is waiting for the station. When there is, the message waiting lamp is turned on. No attempt is made at updating the lamp when no messages are waiting.

Provisioning rules
Specify the number of lines off of each SMS and SMU in the office that will have its lamp audited as specified by parameter LSCM_SYNC_DELAY.

This office parameter is used to achieve a suitable distribution of messaging traffic to the peripherals. (See also parameter LSCM_SYNC_DELAY in table OFCENG)

These parameters are used by the new lamp audit for lines off Subscriber Module SLC-96 (SMS) and Subscriber Carrier Module DMS-100 Urban (SMU).

LSCM_SYNC_BURST indicates the number of lines off each peripheral that should be audited in one audit cycle.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

One line off each SMS and SMU in the office will have its lamp audited every \( n \) seconds (where \( n \) is the value of LSCM_SYNC_DELAY).

Activation
Immediate
Dependencies
Not applicable

Consequences
If the burst value is too large or delay value is too small there is no delay between cycles.

Verification
To verify that the lamp audit is working, remove power from a set that has the message waiting indicator on. This should cause the indicator to be turned off. Assuming that the message is not retrieved, the indicator should be turned on by the audit within X seconds where X is:

possible # of lines on PM / (LSCM_SYNC_BURST /LSCM_SYNC_DELAY)

For example, if there are 640 lines on the PM, LSCM_SYNC_BURST is set to 3 lines, and LSCM_SYNC_DELAY is set to 15 s:

X = 640/3/15 = 3200 seconds (approximately 53 minutes)

Memory requirements
This parameter has no memory impact

Dump and restore rules
This parameter is new with software release BCS31.

Copy the existing value of this parameter when doing a dump and restore.
LSCM_SYNC_DELAY

Parameter name
LSCM Synchronization Delay

Functional description of parameter LSCM_SYNC_DELAY
This parameter is associated with the CLASS Message Waiting Indicator (CMWI) feature that allows a Message Waiting (MWT) subscriber equipped with a CLASS set with a message waiting lamp and/or a display device to know if messages have been queued. Messages can be queued in the switch or at a message center.

Associated with this feature are lamp audits that run periodically to attempt to keep all lamps in sync with the state that the CC expects. For sets with a message waiting lamp, the lamp audit process verifies that at least one message is waiting for the station. When there is, the message waiting lamp is turned on. No attempt is made at updating the lamp when no messages are waiting.

Provisioning rules
Specify the time between lamp audits for lines off of each SMS and SMU in the office.

This office parameter is used to achieve a suitable distribution of messaging traffic to the peripherals. (See also parameter LSCM_SYNC_BURST in table OFCENG)

These parameters are used by the new lamp audit for lines off Subscriber Module SLC-96 (SMS) and Subscriber Carrier Module DMS-100 Urban (SMU).

LSCM_SYNC_DELAY specifies the time in seconds between the start of each audit cycle.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6000</td>
<td>15</td>
</tr>
</tbody>
</table>

n lines off of each SMS and SMU in the office will have its lamp audited every 15 seconds (where n is the value of parameter LSCM_SYNC_BURST).

Activation
Immediate

Dependencies
Not applicable

OFCENG–354 297-1001-455 Standard 22.02 March 1994
LSCM_SYNC_DELAY

Consequences
If the burst value is too large or the delay value is too small there is no delay between cycles.

Verification
To verify that the lamp audit is working, remove power from a set with the message waiting indicator on. This should cause the indicator to be turned off. Assuming that the message is not retrieved, the indicator should be turned on by the audit within X seconds where X is:

possible # of lines on PM / (LSCM_SYNC_BURST / LSCM_SYNC_DELAY)

For example, if there are 640 lines on the PM, LSCM_SYNC_BURST is set to 3 lines, and LSCM_SYNC_DELAY is set to 15 s:

X = 640/3/15 = 3200 seconds (approximately 53 minutes)

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
**MARKET_OF_OFFICE**

**Parameter name**

Market of Office

**Functional description of parameter MARKET_OF_OFFICE**

This parameter is required for all types of switches. It is used to determine the load configuration and the tone set used in a particular market or application.

The tone value is downloaded to peripheral modules (PM), digital trunk controller (DTC), international DTC (IDTC), international line group controller (ILGC), line group controller (LCG) and PCM-30 digital trunk controller (PDTC) as part of the static data when the PM is returned to service.

Service tones are provided by programmable read-only memory (PROM) chips located on either the message interface card or the tone generator card. There are two versions of the message interface card: NT6X43 and NT6X69. Each version of the card has a number of variants. Each variant provides the tones required for one or more markets. The card NT6X69AA requires the tone generator card NT6X79 to provide the tones.

The PM product engineering code (PEC) (field EQPEC in table LTCINV) identifies the card complement of the PM for a particular market or application. For a given EQPEC the message interface card can be any one of the card variants for that market.

See table 1 for the list of markets and applications with associated parameter values, PM PEC, and message interface cards.

<table>
<thead>
<tr>
<th>Market</th>
<th>Value</th>
<th>EQPEC</th>
<th>Message Interface Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>AUSTRALIA</td>
<td>6X02P2</td>
<td>RAM6X69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02P3</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>Austria</td>
<td>AUSTRIA</td>
<td>6102SA</td>
<td>6143B, 6169BA</td>
</tr>
<tr>
<td>Brazil</td>
<td>BRAZIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caribbean</td>
<td>CEP</td>
<td>6X02GA</td>
<td>6X43FA, 6X69FA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02HA</td>
<td>6X43FA, 6X69FA</td>
</tr>
<tr>
<td>Chile</td>
<td>CHILE</td>
<td>6X02P3</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>China</td>
<td>CHINA</td>
<td>6X02KA</td>
<td>6X69KA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02KB</td>
<td></td>
</tr>
</tbody>
</table>

---continued---
## Table 1
MARKET_OF_OFFICE values (continued)

<table>
<thead>
<tr>
<th>Market</th>
<th>Value</th>
<th>EQPEC</th>
<th>Message Interface Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonwealth of Independent States</td>
<td>CIS</td>
<td>6X02P2</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>Eire</td>
<td>EIRE</td>
<td>6X02KA</td>
<td>6X69KA</td>
</tr>
<tr>
<td>Guyana</td>
<td>GUYANA</td>
<td>6X02KB</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>GERMANY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haiti</td>
<td>HAITI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>HONG KONG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>HUNGARY</td>
<td>6102UA</td>
<td>6169UA</td>
</tr>
<tr>
<td>Japan</td>
<td>JAPAN</td>
<td>6X02P2</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>Mexico</td>
<td>MEXICO</td>
<td>6X02P3</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>Morocco</td>
<td>MOROCCO</td>
<td>6X02P3</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>North America</td>
<td>NORTHAM</td>
<td>6X02AA</td>
<td>6X43AA, 6X69AA, 6X69AB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02AC</td>
<td>6X69AB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02AD</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>6X02AF</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6X02AH</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>PERU</td>
<td>6X02P3</td>
<td>RAM6X69</td>
</tr>
<tr>
<td>Poland</td>
<td>POLAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain (LCG)</td>
<td>UK</td>
<td>6X02BC</td>
<td>6X43CA, 6X69DA</td>
</tr>
<tr>
<td>Spain (PDTC)</td>
<td>SPAIN</td>
<td>6X02BE</td>
<td>6X43EA, 6X69EA</td>
</tr>
<tr>
<td>Turkey</td>
<td>TURKEY</td>
<td>6X02BA</td>
<td>6X43BA, 6X69AA, 6X69BB</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>UK300</td>
<td>6X02BC</td>
<td>6X43CA, 6X69DA</td>
</tr>
<tr>
<td></td>
<td>UK PABX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UK CENTREX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

British service tones and Spanish service tones on the LGC are the same except for audible ringing in which the cadence is different.

It is possible to distinguish which card is in the shelf from the datafill since 6X69 and 6X79 are optional cards and must be datafilled in the field OPTCARD in table LTCINV. For example, if the EQPEC is 6X02AA.
MARKET_OF_OFFICE

(North American LGC), the message interface card could be any one of 
6X43AA, 6X69AA, 6X69AB. If 6X69 is datafilled, the message interface 
card is 6X69AA. If 6X69 is not datafilled, the message interface card is 
6X43AA. Otherwise, the card is 6X69AB. A similar analysis can be 
applied to each shelf PEC to determine the card or card variant used as the 
message interface card.

Unique PM loads are required to support each card, card variant or variation 
in tone cadences.

Provisioning rules

The value of this parameter is dependent upon the software package 
provided for the switching unit and the tone requirements as described 
above.

For a switching unit with software package NTX964AA (DMS-100 Centrex 
International) set the value of this parameter to UK CENTREX.

For a switching unit with software package NTX611AA (UK Business 
Features) set the value of this parameter to UK PABX.

To activate Japan special number checking, set the value of this parameter to 
JAPAN.

When this parameter is set to JAPAN, Japanese directory number (DN) 
unpadding is activated if module JPUNPADG has been included in the load.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NORTHAM</td>
</tr>
</tbody>
</table>

Activation

Cold restart

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter value requires 1 word of memory.
Dump and restore rules

Effective in BCS31, this parameter supersedes the parameter TONE_SET. When doing a dump and restore from a software release before BCS31 to software release BCS31 or higher, if the value of this parameter is NORTHAM, reset its value based on the value of the parameter TONE_SET as follows:

- If the value of TONE_SET is AUSTRIA, CEP, CHINA, HUNGARY, NORTHAM, SPAIN or TURKEY, use the same value.
- If the value of TONE_SET is MCL, use the value UK CENTREX.
- If the value of TONE_SET is UK, use the value UK PABX.

Parameter history

BCS36 Commonwealth of Independent states (CIS) value added
**MAX_CMAP_SESSIONS**

**Parameter name**

Maximum Number Of Centralized MAP Sessions

**Functional description of parameter MAX_CMAP_SESSIONS**

This parameter is required in switching units with the Centralized Map (CMAP) feature. It specifies the maximum number of CMAP sessions that can run concurrently on the switching unit.

**Provisioning rules**

The value of this parameter must be in the range of 2 to 20. When the value is modified, a parms_aspect procedure checks whether the new value is acceptable. If it is outside the range (that is, 0, 1, or greater than 20), an error message is displayed and the request is ignored. Otherwise, the new value is stored and put into effect during the next restart. A warning is issued to notify that the new value is not effective immediately.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>20</td>
<td>2</td>
</tr>
</tbody>
</table>

**Activation**

Warm restart

**Dependencies**

If the switching unit has switched virtual circuits (SVC), the value of this parameter affects parameter NOS_QUANTITY_OF_SVCS in table OFCENG.

**Consequences**

The allocation of data store (3K of private data per process and other store resources) and the creation of processes is dependent on this parameter. Large values may result in unnecessary use of data store and processor time.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Maximum Digital Test Access On Switch

**Functional description of parameter MAX_DTA_ON_SWITCH**
This parameter specifies the maximum number of Digital Test Access (DTA) connections that are permitted on the switch.

**Provisioning rules**
Specify the maximum number of DTA connections allowed on the switch.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If the value of this parameter is underprovisioned, craftspersons are potentially unable to establish the number of DTA monitoring connections required for maintaining Integrated Services Digital Network (ISDN) lines. Overprovisioning of this parameter results in inefficient use of data store.

**Verification**
Not applicable

**Memory requirements**
The maximum memory usage associated with this parameter is 7168 words (applicable when the parameter is set to the maximum value of 20).

**Dump and restore rules**
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
**MAX_LINES**

*Parameter name*

Maximum Number of Lines

*Functional description of parameter MAX_LINES*

This parameter is required for a local switching unit (international) with universal translations. It specifies the maximum number of lines that are datafillable in the switching unit.

The value of this parameter should be increased, if agents with meters cannot be added due to lack of unused meter blocks (MTRBLKS).

After increasing the value of this parameter, an immediate meter backup should be done.

The value of this parameter can be increased, but not decreased.

*Provisioning rules*

Set the value of this parameter to the maximum quantity of lines required before the next extension.

*Range information*

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>65535</td>
<td>0</td>
</tr>
</tbody>
</table>

*Activation*

Immediate

*Dependencies*

At extension time the value of this parameter must increase if the number of lines increase.

*Consequences*

Not applicable

*Verification*

Not applicable

*Memory requirements*

11 words of memory are required for each line.

*Dump and restore rules*

This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
MAX_MADN_MEMBERS_PER_LSG

Parameter name
Maximum Multiple Appearance Directory Number Members Per Line Subgroup

Functional description of parameter MAX_MADN_MEMBERS_PER_LSG
This parameter appears only in a local or SL100 switching unit with the Multiple Appearance Directory Number (MADN) feature. It specifies the maximum quantity of MADN members allowed on one line subgroup.

Provisioning rules
For all switching units, excluding IBN and RES switching units in the United States, the recommended value is 4.

For IBN and RES switching units in the United States, the recommended value is 1, and is set to 1 during the process for initial offices.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
VERIFY and VERIFYALL commands output an error message if the maximum quantity of MADN members assigned to a line subgroup exceeds the value of this parameter.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
**MAX_NO_OF_3_PORTS_IN_CHAIN**

**Parameter name**
Maximum Number of Three-way Ports in a Three-way Calling Chain

**Functional description of parameter MAX_NO_OF_3_PORTS_IN_CHAIN**
This parameter is required in a Local or SL100 switching unit and specifies the maximum number of 3-way conference circuits that can be used in a Three Way Calling (3WC) chain.

The 3WC chain feature allows a non-controlling party in an existing three way call to add another party to the line.

If an attempt is made to add a three port to an existing chain beyond the engineered limit, the non controller making this attempt will receive 5 seconds of reorder tone.

**Provisioning rules**
The maximum number of people that can be in the Three-way Calling Chain is equal to the value of this parameter + 2.

For example, if the value of this parameter is 3, the maximum number of conferees is 5.

Enter the maximum number of three port conference circuits which can be associated with a three port conference chain.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Dump and restore rules**
This parameter is new in BCS22.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Maximum Number of Automatic Line Test Processes

Functional description of parameter MAX_NO_OF_ALT_TEST_PROCS

This parameter is required for a SL100 or Local switching unit for the Automatic Line Test (ALT) and is intended to speed up ALT by allowing several test processes, from different ALT CI users, to run simultaneously.

Provisioning rules
The value shall be equal to the number of processes required to be run at the same time by the ALT tester.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>200</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation
Activation requires that no ALT tests, either manual or scheduled, be actively running. When the value is changed, new store is allocated and the old store deallocated. This store is required so that active tests can run.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 133 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
MAX_NO_OF_TRANS_ID

Parameter name
Maximum Number of Transaction Identifiers

Functional description of parameter MAX_NO_OF_TRANS_ID
This parameter is required in a switching unit with the Advanced Intelligent Network (AIN) and Transaction Capability Application Part (TCAP). It specifies the maximum number of transaction identifiers (TRID) that can be allocated.

Each TRID has an associated 50 words of store. This parameter enhances the store allocation for table TCAPTRID by using segmented store to allow a greater number of TRIDs to be allocated. The store required for table TCAPTRID is based on the total TRIDs datafilled in this parameter.

Provisioning rules
Specify the maximum number of TRIDs that can be allocated.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32000</td>
<td>4096</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The total number of TRIDs datafilled in table TCAPTRID must not exceed the value datafilled in this parameter.

Consequences
If the total number of TRIDs datafilled in table TCAPTRID exceeds the value of this parameter the request is rejected and an error message is displayed.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS36.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 parameter introduced

OFCENG-366 297-1001-455 Standard 22.02 March 1994
Parameter name

Maximum Number of Wideband Calls

Functional description of parameter MAX_NUM_WIDEBAND_CALLS

This parameter specifies the number of wideband extension blocks that are engineered for a switch. The number of extension blocks chosen indicates the maximum number of active wideband calls that can exist on a switch at one time. These extension blocks are used to store information that is specific to wideband calls. The extension blocks provisioned by this parameter are held for the duration of the call.

Provisioning rules

Set this parameter to a value equal to the number of simultaneous incoming and outgoing wideband calls that are expected to occur on the switch.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4096</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

Each extension block requires 200 words of memory.

Dump and restore rules

This parameter was introduced in BCS34. In BCS33 it was called NUM_WIDEBAND_EXT_BLOCKS.

Copy the existing value of this parameter when doing a dump and restore.
MAX_PROGRAMMERS

Parameter name
Maximum Number of Programmers

Functional description of parameter MAX_PROGRAMMERS
This parameter is required for a switching unit with the Call Forwarding Remote Access (CFRA) feature. It specifies the maximum number of users that can simultaneously perform a remote programming action of CFRA.

If CFRA lines are on old peripherals, additional digitone receivers (DGT) are required to ensure that the use of this feature does not impact standard call processing.

In a switching unit where all the line and trunk peripherals are XMS-based peripheral modules (XPM) with Universal Tone Detectors (UTR), no DGT receivers are used by this feature.

The value of this parameter must not exceed the number of receivers or UTRs in the switching unit.

Provisioning rules
Set the value of this parameter to equal the number of CFRA announcement members datafilled in table ANNMEMS.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>127</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Overprovisioning of this parameter value results in an excessive number of users receiving NOSC or NOSR treatments indicating that there are insufficient system resources (for example, DGT receivers, UTRs or announcement circuits).

Underprovisioning of this parameter value results in an excessive number of users receiving NOSR treatment.

Verification
Ensure that the number of users specified can concurrently access CFRA.

See OMGROUP CFRA for the operational measurements associated with this feature.
Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
MAX_ROUTE_QUEUED_PER_TRKGRP

Parameter name
Maximum Number of Route Queued Calls per Trunk Group

Functional description of parameter MAX_ROUTE_QUEUED_PER_TRKGRP
This parameter is required for a switching unit with the World Systems and International Traffic Operator Position System (ITOPS) features. It specifies the maximum number of calls that can be queued on a given outgoing route. Each trunk group is allowed a maximum number of calls queued against it. This limits the length of time that a trunk can be held for the processing of route queued calls. If there are too many route queued calls, a trunk may not be available to perform normal two-port call processing.

Provisioning rules
The value of this parameter depends on the number of trunks slated for use by route queueing. The number should be chosen so that the trunk is eventually able to process all of its held calls, and perform normal two port call processing.

Note that the number of calls allowed in the booked call database ranges from 1280 to 5120 as specified by office parameter DB_MAX_SIZE. The extreme case, is that all of the database calls are queued against one trunk group (thus, the system maximum of 5120). This is not desirable. A value should be chosen that will spread out the queueing requests.

Leave at the default value to deactivate the feature.

This parameter must have a non-zero value, to activate the feature.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter functions in conjunction with parameter TOTAL_ROUTE_QUEUED_CALLS in table OFCENG.

If the value of parameter TOTAL_ROUTE_QUEUED_CALLS is smaller than the value of this parameter, the maximum length of a queue on a trunk group is never reached because there are not enough queue elements allocated in the system.

If this parameter or parameter TOTAL_ROUTE_QUEUED_CALLS in table OFCENG is decreased so that a call can no longer be put in a call queue, the call remains in the database as untimed but not route queued.
MAX_ROUTE_QUEUED_PER_TRKGRP

For example, if route Z has 22 calls queued and the value of this parameter is decreased to 20, two of the calls can not be recalled to an operator and must be manually retrieved.

Consequences

Overprovisioning can cause a trunk to process route queued calls all of the time, and not process normal two-port calls due to the fact that the call queue against it is very long.

Underprovisioning results in many attempts at route queueing failing because the maximum is already queued against the trunk group. The header STORE flashes in this case.

Verification

To verify that this parameter is working, make test calls. Each test call queues on one specific outgoing route. When the maximum is reached, an attempt to store a route queued call against this route fails (the header STORE flashes).

Memory requirements

For reserving trunks, 509 words are required for the protected head segment.

8 words are required for each entry in table TRKGRP and 2 bits for each trunk member that meets the restrictions of this feature (those with a signaling type of SIGSYS and a selection sequence of “most idle” and “least idle”).

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 activation changed to immediate
MAX_SDPOOL_NO

Parameter name
Maximum Number Of Store Data Pools

Functional description of parameter MAX_SDPOOL_NO
This parameter specifies the number of SD pools that are assigned to store data for features and options assigned to lines in tables IBNFEAT, IBNLINES, KSETFEAT, KSETLINES, LENFEAT and LENLINES.

Provisioning rules
For a switching unit without the basic Integrated Business Network (IBN) software, the following formula should be used for calculating the number of features that can be assigned to lines:

\[
\text{number of features} = (\text{MAX_SDPOOL\_NO} - 1) \times 31742
\]

The recommended value for a switching unit with the basic IBN software is 15.

When all available pools are within 510 items of being full, no new lines with features can be added until this parameter is updated.

The default value for a switching unit without the basic IBN software is 3. For a switching unit without the basic IBN software, this value should be checked at the time of an extension to verify that the number of SDPOOLS allocated will accommodate the maximum number of line options and features for the engineering period.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>15</td>
<td>3 or 15</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
For an NT40, each unit of this parameter allocates 262269 words.

For a SuperNode switching unit, each unit allocates 262332 words.
Dump and restore rules

This parameter was introduced in BCS14.

Copy the existing value of this parameter when doing a dump and restore.
MAX_SUBSCRIBERS_IN_VLR

Parameter name
Maximum Number of Subscribers In Visitor Location Register

Functional description of parameter MAX_SUBSCRIBERS_IN_VLR
This parameter specifies the maximum number of mobile stations supported by the DMS mobile switching center (MSC). The value for this parameter is defined in increments of 1K (1024). This value is used by the visitor location register data access procedures (VLR-DAP) to compute the amount of memory allocated for the VLR database.

Provisioning rules
No special calculations are required to determine the value of this parameter. However, a knowledge of the number of mobile stations (MS) that need to be registered is required.

The default value is 1. It is chosen because each MS tuple is approximately 300 bytes. The minimum MS tuple data size requirement is:

\[ 300 \times 1024 = 300 \text{ Kbyte}. \]

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>160</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Reload restart

Dependencies
Not applicable.

Consequences
Underprovisioning of this parameter results in some mobile stations being unable to register in the VLR.

Overprovisioning of this parameter results in excess memory being allocated for the VLR database.

Verification
Not applicable.

Memory requirements
Each unit requires 400 bytes of VLR memory.

Dump and restore rules
This parameter was introduced with software release BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Maximum Number of Trunk Meter Blocks

Functional description of parameter MAX_TRUNK_METER_BLOCKS
This parameter is required for a switching unit with the World Systems and the DMS-100 metering system. It specifies the number of trunk meter blocks required.

The number must be equal to or greater than the number of trunk groups with trunk group type MTR and field METERIC equal to Y in table TRKGRP.

The value of this parameter must be increased as the number of metered trunk groups is increased. It can never be decreased.

A 0 (zero) value indicates that no trunks are metered. It also signifies that trunk metering should not be active. Once activated, trunk metering cannot be deactivated.

Provisioning rules
Specify the maximum number of metered trunk groups required for the engineering interval.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2047</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Increasing the value from zero (0) to a nonzero value activates trunk metering. It is immediate in the central control (CC). A cold switch activity (SWACT) or Busy (BSY) and return to service (RTS) is required in the IDTCs in order to start trunk metering. All subsequent increases are also immediate in the CC. A cold swact or BSY and RTS is not required in the IDTCs as metering is already activated.

Dependencies
If the maximum number of metered trunk groups is to increase, increase the value of this parameter to the maximum number of metered trunk groups required for the engineering interval.

Consequences
If there are not enough trunk meter blocks, metered trunk groups cannot be added to table TRKGRP.

Overprovisioning results in memory being wasted.
**MAX_TRUNK_METER_BLOCKS**

**Verification**

Not applicable

**Memory requirements**

Each trunk meter block uses 10 words of memory, with 10 words always used for the special meter block 0.

Memory required = 10 + (10 X number of trunk meter blocks)

**Dump and restore rules**

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
MAX_TRUNKS_IN_ACB_SCAN

Parameter name
Maximum Number Of Trunks In ACB Scan

Functional description of parameter MAX_TRUNKS_IN_ACB_SCAN
This parameter is part of the Real Time Route Status Data feature. It specifies the number of trunk groups that are included in the scanning process. The scanning process examines each trunk group, assesses the percentage of busy trunks and determines whether the state has changed. If so, it determines if the trunk group’s change should be output. The scanning process splits up the number of trunk groups that are scanned into three separate scans in blocks of 1024.

Provisioning rules
Set this parameter to a value of 1024 to specify that one scan is used to scan up to 1024 trunk groups.

Set this parameter to a value of 2048 to specify that two separate scans are used to scan up to 2048 trunk groups.

Set this parameter to a value of 3072 to specify that three separate scans are used to scan up to 3072 trunk groups.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024</td>
<td>3072</td>
<td>1024</td>
</tr>
</tbody>
</table>

Activation
To activate a change to the value of this parameter, perform the following:
1. Change the value of MAX_TRUNKS_IN_ACB_SCAN.
2. Use the CI command ACBCTRL STOP.
3. Use the CI command ACBCTRL START.
4. The change is now activated.

Dependencies
Refer to table ACBTAB for more information concerning the ACB scan.

Consequences
Not applicable

Verification
Not applicable.

Memory requirements
This parameter requires 1 word of memory.
MAX_TRUNKS_IN_ACB_SCAN

Dump and restore rules

This parameter was introduced in BCS33.

Copy the existing value of the parameter when doing a dump and restore.
Parameter name
Maximum Number of Nailed-up Connections

Functional description of parameter MAXNUCS
In an office equipped with the juncered network (JNET), this parameter defines the maximum number of nailed-up connections required for the switch.

In an office equipped with the enhanced network (ENET), this parameter is not required because space is allocated for nailed-up connections as needed. The ENET places no restrictions on the maximum number of nailed-up connections.

This parameter allocates store for all nailed connections, not just the maximum number of 801 nailed-up connections that can be assigned in table NLUPCLLI. In addition to the nailed-up connections assigned in table NLUPCLLI, network nailed-up connections are required for common channel interoffice signaling (CCIS), interperipheral message links (IPM) and integrated business network (IBN) attendant consoles (AC).

Provisioning rules
The recommended value is the maximum number of nailed-up connections required for tables NLUPCLLI, STINV, and IPMLINV + 3 for each IBN attendant console + 10%.

For switching units with the CCIS feature, the minimum quantity should be 4.

If the value specified for this parameter is less than the current number of nailed-up connections assigned, upon doing a restart the new value for this parameter is ignored and the previous value is retained until another restart occurs. The new value for this parameter becomes effective as soon as the number of nailed-up connections active on the switch becomes less than or equal to the value of parameter MAXNUCS.

For offices equipped with ENET, set this parameter to 0 and datafill tables DATASIZE, IPMLINV, STINV, and NLUPCLLI as required. See the Common Customer Data Schema, 297-1001-451 for more information about these tables.

If this feature is not provided set this parameter value to 0.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9126</td>
<td>100</td>
</tr>
</tbody>
</table>
**MAXNUCS**

**Activation**

Warm restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

The size of the table is defined in table 1.

<table>
<thead>
<tr>
<th>Table 1 MAXNUCS memory requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of nailed up connections</td>
</tr>
<tr>
<td>1 to 1024</td>
</tr>
<tr>
<td>1025 to 2048</td>
</tr>
<tr>
<td>2049 to 3072</td>
</tr>
<tr>
<td>3073 to 4096</td>
</tr>
<tr>
<td>4097 to 5120</td>
</tr>
<tr>
<td>5121 to 6144</td>
</tr>
<tr>
<td>6145 to 7168</td>
</tr>
<tr>
<td>7169 to 8192</td>
</tr>
<tr>
<td>8193 to 9216</td>
</tr>
</tbody>
</table>

**Dump and restore rules**

This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore

**Parameter history**

BCS36 NORESTARTSWACT activation added
MAXSTS

Parameter name
Maximum Number of Serving Translation System

Functional description of parameter MAXSTS
This parameter specifies the maximum number of terminating partitions required for the serving translation system.

Provisioning rules
If partitioned FNPAs are required in an IBN load, the recommended value for this parameter is 32 for switching units with less than 33 true serving translation systems. Switching units with more than 32 true serving translation systems must use higher multiples.

The following warning message is generated if this office parameter is changed:
WARNING: A RESTART MUST BE PERFORMED TO ACTIVATE THE CHANGE MADE TO THIS PARAMETER

The following warning message is generated if the office parameter MAXSTS is decreased to a value less than the number of tuples in any of the FNPASTS subtables.

TUPLE(S) IN THE FNPASTS SUBTABLE EXCEED THE TARGET SIZE OF THE FNPASTS SUBTABLE. AS A RESULT, TUPLES WILL BE LOST UPON THE RESTART

** RESTART AT YOUR OWN RISK **

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>999</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Warm restart or NORESTARTSWACT (Refer to the procedure in section "The NORESTARTSWACT utility").

Dependencies
See subtable FNPACODE.FNPASTS for the description of serving translation system.

Consequences
If the value for MAXSTS is reduced to a value less than the number of tuples in any of the FNPASTS subtables, the tuples located at positions greater than the new MAXSTS value are lost.

Verification
Not applicable
MAXSTS

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36  NORESTARTSWACT activation added
Parameter name
Meter Audit

Functional description of parameter METER_AUDIT
This parameter is required in a switching unit with international translations and the DMS-100 metering system. It specifies the meter table audit start time as well as the frequency of the audit.

Provisioning rules
Set the value of this parameter to the starting time (0 to 23 hours and 0 to 59 minutes) and the frequency (1 to 24 hours) at which the meter audit is to run.

The starting time should be set to a time when call processing activity is low.

The operating company may change the value of the starting time and frequency. The new value is effective at midnight.

A suggested starting time is early in the morning and a suggested frequency is once a day.

The default value specifies a starting time of 3:15 a.m. and a frequency of once every 24 hours.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3 15 24 HRS</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
**MF_LAST_DIGIT_DELAY**

**Parameter name**
Multifrequency Last Digit Delay

**Functional description of parameter MF_LAST_DIGIT_DELAY**
This parameter allows the operating company to modify the additional delay added to the inter-digital timing between the second last and last digits of MF outputting.

This delay is required to detect unexpected stop dials.

**Provisioning rules**
Specify, in multiples of 10 ms, the delay between the last and second last outputed digits.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

**Activation**
The affected peripherals must be BSYed and RTSed. When a change is made to this parameter the following message is displayed:

**WARNING: A RELOAD OF THE PM/XPM EXECS MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.**

**Dependencies**
Not applicable

**Consequences**
Setting this parameter to 0 (zero) causes the inter-digital timing between the second last and last digits to be within LSSGR specifications, however it creates the possibility of unexpected stop dials.

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP

Parameter name
Minimum Number Of Digits Reported On Overlap

Functional description of parameter MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP
This parameter is required for a local switch with line-to-trunk overlap outpulsing.

Provisioning rules
This parameter specifies the number of digits that are collected before overlap outpulsing starts for calls using overlapped outpulsing.

For example, if this parameter is set to a value of 5, five digits are collected and the remaining digits are overlapped for all codes that are specified in table LMOVCODE.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>32767 (reserved)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>15 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
To activate a change to the value of this parameter, busy (BSY) the individual affected peripheral modules (PM), reload the static data, and return to service (RTS) the PM.

Dependencies
For information on overlap outpulsing, see table LMOVCODE (Line to Trunk Overlap Outpulse).

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
MIN_PASSWORD_LENGTH

Parameter name
Minimum Password Length

Functional description of parameter MIN_PASSWORD_LENGTH
This parameter specifies the minimum number of characters that are allowed for logon passwords.

Provisioning rules
Specify the minimum number of characters that are allowed for logon passwords.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter appears only if the switching unit has parameter ENHANCED_PASSWORD_CONTROL in table OFCOPT set to Y (yes) and the software package NTX000AA.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter, unless the operating company has specifically requested a change to this parameter.
Parameter name
Minimum Charge Duration

Functional description of parameter MINIMUM_CHARGE_DURATION
This parameter specifies the time, in 10-ms intervals, that the called party must be off-hook before a call is considered answered. This parameter is used in all DMS switches.

Provisioning rules
The recommended value of this parameter is 208 for operating companies that have a regulatory requirement to not charge for calls of less than 2.0 s. The value must be a multiple of 16 (that is, 16, 32, 48, and so on).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4080</td>
<td>208</td>
</tr>
</tbody>
</table>

Activation
For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

Dependencies
Not applicable

Consequences
If the value of this parameter is changed, the central control (CC) or computing module (CM) uses the new value immediately in the billing compensation procedures. However, the PM uses the old values in calculating the call duration times until the static data is reloaded.

The PMs must be reloaded immediately or billing discrepancies can occur. If the PMs are not reloaded immediately, the values for this parameter are different in the CC and PM.
**MINIMUM_CHARGE_DURATION**

The following messages are displayed when making a change to this parameter:

**WARNING:** For LMs a BSY, RTS of each peripheral is required. For LGC/LTC a BSY PM, RTS PM of one LCM per XPM is required to activate changes to this value.

**WARNING:** TRUNK PERIPHERALS MUST HAVE THEIR EXECs RESENT

**Verification**

Not applicable

**Memory requirements**

This parameter requires 1 word of memory.

**Dump and restore rules**

This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**

BCS36  corrected activation information
**Parameter name**
Minimum Calling Line Identification Length

**Functional description of parameter MINIMUM_CLI_LENGTH**
This parameter is requires in a switching unit with the SSP-based Virtual Private Network (VPN) feature.

For VPN standard access calls, there must be a minimum length of Calling Line Identification (CLI) provided in the IAI message. The CLI that is provided is checked against this office parameter. If the CLI has the same number of digits or more digits than the number datafilled in this office parameter, the call is assumed to have a full CLI and call routing will continue. It must still be possible to identify a customer group and an NCOS in table CGNSCRN using the CLI. If the CLI length is less than the number datafilled, the call is assumed to contain a partial CLI and is routed to treatment.

**Provisioning rules**
Set this parameter to the minimum acceptable CLI length.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
If this parameter is set too high, a large number of VPN standard access calls are sent to treatment.

**Verification**
To verify that this parameter is operational, set the value to a CLI length longer than the regular CLI length. Verify that all standard VPN calls are routed to treatment.

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter is new with software release BCS31.

Copy the existing value of this parameter when doing a dump and restore.
Parameter history

BCS36  maximum value increased
Parameter name
N5 Clear-back Timer

Functional description of parameter N5_CLB_TIMER
This parameter is required for DMS-300 Gateway switches with incoming #5 trunks. It specifies the timeout period before the national part of the connection is released, if a clear-forward signal is not received after a clear-back signal is sent.

Provisioning rules
Specify one of the following timeout values:
- T2 = 2 minutes timeout
- T3 = 3 minutes timeout
- T4 = 4 minutes timeout
- T30 = 30 minutes timeout

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2 (2 minutes)</td>
<td>T30 (30 minutes)</td>
<td>T3 (3 minutes)</td>
</tr>
</tbody>
</table>

Activation
The affected peripheral module must be reloaded to activate a change to this parameter.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.
Copy the existing value of this parameter when doing a dump and restore.
**N5 USING UTR**

**Parameter name**
N5 Using Universal Tone Receivers

**Functional description of parameter N5 USING UTR**
This parameter controls the type of receivers used for N5 signaling in a DMS-300 office. It is used to determine whether the N5 signaling system can use universal tone receivers (UTR) for digit collection when provisioned on the peripheral module (PM). This typically occurs on PCM30 digital trunk controller (PDTC) peripherals.

**Provisioning rules**
If the value of this parameter is set to Y (yes), digit reception is performed using UTR receivers if they are provisioned on the PM that provides the trunk interface.

If the value of this parameter is left at the default of N (no), digit reception is done by employing MF300 receivers equipped on a maintenance trunk module (MTM) peripheral.

If this parameter is set to N, MF300 receivers are used for the duration of register signaling. If it is set to Y, UTR receivers are used.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
The setting of this parameter affects the engineering of the office. The correct number and type of receivers must be provisioned.

**Verification**
Not applicable.

**Memory requirements**
Each unit requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
N6 Clear-back Timer

Functional description of parameter N6_CLB_TIMER
This parameter is required for DMS-300 Gateway switches with incoming #6 trunks. It specifies the timeout period after which the national part of the connection is released if a clear-forward signal is not received after a clear-back signal is sent.

Provisioning rules
Specify one of the following timeout values:
- T2 = 2 minutes timeout
- T3 = 3 minutes timeout
- T4 = 4 minutes timeout
- T30 = 30 minutes timeout

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2 (2 minutes)</td>
<td>T30 (30 minutes)</td>
<td>T3 (3 minutes)</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the #6 trunks to activate a change to this office parameter. No restart is required.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Networked Automatic Call Distribution Broadcast Interval

Functional description of parameter NACD_BRDCAST_INTERVAL

This parameter is required for switching units with the Networked Automatic Call Distribution (NACD) feature.

NACD provides automatic load balancing for Networked ACD by enabling NACD groups to exchange load status information, that is used to determine the best overflow target group.

At regular intervals, network load status information is broadcast by each NACD group to each group to which its calls may be routed. As each group receives network load information from other groups, the information is saved and used to determine the best NACD group to receive overflowed calls. Each group is automatically kept up to date on the current load traffic of the other groups to achieve automatic load balancing.

The automatic load balancing provided by this feature reduces the time it takes for overflowed calls to be answered by enabling them to be routed to the group best able to answer them.

Provisioning rules

This parameter specifies the time, in 1 second intervals, between the broadcast of load status information by each NACD group to other groups in the network.

This parameter should be set to a multiple of ten in order to define a true interval. If the parameter is not an interval of ten, broadcasts occur at the next highest multiple of ten, (for example, a 28 s interval actually occurs every 30 s).

If other than 60 s, specifies the time, in 1 s intervals, between the broadcast of load status information by each NACD group to other groups in the network.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1800</td>
<td>60</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

OFCENG-394 297-1001-455 Standard 22.02 March 1994
**NACD_BRDCAST_INTERVAL**

**Consequences**
If this parameter is set to zero, no periodic broadcast of load status information is performed by any NACD groups.

**Verification**
Not applicable.

**Dump and restore rules**
This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
**NACD_RI_DELTA_PARM**

**Parameter name**
Network Automatic Call Distribution Resource Index Delta Parameter

**Functional description of parameter NACD_RI_DELTA_PARM**

This parameter is associated with the Network Automated Call Distribution feature (NACD).

NACD provides the capability for each ACD group to broadcast status information about its own load traffic and store load status information about the rest of the network.

The load status information that is used to determine the best group is the combined value of the preference weighting factor (PWF) and the resource index (RI). The PWF is a customer defined value that is datafilled in table NACDGRP, and provides a means to give preference to a particular NACD group. The RI is calculated on a per-group basis, and indicates the load traffic for that group.

The RI algorithm is introduced based on the following:

- the number of idle agents
- wait time of oldest call
- wait time of most idle agent
- queue size

This parameter specifies the delta value to use when determining whether the NACD RI value has changed enough to warrant an update. The difference between the current RI and the previous RI is computed. This difference is then compared against the value of this parameter. If the difference is greater than or equal to the parameter value, the current RI is broadcast to update the network.

**Provisioning rules**

The higher the parameter value is set, the less often RI broadcasts are performed.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32676</td>
<td>5</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

OFCENG-396 297-1001-455 Standard 22.02 March 1994
NACD_RI_DELTA_PARM

Consequences
If this parameter is set to zero, the RI is sent each time a broadcast is attempted (see office parameter NACD_BRDCAST_INTERVAL in table OFCENG).

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
NATIONAL_COUNTRY_CODE

Parameter name
National Country Code

Functional description of parameter NATIONAL_COUNTRY_CODE
This parameter is required in a DMS-300 switching unit. It specifies the country code of the country where the switch is located.

To be properly recognized, there must be data for this country code in table OVNTRNSL.

If a country code for which no data exists in table OVNTRNSL is used, the internal country code index into table OVNTRNSL for terminating calls is not updated, but left at the previous value. A check is made for changes on cold and reload restarts.

Provisioning rules
The value of this parameter must be numeric and equal to the country code of the country where the switch is located.

If the switch is located in North America, leave the value of this parameter at the default of 1.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Immediate or cold restart

If a change is made and data for the new country code exists in table OVNTRNSL, the change is effective immediately.

If the country code is not datafilled in table OVNTRNSL, a warning is displayed and the parameter is activated on the next restart after the country code is added to table OVNTRNSL.

Dependencies
Data for this country code must be datafilled in table OVNTRNSL.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**NCCBS**

**Parameter name**
Number of Call Condense Blocks

**Functional description of parameter NCCBS**
This parameter is required for all switching units. It specifies the number of call condense blocks (CCB) required for the switching unit. A CCB is a software register associated with a call throughout its duration, containing information such as the identity of the calling and called appearances.

The parameter value determines the maximum number of simultaneous calls.

As of BCS34, this parameter is used by the DMS packet handler to set up packet calls. One CCB is required for each packet call.

The expected number of simultaneous active calls on an XLIU is 1000. Engineering the switch NCCBS value on this basis does not restrict the number of calls for each XLIU from exceeding 1000 (in which case resources provisioned for voice calls are used).

The recommended minimum value for this parameter is 2000.

**Provisioning rules**
For Junctored Network (JNET) offices the value of this parameter is calculated with the following equation:

\[
NCCBS = N \times 64 \times 15 \times \text{number of provisioned network modules.}
\]

For Enhanced Network (ENET) offices the value of this parameter is calculated with the following equation:

\[
NCCBS = N \times 64 \times 15 \times 15 \times \text{number of ENET shelves per plane}
\]

For DMS packet handler (JNET offices) the value of this parameter is calculated with the following equation:

\[
NCCBS = (N \times 64 \times 15 \times \text{number of provisioned network modules}) + (1000 \times \text{number of XLIUs provisioned for the office})
\]

For DMS packet handler (ENET offices) the value of this parameter is calculated with the following equation:

\[
NCCBS = (N \times 64 \times 15 \times 15 \times \text{number of ENET shelves per plane}) + (1000 \times \text{number of XLIUs provisioned for the office})
\]

where

\[
N = 0.8 \text{ for a Bell Canada switching unit, excluding a stand-alone signal transfer point (STP).}
\]
N = 0.9 for all switching units, excluding a switching unit in the United States or a stand alone signal transfer point (STP).

N = 1.0 for all switching units in the United States, excluding a stand alone signal transfer point (STP).

For a stand alone STP, leave the value of this parameter at the default.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (NT40)</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>65535 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**

Increase - immediate

Decrease of more than 10% - cold restart

**Dependencies**

For all switching units, excluding a stand-alone STP, the value of this parameter must be increased if the number of networks increases.

Changing the value of this parameter in an Integrated Business Network (IBN) switching unit can affect the value of parameters NO_OF_SMDR_REC_UNITS and NUMOHCBQTRANSBLKS in table OFCENG.

Changing the value of this parameter in a switching unit with the Common Channel Signaling 7 (CCS7) feature affects the value of parameter NUM_ISUP_EXT_BLKS in table OFCENG.

Changing the value of this parameter in a local switching unit (international) with universal translation scheme affects the value of parameter NUM_CCMTR_EXT_BLKS in table OFCENG.

**Consequences**

If there are no CCBs available, calls are routed to network blockage normal traffic (NBLN) treatment in treatment tables.

**Verification**

To verify that sufficient call condense blocks have been allocated, use command interpreter (CI) command OMSHOW CP ACTIVE and read the measurement CCBOVFL.

Any non-zero value in CCBOVFL indicates underprovisioning.

Use CI command OMSHOW CP2 ACTIVE and read measurement CCBHI.
NCCBS

Measurement CCBHI records the maximum number of CCBs in simultaneous use during the current transfer period.

See operational measurements CCBSZ and CCBOVFL in OM group CP and CCBHI in OM group CP2 for the OMs associated with this parameter.


Memory requirements

NT40: 125 words of memory are required for each CCB.

SuperNode: 132 words of memory are required for each CCB.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
NETWORK_ELEMENT_ID

Parameter name
Network Element Identifier

Functional description of parameter NETWORK_ELEMENT_ID
This parameter appears only in a switching unit that contains software module EOCPPSUB. It specifies the network element identifier that is referenced by the FiberWorld protocol stack.

This network element identifier must be provisioned by the operating company when connecting an AccessNode to a DMS in a multihosting environment. The network element identifier must be unique for each DMS.

Because this parameter is used in the communication stack, it is necessary to reset the stack if the value of this parameter is changed.

Provisioning rules
Specify the unique network element identifier for a DMS switching unit that is connected to an AccessNode in a multihosting environment.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 parameter introduced
NFA_ANSWER_DETECT_TIME

Parameter name
Network Facility Access Answer Detect Time

Functional description of parameter NFA_ANSWER_DETECT_TIME
This parameter is required in a switching unit with feature package NTXR25AA (Network Facility Access). It specifies the filter time in 10 ms intervals for detecting answer on a Network Facility Access (NFA) trunk.

Provisioning rules
The filter time value for hook changes can be set at a value from 7 (70 ms) to 9 (90 ms). The recommended value for this parameter is 9. If the switch is using an intelligent peripheral (IP) and transmission medium that can support a shorter timing value, the value can be decreased from the default of 9.

The following message is displayed whenever the value of this parameter is decreased from the default value:
WARNING: DECREASING THIS OFFICE PARAMETER FROM THE DEFAULT OF 9 CAN IMPACT THE GRADE OF SERVICE FOR NFA SUBSCRIBERS.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Decreasing the value of this parameter can impact the grade of service for NFA subscribers if the switch is not equipped with an intelligent peripheral (IP) and transmission medium that can support a shorter timing value.

Verification
A change to the value of this parameter can be verified by assigning NFA access to a line. Connect a trunk signaling device to the NFA trunk. Seize the NFA trunk and program the trunk signaling device to return a wink of a specific duration. If the duration of the wink is less than the filter time, the DMS should not recognize it as an answer. If the duration of the wink is longer than the answer time, the DMS should recognize it as an answer followed by a disconnect.

Memory requirements
This parameter requires 1 word of memory.
Dump and restore rules

This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  parameter introduced
**NFA_IMPLCT_BYPASS_UTR**

Parameter name
Network Facility Access Implicit Bypass Universal Tone Receivers

Functional description of parameter NFA_IMPLCT_BYPASS_UTR
This parameter is present in switches equipped with the Network Facility Access feature. It specifies whether universal tone receivers (UTR) are bypassed when digit collection is performed on lines that have the NFA implicit access feature.

Provisioning rules
Set the value of this parameter to Y (yes) to allow network dual tone multi-frequency (DTMF) receivers to be used for digit collection on lines with the NFA Implicit Access feature activated.

When the parameter value is changed from N (no) to Y, the following message appears:
**WARNING:** 2X48 DTMF RECEIVERS WILL BE USED ON ALL NFA IMPLICIT CONNECTIONS. VERIFY IMMEDIATELY THAT THE OFFICE IS ENGINEERED WITH ENOUGH DTMF RECEIVERS TO HANDLE ALL NFA IMPLICIT TRAFFIC. IF THIS IS NOT THE CASE, THE VALUE OF THIS PARAMETER SHOULD BE CHANGED BACK TO N.

Set the value of this parameter to N to allow UTR to be used for digit collection if the line’s peripheral module is engineered with UTR.

When the parameter value is changed from Y to N, the following message appears:
**UTRS WILL BE USED ON NFA IMPLICIT CONNECTIONS IF THEY ARE AVAILABLE.**

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
The value of this parameter must only be set to Y if the office is engineered with enough network DTMF receivers to handle digit collection for all originations from lines that have activated the NFA implicit access feature. If there are not enough DTMF receivers, delays in dial tone and aborted calls can result.

OFCENG-406 297-1001-455 Standard 22.02 March 1994
NFA_IMPLCT_BYPASS_UTR

Verification
A change to this parameter can be verified by posting a line from a peripheral engineered with UTRs at the LTP level of the MAP. Assign NFA implicit access to the line. Go off hook from the line and dial one digit. If the parameter value is set to N, UTR is displayed next to the line at the LTP level. If the parameter value is set to Y, the common language location identifier (CLLI) and receiver number associated with the DTMF receiver being used is displayed at the LTP level.

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 parameter description moved from OFCVAR to OFCENG
NFA_INVERTED_WINK_DURATION

Parameter name
Network Facility Access Inverted Wink Duration

Functional description of parameter NFA_INVERTED_WINK_DURATION
This parameter is required in a switching unit with feature package NTXR25AA (Network Facility Access). It specifies the upper limit of the duration of the inverted wink that is propagated by a DMS on a Network Facility Access (NFA) trunk when the speech path is established between the subscriber and the NFA trunk.

Provisioning rules
The duration of the inverted wink can be set at a value from 6 (between 50 and 60 ms) and 10 (between 90 and 100 ms). The recommended value for this parameter is 10. If the switch is using an intelligent peripheral (IP) and transmission medium that can support a shorter timing value, the value can be decreased from the default of 10.

The following message is displayed when the value of this parameter is decreased from the default value:
DECREASING THIS OFFICE PARAMETER FROM THE DEFAULT OF 10 CAN IMPACT THE GRADE OF SERVICE FOR NFA SUBSCRIBERS.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Decreasing the value of this parameter can impact the grade of service for NFA subscribers if the switch is not equipped with an intelligent peripheral (IP) and transmission medium that can support a shorter timing value.

Verification
A change to the value of this parameter can be verified by assigning NFA access to a line. Establish an NFA trunk connection and measure the duration of the inverted wink.

Memory requirements
This parameter requires 1 word of memory.
NFA_INVERTED_WINK_DURATION

Dump and restore rules

This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter introduced
**NFA_PRE_DIAL_DELAY_TIME**

**Parameter name**
Network Facility Access Pre-dial Delay Time

**Functional description of parameter NFA_PRE_DIAL_DELAY_TIME**
This parameter is required in a switching unit with feature package NTXR25AA (Network Facility Access). It specifies the amount of pre-dial delay, in 10 ms intervals, between seizing a Network Facility Access (NFA) trunk and outpulsing the first digit.

**Provisioning rules**
The pre-dial delay can be set to a value from 0 (0 ms) to 15 (150 ms). The recommended value for this parameter is the default of 15. If the switch is using an intelligent peripheral (IP) and transmission medium that can support a shorter timing value, the value can be decreased from the default.

The following message is displayed when the value of this parameter is decreased from the default value:

**WARNING:** DECREASING THIS OFFICE PARAMETER FROM THE DEFAULT OF 15 CAN IMPACT THE GRADE OF SERVICE FOR NFA SUBSCRIBERS.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Decreasing the value of this parameter can impact the grade of service for NFA subscribers if the switch is not equipped with an intelligent peripheral (IP) and transmission medium that can support a shorter timing value.

**Verification**
A change to the value of this parameter can be verified by assigning NFA access to a line. Go offhook from the line and measure the pre-dial delay. The total call timing should decrease.

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.
Parameter history

BCS36 parameter introduced
NMULTIBLKS

Parameter name
Number of Multiblocks

Functional description of parameter NMULTIBLKS
This parameter is required for all switching units. It specifies the number of multiblocks required for the engineering period.

A multiblock is used to associate call condense blocks (CCB) if more than one call is associated with the same line or trunk, such as a three-way call.

Multiblocks are required for the following features:
- Three-Way Calling
- Call Waiting
- Traffic Operator Position System (TOPS)

Provisioning rules
The recommended value for this parameter is determined by the following formula:

\[
2 \times \text{number of 3-port conference circuits} + 0.3 \times \text{value of parameter NO_OF_FTR_CONTROL_BLKS} + 0.8 \times \text{number of TOPS positions}
\]

See table CONF3PR for the number of 3-port conference circuits.

For all switching units not covered by the above formula, leave this parameter at the default value of 10.

If a call requires one of these blocks and none are available, the call is routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>4095 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
At extension time, recalculate the value of this parameter if the value of one or more of the items in the provisioning rules change.

Consequences
Not applicable
Verification

See operational measurements (OM) MULTSZ and MULTOVFL in OM group CP and MULTHI in OM group CP2 for the OMs associated with this parameter.

To verify that sufficient multiblocks have been allocated, use CI command OMSHOW CP ACTIVE and read the measurement MULTOVFL in OM group CP.

Any nonzero value in measurement MULTOVFL indicates underprovisioning.

Measurement MULTHI records the maximum number of multiblocks in simultaneous use during the current transfer period.


Memory requirements

Three words of memory are required for each multiblock.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
NMS_ACKNOWLEDGEMENT_TIMEOUT

Parameter name
Network Message Waiting Acknowledgement Timeout

Functional description of parameter NMS_ACKNOWLEDGEMENT_TIMEOUT
This parameter is associated with the Network Message Waiting Indicator (NMWI) feature.

NMWI enables a Message Service on one node to activate and deactivate the message waiting indicator of a subscriber located on a different node, provided the two nodes support transaction capability application part (TCAP) communication between them.

NMWI uses TCAP and the connectionless class 0 (basic) service provided by the signaling connection control part (SCCP) of the CCS7 network.

This parameter specifies the maximum amount of time in seconds, that an NMS TCAP request can wait for an acknowledgement. Beyond this time limit, the NMS request is considered to have timed out.

Provisioning rules
The default value of 3 should be used in most cases for this office parameter. If problems due to underprovisioning or overprovisioning arise, the value of this parameter should be raised or lowered by 1.

Setting this parameter to 0 (zero) is not recommended because it implies that no acknowledgements, positive or negative, are required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>3</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Underprovisioning results in too many NMS TCAP requests timing out. Setting this parameter to 0 causes no timing to be performed.

Overprovisioning results in transaction ID existing for longer periods. may Transaction IDs are used up more quickly.

Verification
Not applicable
NMS_ACKNOWLEDGEMENT_TIMEOUT

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
NO_ANS_CALLS_ONTAPE

Parameter name
No Answer Calls On Tape

Functional description of parameter NO_ANS_CALLS_ONTAPE
This parameter specifies whether calls for which no answer is received are to be recorded on the automatic message accounting (AMA) tape. It is used by NT-format AMA software, market specific United Kingdom Traffic Operator Position System (TOPS) software, and Overseas Operator Centre (OOC) TOPS software.

Provisioning rules
If the value of this parameter is set to Y (yes), calls for which no answer is received are recorded on the AMA tape.

If the value of this parameter is left at the default value of N (no), calls for which no answer is received are not recorded on the AMA tape.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number Of Local Coin Extension Blocks

Functional description of parameter NO_LOCAL_COIN_EXT_BLKS
This parameter appears only in switching units with the Local Coin Overtime Charging feature. It specifies the number of local coin extension blocks required for the switch.

Local coin extension blocks are required when connecting local coin calls to coin overtime treatment.

Provisioning rules
The recommended number of extension blocks is equal to the maximum number of simultaneous connections to the tone or announcement specified in the first element in the route list (table OFRT) assigned to the coin overtime treatment CNOT in subtable LNT of table TMTCNTL.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>32000 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
At extension time this parameter value must increase if the number of simultaneous connections specified in the provisioning rules increases.

Consequences
Not applicable

Verification
To verify that sufficient recording units have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 27 and read the following entry:

```
  27  LCO_EXTENSION_BLOCK
     15
     0     0     0     0
  0    0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
NO_LOCAL_COIN_EXT_BLKS

See the Operational Measurement Reference Manual, 297-1001-814 for a description of OM group EXT.

Memory requirements
Each extension block requires 12 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Other Common Carrier Traffic Separation Operational Measurement Registers

Functional description of parameter NO_OCCTS_OM_REGISTERS
This parameter is required for switching units with the Equal Access Traffic Separation Measurement System, Other Common Carrier Traffic Separation (OCCTS).

This parameter specifies the maximum number of operational measurement registers that can be assigned in table OCCTSINT.

Provisioning rules
For switching units without software package NTX085AA (Traffic Separation Peg Count) and parameter OCCTS_ENHANCED_FEATURE in table OFCENG set to N (no), leave the value of this parameter at the default of 225.

If the switching unit has software package NTX085AA present and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y (yes), the recommended value is 1000.

Range information
<table>
<thead>
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<th>Default</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>2047</td>
<td>225</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
See parameter OCCTS_ENHANCED_FEATURE in table OFCENG for other parameters and tables that are associated with the OCCTS feature.

Consequences
Once this parameter is set and a cold restart done, the value can not be decreased. This is to avoid traps that can occur in table control and call processing if OCCTS registers that were deallocated are used.

Verification
Not applicable

Memory requirements
For memory allocation see parameter OCCTS_IN_MAX_NUMBER in table OFCENG
NO_OCCTS_OM_REGISTERS

Dump and restore rules

For switching units with software package NTX085AA, copy the existing value of this parameter when doing a dump and restore.

For switching units without software package NTX085AA, leave the value of this parameter at the default of 225.
Parameter name

Number of Clone Terminal Identifier

Functional description of parameter NO_OF_CLONE_TIDS

This parameter is used with the Broadcast feature to specify the number of Clone Terminal Identifiers (CTIDS) that are engineered for the office.

This office parameter represents the summation of the maximum number of active concurrent output ports in all broadcast calls supported in the office at any one time.

Provisioning rules

If one CTID is required for each output port, and up to 1000 trunks are being supported with an average of eight destinations each, a maximum of 8000 CTIDS are needed for the broadcast feature. Since CTIDS are not broadcast specific, additional CTIDS are allocated for other uses. The value of this parameter cannot be reduced.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32000</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
NO_OF_CRITICAL_FTR_DATA_BLKS

Parameter name
Number of Critical Feature Data Blocks

Functional description of parameter NO_OF_CRITICAL_FTR_DATA_BLKS
This parameter specifies the number of feature data blocks (FDB) that are reserved in a pool for critical features that must always have access to an available FDB. This parameter is used in collaboration with office parameter E911_NUMBER_OF_FDBS in table OFCENG in order to reserve a pool of FDBs for critical calls.

The use of a critical FDB begins when a call terminates to a public safety answering point (PSAP) or Automatic Call Distribution (ACD) queue and continues until all parties in the call go on hook.

Any DMS switch acting as an Enhanced 911 Emergency Service (E911) tandem and containing software packages NTX447AA (E911 - Tandem) and NTXF61AA (DMS Integrated E911 PSAP Functionality) uses this parameter.

Provisioning rules
This parameter is provisioned based on the cumulative total of all features that use critical FDBs. Only the E911 feature uses critical FDBs. The provisioning rule for this parameter is the same as that of E911_NUMBER_OF_FDBS:

\[((# \text{ACD/line/LDT PSAP agents}) + (# \text{slots in ACD PSAP queue})) \times 2\]

where:
- ACD = Automatic Call Distribution
- LDT = line appearance on a digital trunk
- PSAP = public safety answering point

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
The value of this office parameter must not be smaller than that of E911_NUMBER_OF_FDBS in table OFCENG.

OFCENG–422 297-1001-455 Standard 22.02 March 1994
NO_OF_CRITICAL_FTR_DATA_BLKS

Consequences

Overprovisioning of this parameter decreases memory resources that are available for other activities.

Underprovisioning of this parameter results in the possibility of features being unable to function. The features at risk are orighold, switch-hook status tone, E911212 logs, disconnect timing, remote call event records (RCER), automatic number identification (ANI), automatic link intelligence (ALI), ringback and selective transfer.

Verification

To verify that sufficient data blocks have been allocated, use CI command OMSHOW EXT ACTIVE 86 and read the following:

```
   EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
  EXTSEIZ2
   86  CRITICAL_FEATURE_DATA
        400
        0    0    0
         0
```

Any nonzero entry in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of data blocks in simultaneous use during the current transfer period.

Memory requirements

Each unit requires 36 words of memory.

Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**NO_OF_FTR_CONTROL_BLKS**

**Parameter name**
Number of Feature Control Blocks

**Functional description of parameter NO_OF_FTR_CONTROL_BLKS**
This parameter specifies the number of feature control blocks required.

** Provisioning rules**
Set the value of this parameter to the greater of 2000 or the value of field MAXCQSIZ in table ACDGRP.

An Automatic Call Distribution (ACD) group is defined by datafilling a tuple for the group in table ACDGRP. Field MAXCQSIZ in the tuple defines the total maximum number of calls that can be queued in the group’s incoming call queue at one time.

One control block is required for each call that is queued in the incoming call queue or each unanswered call.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>50</td>
</tr>
</tbody>
</table>

**Activation**
increase – immediate
decrease – cold restart

**Dependencies**
One FCB is used by each Automatic Call Distribution (ACD) queued call. The maximum number of queued calls for each ACDGRP is specified in field MAXCQSIZ in table ACDGRP. A check is performed by software to determine if there are enough FDBs provisioned in the case that every ACD call queue is full. If the number of queued calls specified by the total of all ACD group exceeds 75% of the value of this parameter, the following warning message is displayed when a new ACDGRP is added.

**WARNING — POTENTIALLY NOT ENOUGH FCBS ALLOCATED**

Note that if the MAXCQSIZ field of table ACDGRP is set unreasonably high, this warning message may be output unnecessarily.

The above warnings will no longer be generated in the following cases:
- if the size of this parameter is increased
- the value of the total MAXCQSIZ is decreased, by decreasing field MAXCQSIZ of one or more ACD groups in table ACDGRP, so that it no longer exceeds 75% of the value of this parameter
• one or more ACD groups are deleted, decreasing the value of the total MAXCQSIZ, so that it no longer exceeds 75% of the value of this parameter

**Consequences**

If there are not enough blocks allocated for the total number of calls that can be queued in all ACD groups within the switching unit, calls are lost. When the allocated blocks are all in use, there are no resources to enqueue any arriving calls. Since the MAXCQSIZ upper bound has not been reached, the calls are not deflected (as specified in field THROUTE of table ACDGRP) and these arriving calls are lost.

A check is provided to warn the customer of this potential software resource problem. If an ACD group is datafilled in table ACDGRP, the total of all of the MAXCQSIZ fields is compared against 75% of the value of this office parameter. If the MAXCQSIZ total exceeds 75% of the value of this office parameter, the group is still added but the following warning is generated on the maintenance and administration position (MAP) screen:

**WARNING—POTENTIALLY NOT ENOUGH FCBs ALLOCATED**

**Verification**

To verify that sufficient FCBs have been allocated, use CI command OMSHOW EXT ACTIVE 22 and read the following entry:

```
  EXTHI2  EXTSEIZ2  EXTHI  EXTSEIZ
EXTSEIZ   EXTOVFL   EXTSEIZ
  22 FEATURE_CONTROL_BLOCK
  50  0  0  0  0  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual, 297–1001–814* for a description of OM group EXT.

**Memory requirements**

Each FTR control block requires 121 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS14

Copy the existing value of this parameter when doing a dump and restore.
**NO_OF_FTR_XLA_BLKS**

**Parameter name**

Number of Feature Translation Blocks

**Functional description of parameter NO_OF_FTR_XLA_BLKS**

This parameter specifies the quantity of feature translation data extension blocks required.

One feature translation data extension block is used each time the user flashes. As soon as the user finishes dialing, the extension block is released.

One feature translation data extension block is required for each activation of the Station Origination Restrictions (SOR) feature.

In switching units with the Advanced Intelligent Network (AIN), a feature translation extension block is attached at the beginning of subsequent digit collection, and released when sufficient digits have been collected and analyzed.

**Provisioning rules**

For a local or SL-100 switching unit, set the parameter value to 600.

For a local switching unit in the United States, set the parameter value to 200.

For a Local switching unit with the World Systems feature set the parameter value equal to the value of parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>32000 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**

Increase – immediate
Decrease – cold restart

**Dependencies**

Not applicable

**Consequences**

If an insufficient quantity of extension blocks are provided, the user is incapable of flashing or activating the SOR feature. Also, the AIN feature is unable to collect subsequent digits when they are requested by an AIN send_to_resource response message requesting normal digit collection, or when subsequent normal digit collection is required in the case of
encountering the AIN Customized Dial Plan Vertical Service Code trigger in table IBNXL or XLANAME.

Verification

To verify that sufficient recording units have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 47 and read the following entry:

<table>
<thead>
<tr>
<th></th>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
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</thead>
<tbody>
<tr>
<td>47</td>
<td>EXTSEIZ</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>EXTHI</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>XLA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Guide 297-1001-814 for a description of OM group EXT.

Memory requirements

Each unit requires 60 words of memory.

Dump and restore rules

This parameter was introduced in BCS22.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  AIN feature translation extension block usage added
NO_OF_HIS_CONTROL_BLKS

Parameter name
Number of History Control Blocks

Functional description of parameter NO_OF_HIS_CONTROL_BLKS
This parameter is required for a switching unit with Common Channel Signaling 7 (CCS7) and primary rate access (PRA) trunks.

This parameter is also associated with the SPC-CMS feature that enables SPC Stored Program Control (SPC) switches to be included in the Call Management Service (CMS) network to provide one-way CMS. One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to DMS subscribers but not to the SPC subscribers.

SPC switches are Stored Program Control switches, specifically SP-1/2W and 1ESS, that are not capable of transmitting calling line information through the standard Per Trunk Signaling (PTS) trunking.

This parameter is required for the following call types:
• TUP and ATUP calls on the DMS-300
• ATUP calls on the DMS-100
• TUP+ calls on the DMS-100
• Australian ISUP
• Flexible Signaling Trunk (FST) R2 calls on the DMS-100

Provisioning rules
The following formulas are used to calculate the value of this parameter:

For an originating or terminating end office, the value is equal to:

\[ \text{(2X (number of CCS7 trunks + number of PRA trunks))} \]
\[ + \text{ (number of SPC trunks datafilled in table SPCTRKS)} \]
\[ + \text{(number of incoming FST R2 trunks)} \]
\[ + \text{(number of two-way FST R2 trunks)} \]

(Note: CCS7 refers to the number of user (voice) trunks, not signaling trunks.

For a tandem switching unit, the value is equal to:

\[ \text{(number of CCS7 trunks)} \]
\[ + \text{(number of PRA trunks)} \]
\[ + \text{(number of SPC trunks datafilled in table SPCTRKS)} \]
\[ + \text{(number of incoming FST R2 trunks)} \]
\[ + \text{(number of two-way FST R2 trunks)} \]
This parameter must be provisioned not only on the switch running the CND or SPC features, but also on any other switch (for example, Tandem) in the network.

For a switching unit with the advanced intelligent network (AIN), the value is equal to:

\[ 1 \times (\text{the value of office parameter NCCBS in table OFCENG}) \]

### Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>262144</td>
<td>50</td>
</tr>
</tbody>
</table>

### Activation

- Increase - immediate
- Decrease - cold restart

### Dependencies

At extension time the value of the parameter must increase if the maximum number of signaling system #7 (SS7), PRA, or SPC trunks required for the engineering interval increases.

### Consequences

If an insufficient quantity of units is specified, network call completion can fail. Additionally, the activation of network services can fail even after the call has been established.

For SPC trunks, underprovisioning results in no calling line information being delivered to the terminating agents. However, the call is completed normally.

### Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 55 and read the values under EXTOVFL and EXTHI and EXTH2.

\[
\begin{array}{cccc}
\text{EXTSEIZ} & \text{EXTOVFL} & \text{EXTHI} & \text{EXTHI2} \\
250 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
\end{array}
\]

Any nonzero value under register EXTOVFL indicates underprovisioning.

Registers EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
NO_OF_HIS_CONTROL_BLKS

Memory requirements
Each unit requires 26 words of memory.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 provisioning rules changed to allow for FST two-way R2 trunks and the advanced intelligent network
Parameter name

Number of History Data Blocks

Functional description of parameter NO_OF_HIS_DATA_BLKS

This parameter is required for a switching unit with Common Channel Signaling 7 (CCS7), or primary rate access (PRA) trunks or PCM30 channel associated signaling (CAS) flexible signaling trunk (FST) R2 trunks.

This parameter is also associated with the SPC-CMS feature that enables stored program control (SPC) switches to be included in the Call Management Service (CMS) network to provide one-way CMS. One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to DMS subscribers, but not to the SPC subscribers.

SPCs are stored program control switches, specifically SP-1/2W and 1ESS, that are not capable of transmitting calling line information through the standard per trunk signaling (PTS) trunking.

With the enhancement of the call history facility (CHF) in BCS33, this parameter is modified to include the number of regular, large, and extra-large history data blocks (HDB).

As of BCS35, extra large HDBs are used to store unrecognized Initial Address Messages (IAM). Before BCS35, large HDBs performed this function.

Provisioning rules

The HDBs are used for all ISDN user part (ISUP), primary rate interface (PRI), and telephone user part (TUP) calls to keep call setup information for basic calls or feature specific information for feature calls. The number of HDBs and their size used for each call depends on the call type and features.

The following calculation is used for an office with an average mix of features and traffic:

\[
\text{# of HDB} = (\text{# of ISUP HDB} + \text{# of PRI HDB} + \text{# of SPC HDB} + \text{# of FST R2 HDB})
\]

Where:

\[
\text{# of ISUP HDB} = 2.25 \text{ regular HDB} + 0.13 \text{ large HDB} + 0.02 \text{ extra-large HDB for each ISUP/TUP trunk (and their variants)}
\]

\[
\text{# of PRI HDB} = 3 \text{ regular HDB} + 0 \text{ large HDB} + 0 \text{ extra-large HDB for each PRI trunk}
\]
# of SPC HDB = 3 regular HDB + 0 large HDB + 0 extra-large HDB per SPC trunk

# of FST R2 HDB = 1 regular HDB + 1 large HDB per incoming FST R2 trunk
+ 1 regular HDB + 1 large HDB per two-way FST R2 trunk

In other words:

\[ \text{NO_OF_HIS_DATA_BLKS} = X_1, X_2, X_3 \]

\[ X_1 = \# \text{ of regular HDB} = 2.25 \times \ (# \text{ of ISUP trunk}) + 3 \times \ (# \text{ of PRI trunk}) + 3 \times \ (# \text{ of SPC trunk}) + 1 \times \ (# \text{ of incoming FST R2 trunks}) + 1 \times \ (# \text{ of two-way FST R2 trunks}) \]

\[ X_2 = \# \text{ of large HDB} = 0.13 \times \ (# \text{ of ISUP trunk}) + 1 \times \ (# \text{ of incoming FST R2 trunks}) + 1 \times \ (# \text{ of two-way FST R2 trunks}) \]

\[ X_3 = \# \text{ of extra-large HDB} = 0.02 \times \ (# \text{ of ISUP trunks}) \]

Note: Round up any decimal values to a whole number.

The first field is the number of regular HDBs. The second field is the number of large HDBs. The third field is the number of extra-large HDBs.

**International market**

The provisioning rules for a DMS-300 switching unit are as follows:

\[ X_1 = 1 \times \ (# \text{ of TUP variant trunks}) + 4 \times \ (# \text{ of ISUP variant trunks}) \]

\[ X_2 = 1 \times \ (# \text{ of TUP variant trunks}) + 0.5 \times \ (# \text{ of TUP+ trunks}) + 1 \times \ (# \text{ of ISUP variant trunks}) \]

\[ X_3 = 0.5 \times \ (# \text{ of AISUP trunks}) \]

TUP variant trunks consist of ATUP trunks. ISUP variant trunks consist of ANSI, ISUP and AISUP trunks.
United States market

The following provisioning rule is recommended for switching units in the United States. A single call can use more than one HDB depending on the features involved.

The value of NO_OF_HIS_DATA_BLKS = X1, X2, X3

**X1**

If feature package NTX167AB (CCS7 Trunk Signaling) is present, then

\[ X1 = 2.1 \times \text{(maximum number of SS7 trunks required)} \]

If feature package NTX790AC (ISDN-Primary Rate Interface) is present, then

\[ + 1.2 \times \text{(maximum number of PRA trunks required)} \]

If feature package NTX946AB (EBS Call Name Display) is present, then

\[ + 0.2 \times \text{(number of business set lines)} \]

**X2**

If feature package NTX167AB is present with NTXE13AB or NTXE14AB, then

\[ X2 = 1.3 \times \text{(maximum number of SS7 trunks required)} \]

If NTXN46 or NTX753 is present and NTXE13 or NTXE14 are not, then

\[ X2 = 0.05 \times \text{(maximum number of SS7 trunks required)} \]

If feature package NTXQ42 (Advanced Intelligent Network) is present add the following:

\[ 1 \times \text{(total number of AIN subscribers)} \]

Note: If this number is less than 10 (default), use the value of 10.

**X3**

\[ X3 = 0.02 \times \text{(the number of ISUP trunks)} \]

If feature package NTXQ42 (Advanced Intelligent Network) is present add the following:

\[ \text{(total number of AIN subscribers)} \times \text{(the percentage of AIN traffic for those subscribers)} \]
Table 1 shows the ISUP and ISDN features with the size and quantity of HDBs that they use for each call.

Optional features that use the basic ISUP or ISDN features use those blocks plus any additional blocks listed by the optional package. For example, an equal access end office ISUP call uses two regular HDBs plus one large HDB. The base packages are indicated with brace brackets {}, followed by the optional feature packages that may require extra HDBs.

<table>
<thead>
<tr>
<th>NTX package</th>
<th>Feature package name</th>
<th>HDBs required per call</th>
</tr>
</thead>
<tbody>
<tr>
<td>{NTX167}</td>
<td>CCS7 Trunk Signaling</td>
<td>2 regular</td>
</tr>
<tr>
<td>NTXE13</td>
<td>CCS7 ISUP InterLATA</td>
<td>+ 1 large</td>
</tr>
<tr>
<td>NTXE14</td>
<td>CCS7 ISUP InterLATA</td>
<td>+ 1 large</td>
</tr>
<tr>
<td>NTXA79</td>
<td>IBN Trunk with ISUP Signaling</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>NTX875</td>
<td>CCS7 Mass Trunk Conversion</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX167 and NTX550}</td>
<td>TCAP</td>
<td>2 regular</td>
</tr>
<tr>
<td>NTXN46</td>
<td>Networked ACD on CCS7</td>
<td>+ 1 regular + 1 large</td>
</tr>
<tr>
<td>NTXA68</td>
<td>Network Message Service</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX167 and NTX79}</td>
<td>2 regular</td>
<td></td>
</tr>
<tr>
<td>NTXA39</td>
<td>Meridian Network Attendant Service</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>NTXA35</td>
<td>Meridian Network Number Display</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>NTXN01</td>
<td>Multilocation Business Group</td>
<td>+ 1 regular</td>
</tr>
<tr>
<td>NTXA39</td>
<td>Network Attendant Services</td>
<td>no extra HDBs</td>
</tr>
</tbody>
</table>

**Note:** If both NTXE13 and NTXE14 are present, only one additional HDB is required for Equal Access use.

**Note:** Network automatic call distribution (NACD) on CCS7 does not hold the HDB for the duration of the call.
<table>
<thead>
<tr>
<th>NTX package</th>
<th>Feature package name</th>
<th>HDBs required per call</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTXA80</td>
<td>Network Name Display</td>
<td>+ 1 regular</td>
</tr>
<tr>
<td>NTXJ68</td>
<td>ISDN PRA</td>
<td>1 regular</td>
</tr>
<tr>
<td>{NTX790}</td>
<td>ISDN PRA: Network Ring Again</td>
<td>+ 1 regular</td>
</tr>
<tr>
<td>NTXN47</td>
<td>Networked ACD on PRA (needs NTXE22)</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX167 and NTX790}</td>
<td></td>
<td>3 regular</td>
</tr>
<tr>
<td>NTX794</td>
<td>PRA CCS7 Interworking</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX790 and NTX946}</td>
<td></td>
<td>3 regular</td>
</tr>
<tr>
<td>NTX792</td>
<td>ISDN PRA: Network Name Display</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX946}</td>
<td>EBS Call Name Display</td>
<td>1 regular</td>
</tr>
<tr>
<td>{NTXE22}</td>
<td>ACD Supergroup</td>
<td>no extra HDBs</td>
</tr>
<tr>
<td>{NTX753}</td>
<td>ISDN Functional Mode Basic Rate Services</td>
<td>1 regular (for compatibility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 large (for subaddress)</td>
</tr>
</tbody>
</table>

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 0</td>
<td>655360 655360 655360</td>
<td>50 10 0</td>
</tr>
</tbody>
</table>

**Activation**

- Increase - immediate
- Decrease - cold restart

**Dependencies**

At extension time, the value of the parameter must be increased if the maximum number of CCS7, PRA or SPC trunks required for the engineering interval increases, the Network Name Display feature is added, or the Calling Name Display feature is added to SPC trunks.

**Consequences**

If an insufficient quantity of units is specified, calls are completed, but additional features such as Network Number and Name Display are lost.
For SPC, underprovisioning causes calls to lose calling line information that is delivered to the terminating agents, but the call completes normally.

**Verification**

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 109 111 and read the following entries:

<table>
<thead>
<tr>
<th>KEY</th>
<th>(EXT_FORMAT_CODE)</th>
<th>INFO (EXTINFO)</th>
<th>EXTSEIZ</th>
<th>EXTVOFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>109</td>
<td>REGULAR_HISTORY_DATA</td>
<td></td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>110</td>
<td>LARGE_HISTORY_DATA</td>
<td></td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>111</td>
<td>EXTRA_LARGE_HISTORY_DATA</td>
<td></td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in EXTVOFL indicates underprovisioning.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

**Memory requirements**

Each regular HDB requires 24 words of memory. Each large HDB requires 80 words of memory. Each extra-large HDB requires 132 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS25.

The following algorithm is used to reformat from BCS30, BCS31 or BCS32 to BCS33:

Old value: X

If X > 50 (default):

X1 = X
X2 = .67 * X
X3 = 100

If X < or = 50 leave X1, X2, and X3 at default. No reformat is required.
Parameter history

BCS36  provisioning rules changed to allow for FST two-way R2 trunks
  • DMS–300 provisioning rules added
  • AIN provisioning added
**NO_OF_LARGE_EXT_BLKS**

**Parameter name**

Number Of Large Extension Blocks

**Functional description of parameter NO_OF_LARGE_EXT_BLKS**

This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) Network Ring Again (RAG) feature. It specifies the quantity of large extension blocks used by some transaction capability application part (TCAP) applications for encoding and decoding purposes. The extension blocks from this parameter are also used by Network Automatic Call Distribution (NACD).

NRAG extends the scope of the nodal Ring Again feature to include the ability for a user to use the RAG feature on a station served by a different switching unit in the network. In order for a user to use the RAG feature on a station served by a different switching unit, the original call to the busy user must be set up over an ISDN user part (ISUP) trunk.

NACD uses large extension blocks for the load status indicator (LSI) update process and time delay overflow calls.

The LSI update process allows each NACD group on the switch to periodically send a measure of its capacity to accept calls to each of its remote counterparts, as part of the NACD load balancing algorithm. This allows each group to know every other group’s ability to accept ACD calls. LSI values are sent using signaling system #7 SS7 or primary rate interface (PRI) TCAP messages. Each time an LSI value is received, a large extension block is used.

The NACD time delay overflow feature allows ACD calls queued on an NACD group for an extended period of time to be rerouted to the group most able to handle the call (that with the highest LSI value). When the timer expires, a TCAP message is sent to the remote group requesting its status (does the remote group have a free agent?). The remote group responds with another TCAP message. If the remote group does not have a free agent, the call is taken by the first available group. The time delay overflow option uses one large extension block when a TCAP message is received by a remote switch for a time delay overflow call. The originating switch also uses one large extension block while processing responses from the remote switch. The number of large extension blocks required by time delay overflow depends on the number of possible simultaneous time delay overflow calls in progress on the switch.
Provisioning rules

If the switch has the RAG feature only, leave the value of this parameter at the default of 16.

Datafill one additional extension block for each NACD group on the switch that is networked to a remote switch. This number can be determined by counting the number of tuples using REM selectors in table NACDGRP.

Datafill one additional extension block for each of the maximum number of simultaneous time delay overflow calls. To determine this number, see field MAXCQSIZ in table ACDGRP and determine the number of tuples that have option TMDELOFL assigned and are also NACD groups.

If the switch does not have the RAG or NACD features, set the value to 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>16</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

Changing the value of this parameter affects the value of parameter NUMPERMEXT in table OFCENG.

Consequences

If this parameter is under provisioned, some TCAP applications do not function.

If this parameter is over provisioned, memory is wasted.

Verification

To verify that sufficient extension blocks have been allocated use command interpreter (CI) command OMSHOW EXT ACTIVE 62 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
EXTHI2  62  TC_AP_LARGE_EXT_BLKS
        16
        0       0       0
        0
```

Any nonzero value in EXTOVFL indicates underprovisioning.
NO_OF_LARGE_EXT_BLKS

Operational measurements EXTH1 and EXTH2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each extension block requires 100 words of memory.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number Of Large Feature Data Blocks

Functional description of parameter NO_OF_LARGE_FTR_DATA_BLKS
This parameter specifies the number of large feature data blocks (FDB) required.

Provisioning rules
Set this parameter to a fixed value of 1200 unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>50</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
One large FDB is used by each Automatic Call Distribution (ACD) queued call. The maximum number of queued calls for each ACDGRP is specified in field MAXCQSIZ in table ACDGRP. A check is performed by software to determine if there are enough FDBs provisioned in the case that every ACD call queue is full. If the number of queued calls specified by the total of all ACD group exceeds 75% of the value of this parameter, the following warning message is displayed when a new ACDGRP is added.

WARNING -- POTENTIALLY NOT ENOUGH LARGE FDBS ALLOCATED

Note that if the MAXCQSIZ field of table ACDGRP is set unreasonably high, this warning message may be output unnecessarily.

The above warning is no longer generated in the following cases:
- if the size of this parameter is increased
- the value of the total MAXCQSIZ is decreased, by decreasing field MAXCQSIZ of one or more ACD groups in table ACDGRP, so that it no longer exceeds 75% of the value of this parameter
- one or more ACD groups are deleted, decreasing the value of the total MAXCQSIZ, so that it no longer exceeds 75% of the value of this parameter

Consequences
When underprovisioning of these blocks occurs, the features that require one of these blocks are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.
In an Integrated Business Network (IBN) switching unit the following operational measurements report any failures due to an overflow on these software resources:

- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD

**Verification**

To verify that sufficient large FDBs have been allocated, use CI command OMSHOW EXT ACTIVE 83 and read the following entry:

```
EXTSEIZ     EXTVOFL     EXTHI     EXTSEIZ2
  83  LARGE_FEATURE_DATA
     50            0           0           0
```

Any nonzero value in EXTVOFL indicates underprovisioning.

Operational measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

**Memory requirements**

Each unit requires 41 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number Of Medium Extension Blocks

Functional description of parameter NO_OF_MEDIUM_EXT_BLKS
This parameter is required in a switching unit with North American translations and the residential and private virtual network (PVN) services. It specifies the quantity of extension blocks used by some transaction capability application part (TCAP) applications for encoding and decoding purposes.

As of BCS34, this parameter is used to provision internal resources to allow home location register (HLR) queries to be performed. Each HLR response or time out results in the use of one medium extension block.

Provisioning rules
The default value of this parameter is 16.

For switches equipped with HLR, add the following to the default:
(NUMTRIDS X 1.2)

For the value of NUMTRIDS see field NUMTRIDS in table TCAPTRID.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>16</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Consequences
If this parameter is underprovisioned, some TCAP applications do not function.

If this parameter is overprovisioned, memory is wasted.

Verification
To verify that sufficient extension blocks have been allocated use command interpreter (CI) command OMSHOW EXT ACTIVE 67 and read the following entry:

```
  EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ
EXTHI2
67  TC_AP_MEDIUM_EXT_BLOCKS
   16
   0    0     0    0
   0
```

Office Parameters  Reference Manual, volume 1 of 2  BCS36 and up  OFCENG-443
NO_OF_MEDIUM_EXT_BLKS

Any nonzero value in EXTOVFL indicates under provisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each extension block requires 50 words of memory.

Dump and restore rules
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number Of Medium Feature Data Blocks

Functional description of parameter NO_OF_MEDIUM_FTR_DATA_BLKS
This parameter specifies the number of medium feature data blocks required.

Provisioning rules
Set this parameter to a value of 500 unless otherwise specified by Northern Telecom.

The BCS33 feature Three Port Flexible Call Chaining involves the addition of three-port conference circuits. This parameter should be increased by three times the number of three-port conference circuits that are added. For example, the addition of 6 three-port conference circuits results in the need for 18 additional medium FDBs. The present value must be increased by 18.

This parameter is also associated with Residential Enhanced Services (RES) feature Automatic Call Back and Automatic Ring-Again (ACB/AR).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>50</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
One medium FDB is used by each Automatic Call Distribution (ACD) queued call. The maximum number of queued calls for each ACDGRP is specified in field MAXCQSIZ in table ACDGRP. A check is performed by software to determine if there are enough FDBs provisioned in the case that every ACD call queue is full. If the number of queued calls specified by the total of all ACD group exceeds 75% of the value of this parameter, the following warning message is displayed when a new ACDGRP is added.

WARNING - - POTENTIALLY NOT ENOUGH MEDIUM HDBS ALLOCATED

Note that if the MAXCQSIZ field of table ACDGRP is set unreasonably high, this warning message may be output unnecessarily.

The above warning is no longer generated in the following cases:
- if the size of this parameter is increased
- the value of the total MAXCQSIZ is decreased, by decreasing field MAXCQSIZ of one or more ACD groups in table ACDGRP, so that it no longer exceeds 75% of the value of this parameter
**NO_OF_MEDIUM_FTR_DATA_BLKS**

- One or more ACD groups are deleted, decreasing the value of the total MAXCQSIZ, so that it no longer exceeds 75% of the value of this parameter.

**Consequences**

If underprovisioning of these blocks occurs, the features that require one of these blocks are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

Underprovisioning of this parameter prevents calls from terminating on non-data link consoles in an MPH arrangement.

In an Integrated Business Network (IBN) switching unit, the following operational measurements (OM) report any failures due to an overflow on these software resources:

- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD

**Verification**

To verify that sufficient FDBs have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 82 and read the following entry:

```
EXTSEIZ2  EXTSEIZ  EXTHI  EXTHI2  EXTOVFL  MEDIUM_FEATURE_DATA
82       50        0      0      0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

OMs EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

**Memory requirements**

Each unit requires 21 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Private Virtual Network Extension Blocks

Functional description of parameter NO_OF_PVN_EXTBLK
This parameter appears in a switching unit that is equipped with the service switching point (SSP) and private virtual network (PVN) features.

SSP features can be provided in equal access end offices (EAEO) and access tandems (AT) with or without equal access (EA).

PVN uses the public and private switched network to provide private network features and capabilities. It provides connections for customers within a local access and transport area (LATA) and, through inter-LATA carriers (IC), connections to other LATAs.

PVN service is implemented by means of operating company-provided databases located at the service control points (SCP). A query is made on all PVN calls to one of these databases from a switch that is equipped with the SSP and PVN services. Queries and responses between the SSP or PVN and the SCP use the SS7 common channel signaling protocol. The response message from the SCP indicates whether the call must be completed, how it must be routed, and what information must be included in the Automatic Message Accounting (AMA) record for the call. The response can also instruct the SSP or PVN to obtain additional input from the caller such as an authorization code.

This parameter specifies the maximum number of PVN extension blocks required for the engineering interval.

A PVN_EXT_BLOCK is used to store the PVN call information and is attached to a PVN call during the translation stage.

Provisioning rules
The recommended formula is as follows.

\[(N \times \text{number of PVN calls} / s \times \text{nominal SCP response time}) + (Y \times \text{number of PVN calls} / s \times \text{average class of service override time}) + (Z \times \text{number of PVN calls} / s \times \text{average remote access call access time})\]

where \(N = \%\) of PVN calls that do not require an authorization code or remote access

\(Y = \%\) of PVN calls that require class of service override
(authorization code collection required)

\(Z = \%\) of PVN calls dialed as remote access calls (PVN-DISA)

The recommended time for the SCP response is 3 s.
NO_OF_PVN_EXTBLK

The average class of service override time (in seconds) includes the nominal response time and the average authorization code collection time including retry attempts.

The average remote access call access time (in seconds) includes the nominal response time and the length of time required to enter the Personal Identification Number (PIN) and called number.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>150</td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Dependencies

At extension time the value must change, if one or more of the formula values changes.

Consequences

If insufficient PVN extension blocks are assigned in an SSP, PVN calls failing to get a PVN extension block are given No Software Resource (NOSR) treatment.

Verification

To verify that sufficient recording units have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 57 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI   EXTSEIZ2
EXTHI2   57 PVN_EXT_BLK
150 0 0 0 0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Operational measurements (OM) EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each unit requires 86 words of memory.
Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Private Virtual Network Term Extension Blocks

Functional description of parameter NO_OF_PVN_TERM_EXTBLK
This parameter appears in a switching unit that is equipped with the Service Switching Point (SSP) and Private Virtual Network (PVN) features.

SSP features can be provided in equal access end offices (EAEO) and access tandems (AT) with or without equal access (EA).

PVN is a feature that uses the public and private switched network to provide private network features and capabilities. It provides connections for customers within a local access and transport area (LATA) and, through interLATA carriers (IC), connections to other LATAs.

PVN service is implemented by means of operating company provided databases located at the service control points (SCP). A query is made on all PVN calls to one of these databases from a switch that is equipped with the SSP and PVN features. Queries and responses between the SSP/PVN and the SCP use the SS7 common channel signaling protocol. The response message from the SCP indicates whether the call should be completed, how it should be routed, and what information should be included in the Automatic Message Accounting (AMA) record for the call. The response may also instruct the SSP/PVN to obtain additional input from the caller such as an authorization code.

This parameter specifies the maximum number of PVN term extension blocks required for the engineering interval.

A PVN_TERM_EXT_BLOCK is used to store the PVN call information and is attached to a PVN call during the translation stage.

Provisioning rules
The recommended formula is as follows:

\[ \text{(number of PVN calls requiring termination info / second)} \times \text{(average PVN call holding time in seconds)} \]

Set the value to 0 if the feature is not required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>150</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

OFCENG-450 297-1001-455 Standard 22.02 March 1994
Dependencies
At extension time the value must change, if one or more items in the formula changes value.

Consequences
If insufficient PVN_TERM_EXT_BLKs are assigned in an SSP, PVN calls required to send termination information to the SCP cannot send termination information.

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 68 and read the following entry:

```
EXTSEIZ  EXTSEIZ2
EXTSEIZ2
68  PVN_TERM_EXT_BLK
    150
    0 0 0 0
```

Any nonzero value in EXTOVFL indicates underprovisioning.
Measurements EXTH1 and EXTH12 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each unit requires 39 words of memory.

Dump and restore rules
This parameter was introduced in BCS26.
Copy the existing value of this parameter when doing a dump and restore.
NO_OF_SC_EXT_BLKS

Parameter name
Number of Speed Call Extension Blocks

Functional description of parameter NO_OF_SC_EXT_BLKS
This parameter is required for all switching units that have the Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES) speed calling feature.

One extension block is required for each active speed call (SC) that stores 12 or more digits.

Provisioning rules
The recommended formula for this parameter is 1% of the number of MDC, RES, and KSET lines with speed calling.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
Recalculate the value of this parameter if the number of MDC, RES or KSET lines with the speed calling changes.

Changing the value of this parameter affects the value of parameter NUMPERMEXT in table OFCENG.

Consequences
Not applicable

Verification
To verify that sufficient extension blocks have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 12 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
12  CUSTOM_CALLING_DATA
10  0  0  0  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.
Operational measurements EXTH1 and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

**Memory requirements**

12 words of memory are required for each extension block.

**Dump and restore rules**

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Number of Small Extension Blocks

Functional description of parameter NO_OF_SMALL_EXT_BLKS

This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) Network Ring Again (NRAG) feature or the Network Message Waiting Indicator (NMWI) feature or the Network Automatic Call Distribution (NACD) feature.

NRAG extends the scope of the nodal Ring Again feature to include the ability for a user to RAG on a station served by a different switching unit in the network. In order for a user to RAG on a station served by a different switching unit, the original call to the busy user must be set up over an ISDN user part (ISUP) trunk.

NMWI enables a message service on one node to activate and deactivate the message waiting indicator of a subscriber located on a different node, provided the two nodes support transaction capability application part (TCAP) communication between them, and have ISUP and primary rate access (PRA) or both connections between them in order to provide the message service with the subscriber’s directory number (DN) and, optionally, the subscriber’s name.

NACD uses small extension blocks for the load status indicator (LSI) update process and time delay overflow calls. The LSI update process allows each NACD group on the switch to periodically send a measure of its capacity to accept calls to each of its remote counterparts, as part of the NACD load balancing algorithm. This allows each group to know every other group’s ability to accept ACD calls. LSI values are sent using signaling system #7 (SS7) or primary rate interface (PRI) TCAP messages. Each time an LSI value is sent, a small extension block is used.

The NACD time delay overflow feature allows ACD calls queued on an NACD group for an extended period of time to be rerouted to the group most able to handle the call (that with the highest LSI value). When the timer expires, a TCAP message is sent to the remote group requesting its status (does the remote group have a free agent?). The remote group responds with another TCAP message. If the remote group does not have a free agent, the call is taken by the first available group.

Time delay overflow uses small extension blocks if the protocol errors occur in time delay overflow call scenarios.

Provisioning rules

If the switch has the NRAG feature only, leave the value of this parameter at the default of 16.
If the switch is equipped with NMWI, add the value of OFCENG office parameter NO_OF_XLARGE_EXT_BLKS divided by 10.

Datafill one additional extension block for each NACD group on the switch that is networked to a remote switch. This number can be determined by counting the number of tuples using REM selectors in table NACDGRP.

Datafill additional extension blocks equal to the number derived from 5% of the tuples in field MAXCQSIZ in table ACDGRP that have option TMDELOFL assigned and are also NACD groups.

For a switching unit without NRAG, NMWI, or NACD, set the parameter value to 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>16</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

Changing the value of this parameter affects the value of parameter NUMPERMEXT in table OFCENG.

Consequences

If the value of this parameter is underprovisioned, NRAG, NMWI, and NACD features do not function properly.

If the value of this parameter is overprovisioned, data store is wasted.

Verification

To verify that sufficient extension blocks have been allocated use CI command OMSHOW EXT ACTIVE and read the following entry:

```
EXTSEIZ   EXTVOFL    EXTHI    EXTSEIZ2
EXTHI2
60 TC_AP_SMALL_EXT_BLKS
  16
  0     0     0    0
  0
```

Any nonzero value in EXTVOFL indicates underprovisioning.

Operational measurements EXTHI and EXTHI2 record the maximum number of extension blocks blocks in simultaneous use during the current transfer period.
NO_OF_SMALL_EXT_BLKS

Memory requirements
Each extension block requires 10 words of memory.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number Of Small Feature Data Blocks

Functional description of parameter NO_OF_SMALL_FTR_DATA_BLKS
Software release BCS29 introduced three sizes of feature data blocks (FDB) to achieve data store efficiencies. This parameter specifies the number of small FDBs required.

Provisioning rules
The recommended value for a switching unit in the United States with BCS34 or higher software is 900.

Other offices should set this parameter to a fixed value of 300 unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>50</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
Not applicable

Consequences
If underprovisioning of these blocks occurs, features that require one of these blocks are routed to No Software Resource (NOSR) treatment in the appropriate treatment table.

In an Integrated Business Network (IBN) switching unit the following operational measurements report any failures due to an overflow on these software resources:
- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD
To verify that sufficient small FDBs have been allocated, use the command interpreter (CI) command OMSHOW EXT ACTIVE 81 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>SMALL_FEATURE_DATA</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each unit requires 13 words of memory.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 new recommended value for U.S. market added
Parameter name
Number of Variable Call Detail Recording Recording Units

Functional description of parameter NO_OF_VCDR_REC_UNITS
This parameter specifies the number of recording units that are allocated for variable call detail recording (VCDR) billing.

Provisioning rules
Allow sufficient recording units to accommodate the maximum number of expected simultaneous Integrated Business Network (IBN) calls requiring VCDR billing records. Each leg of the call can require an additional recording unit (that is, three-way calls).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
Not applicable

Consequences
Underprovisioning of this office parameter results in the blocking of calls that are unable to obtain an extension block billing information record.

Verification
To verify that sufficient recording units have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 102 and read the following entry:

```
KEY (EXT_FORMAT_CODE)
INFO (EXTINFO)
  EXTSEIZ   EXTOVFL   EXTHI   EXTSEIZ2
  EXTHI2
102 VCDR_RECORDING_UNIT
  100
    0 0 0 0
    0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
NO_OF_VCDR_REC_UNITS

Memory requirements
Each unit requires 69 words of memory.

Dump and restore rules
This parameter was introduced in BCS32.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Number of Extra Large Extension Blocks

Functional description of parameter NO_OF_XLARGE_EXT_BLKS

This parameter is required in a switching unit with North American translations and the Integrated Business Network (IBN) Network Ring Again (NRAG) feature, the Network Message Waiting Indicator (NMWI) feature or the Residential Enhanced Services Feature Automatic Call Back and Automatic Ring-Again (ACB/AR).

NRAG extends the scope of the nodal ring again feature to include the ability for a user to use the RAG feature on a station served by a different switching unit in the network.

In order for a user to use the RAG feature on a station served by a different switching unit, the original call to the busy user must be set up over an ISDN user part (ISUP) trunk.

The NMWI feature affects provisioning of this parameter.

NMWI enables a message service on one node to activate and deactivate the message waiting indicator of a subscriber located on a different node, provided the two nodes support transaction capability application part (TCAP) communication between them, and have ISUP or primary rate access (PRA) connections between them in order to provide the message service with the subscriber’s directory number (DN) and optionally, the subscriber’s name.

A simplified message desk interface (SMDI) provides a central answering service by integrating Call Forwarding (CFW), Uniform Call Distribution (UCD), and Message Waiting (MWT). An SMDI is made up of a group of UCD agents that receive information on incoming calls through a dedicated datalink interface. The incoming information includes the calling party number, the forwarding from station number, and the type of call forwarding involved.

If the SMDI uses the text messaging system (TMS), an SMDI agent takes the message from the calling party. If the SMDI uses the voice messaging system (VMS), the calling party can record a message through dedicated voice ports. Incoming calls are answered automatically by the VMS. Both systems use the datalink connection to activate and deactivate the SMDI user’s MWT indicator.

An SMDI can support up to 64 datalinks for transferring information and each datalink is able to support up to 63 message desks.
Provisioning rules

The value of this office parameter includes the number of extra large extension blocks used by NMWI. One block is used for each NMWI activation or deactivation and is held for the duration determined by office parameter NMS_ACKNOWLEDGEMENT_TIMEOUT in table OFCENG.

Calculate the parameter value as follows:

\[
\text{Parameter Value} = \left( \frac{\text{# of requests/s}}{\text{NMS_ACKNOWLEDGEMENT_TIMEOUT}} \right) + (16, \text{if the switch has the NRAG feature}) + (16, \text{if the switch has the ACB/AR feature}) + (0.02 \times \text{# of RES lines - up to 100})
\]

Where:

- \( \text{# of requests/second} \) = sum of \( \text{# of requests/second for each SMDI in office} \)

For example, an office with 5 SMDIs (each of which can handle 4 requests per second) and NMS_ACKNOWLEDGEMENT_TIMEOUT set to the default value (3) requires an additional \((5 \times 4) \times 3 = 60\) extra large extension blocks.

The number of requests per second that an SMDI can handle depends on either the number of agents available (if the SMDI uses TMS) or the number of voice ports available (if the SMDI uses VMS).

For example, take an office with 2 SMDIs, one using TMS with 10 agents, each of which can handle 1 request every 5 s, and another using VMS with 20 voice ports, each of which can handle a request every 4 s. The following calculation indicates how many requests per second this office can handle:

\[
(10 \times 1 \text{ request/5 s}) + (20 \times 1 \text{ request/4 s})
\]

In this case the 7 requests per second can be handled.

For a switching unit without the network RAG or network MWI features, set the value of this parameter to 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>16</td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Dependencies

Changing the value of this parameter affects the value of parameter NUMPERMEXT in table OFCENG.
**Consequences**

If the value of this parameter is underprovisioned, NMWI and NRAG do not function properly.

If the value of this parameter is overprovisioned, data store is wasted.

**Verification**

To verify that sufficient extension blocks have been allocated use CI command OMSHOW EXT ACTIVE 63 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTHI2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>TC_AP_XLARGE_EXT_BLKS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

**Memory requirements**

Each extension block requires 200 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
NO_RING_ON_TIP_FOR_LM

Parameter name
No Ring On Tip For Line Modules

Functional description of parameter NO_RING_ON_TIP_FOR_LM
This parameter specifies whether distinctive ringing current is forced to the ring side for line modules (LM).

Provisioning rules
Set this parameter to Y to apply all of the distinctive ringing current to the ring side.

Set this parameter to N (no) to apply some of the distinctive ringing current to the tip side.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Use the commands BSY and RTS on the affected LMs at the PM level of the MAP.

Dependencies
Not applicable.

Consequences
Not applicable.

Verification
Not applicable.

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Traffic Separation Measurement System Operational Measurement Registers

Functional description of parameter NO_TFAN_OM_REGISTERS
This parameter is required for switching units with the traffic separation measurement system (TFAN).

This parameter specifies the maximum number of operational measurement (OM) registers that can be assigned in the Traffic Separation Intersection table.

See parameter TFAN_ENHANCED_FEATURE in table OFCOPT for other parameters and tables that are associated with the TFAN feature.

Provisioning rules
For switching units without software package NTX085AA or NTX470AA, the value must be left at the default value.

Changing the value of this parameter is not allowed unless package NTX085AA or NTX470AA is present and parameter TFAN_ENHANCED_FEATURE in table OFCOPT is set to Y (yes).

NTX470AA is equivalent to NTX085AA, but it is used in switching units (international) with universal translations.

For switching unit in the United States with software package NTX085AA, the recommended value is 1000.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
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<tbody>
<tr>
<td>0 (zero)</td>
<td>2047</td>
<td>225</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Once this parameter is set and a cold restart is done, its value may not be decreased. This avoids traps that may occur in table control and call processing if TFAN registers that were deallocated are used.

Dependencies
Not applicable

Consequences
Not applicable
**NO_TFAN_OM_REGISTERS**

**Verification**
Query OM group TFCANA from the CI level of the MAP.

**Memory requirements**
For memory allocation see parameter TFAN_ENHANCED_FEATURE, in table OFCOPT.

**Dump and restore rules**
For switching units with software package NTX085AA or NTX470AA, copy the existing value of this parameter when doing a dump and restore.

For switching units without software package NTX085AA or NTX470AA, leave the value at the default of 225.
Parameter name
Node

Functional description of parameter NODE
This parameter defines the node type for the link.

Provisioning rules
This parameter was introduced to the DMS-300 in BCS32. It should be set to a value of CP_CORE 0 for switches equipped with software feature AJ1271 or feature AJ1472.

The node consists of two parts; the node type and the node instance. The following values are valid for the node type:
• EIOC_MP (NT40 component of the EIOC)
• EIOC_FP (DVS component of the EIOC)
• CP_CORE, CM (call processing system)
• CFP (customer programmable component of the DVS)
• FOREIGN (node that lies outside the normal switch configuration)

The valid range for the node instance is 00 – 1F.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREIGN</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Any restart

Dependencies
Not applicable.

Consequences
Not applicable.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Functional description of parameter NOP DNA_DEFAULT_ACCESS
This parameter is required in a switching unit with Network Operations Protocol (NOP) remote operation (RO) Service.

This parameter provides additional control over access to the switching unit by way of applications using NOP. It is used to enable or disable access to the Pass-Thru MAP application from any calling X.25 data network address (DNA) that is not specifically enabled by the NOPCTRL enable command.

Provisioning rules
If the value of this parameter is set to ACCESS_ENABLED, access to the switch is subject to the controls provided by the NOP logon user identification (ID) and password and tables NOPADDR, NOPAPPLN, and NOPUSERS.

If the value of this parameter is set to ACCESS_DISABLED, access to the switch is also subject to the controls provided by the NOP logon user identification (ID) and password and tables NOPADDR, NOPAPPLN, and NOPUSERS. In addition, access to the switch is blocked unless permission has been granted to the calling X.25 DNA by use of the NOPCTRL enable command.

NOP logon attempts blocked by the action of this parameter cause ROAPPL ROFLOGA (failed login attempts) to be pegged.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS_ENABLED</td>
<td>ACCESS_ENABLED</td>
<td>ACCESS_ENABLED</td>
</tr>
</tbody>
</table>

This value represents the access screening that was present prior to the implementation of this parameter.

Activation
Immediate

Dependencies
The function of this parameter supplements controls implemented in table NOPADDR, NOPAPPLN, and NOPUSERS.

Consequences
Not applicable
Verification

If this parameter is set to ACCESS_ENABLED, verify that it is possible to establish a Pass-Thru MAP session for a calling DNA that has been properly datafilled in table NOPADDR and set to the PTAE_APPL or ALL values in table NOPAPPLN.

If this parameter is set to ACCESS_DISABLED, verify that it is no longer possible to establish a Pass-Thru MAP session for a calling DNA that has been properly datafilled in table NOPADDR and set to the PTAE_APPL or ALL values in table NOPAPPLN. Also verify that a session can be established once the calling DNA has been enabled using the NOPCTRL command.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS36

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter introduced
**NOP_USERID_SECURITY_ACCESS**

**Parameter name**

NOPUSERS Identification Security Access

**Functional description of parameter NOP_USERID_SECURITY_ACCESS**

This parameter allows the telco to restrict access to a DMS switch by user identification.

**Provisioning rules**

Set the value of this parameter to Y (yes) to restrict access if the remote user identification is not defined either in table NOPUSERS or table USERINF. This also restricts access to the application a userid can access. The authorized applications of the userid are defined in table NOPUSERS.

If NOP_USERID_SECURITY_ACCESS is set to N (no), no restriction exists for the user identification.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Set the value of this parameter to Y without defining a remote userid in table NOPUSERS. Attempt an RO call with one of the applications (PADN, PTAE, etc.). Switch access should not be possible. Set the parameter to N and access to the switch should be available.

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Network Operating System Quantity of Switched Virtual Circuits

Functional description of parameter NOS_QUANTITY_OF_SVCS
This parameter specifies how many switched virtual circuits (SVC) are required by the operating company. This directly affects how many processes are running on the system, since there are as many incoming and outgoing tasks as there are SVCs.

Provisioning rules
The quantity of SVCs required can be determined by examining the applications that need SVCs. They are as follows:

Data collection using NOS FT
6 SVCs are required (the number of FT data types + 1).

Centralized MAP
CMAP can have from 2 to 10 SVCs. The number of SVCs allocated for CMAP should be equal to the value of parameter MAX_CMAP_SESSIONS in table OFCENG.

Centralized Alarms
Centralized alarms require two SVCs

The range of this parameter is increased in BCS30 by the NOP outgoing call capability that allows applications using NOP (Network Operation Protocol) RO (Remote Operations) services on the DMS to initiate outgoing calls.

Nop Outgoing call capability is not an application that uses the RO service, but is an enhancement to the RO service. It does not directly use any SVSs.

This parameter impacts the automatic call distribution management information system (ACD MIS)

Both NT-40 and SuperNode support a maximum of 60 simultaneous RO sessions

The maximum number of ACD MIS sessions allowed on a switch is equal to parameter MAX_ACDMIS_SESSIONS or the value of this parameter, whichever is less.

There is no dependency between the two parameters. It is possible for MAX_ACDMIS_SESSIONS to be greater than NOS_QUANTITY_OF_SVCS even though the maximum number of ACD MIS sessions can never be greater than NOS_QUANTITY_OF_SVCS.
NOS_QUANTITY_OF_SVCS

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>5</td>
</tr>
</tbody>
</table>

**Activation**

Warm restart

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
NRS_AUD_DELAY

Parameter name
Network Resource System Audit Delay

Functional description of parameter NRS_AUD_DELAY
This parameter specifies the delay, in minutes, between successive network resource system (NRS) audit cycles for the Datapath modem pooling feature.

Provisioning rules
Specify the delay between network resource system (NRS) audit cycles.
A value of 0 (zero) disables the audits.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
A new value takes affect at the beginning of an audit cycle.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS15.
Copy the existing value of this parameter when doing a dump and restore.
NSS_RDD_REPLDIGS_LENGTH_A

Parameter name
Network Services Software REPLDigs Template Length A

Functional description of parameter NSS_RDD_REPLDIGS_LENGTH_A
To minimalize the real time requirement for sending a transaction capabilities application part (TCAP) response message from the network services software (NSS) database control point (DBCP) to the NSS service switching point (SSP), templates of the REPLDigs response message are built when the REPLDigs subsystem is initially brought into service. These templates are of a fixed length. However, the length of a return result response message can be from 1 to 18 digits long as specified in the REPLDigs field in table REPLDATA at the DBCP. Because it is not practical to create templates for each possible length, the office parameters NSS_RDD_REPLDIGS_LENGTH_A and NSS_RDD_REPLDIGS_LENGTH_B allow the operating company to choose the two most popular return result message length templates. If these templates are not created ahead of time, this real-time intensive task must be performed by the DBCP when the query is processed.

When a query is successfully processed at the DBCP and the number of digits to be returned is equal to the value specified by NSS_RDD_REPLDIGS_LENGTH_A or NSS_RDD_REPLDIGS_LENGTH_B, a template is used to send the response. Otherwise, the response TCAP message is assembled without a template, consuming a considerable amount of real-time.

Provisioning rules
This office parameter must be provisioned based on the value datafilled in table REPLDATA and the network dialing plan. For example, if the majority of the tuples in table REPLDATA have the REPLDigs field datafilled to specify four digits, NSS_RDD_REPLDIGS_LENGTH_A must be set to 4. The next most frequent value found must be datafilled in office parameter NSS_RDD_REPLDIGS_LENGTH_B.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>7</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the REPLDigs subsystem in the SCCPLOC level of MAPCI. This map level can be accessed by entering the following:

```
>mapci;mtc;ccs;ccs7;scscploc
```

Dependencies
Not applicable.

OFCENG-474 297-1001-455 Standard 22.02 March 1994
Consequences
Incorrectly provisioning this parameter results in the majority of TCAP messages being built without a template and consuming real-time.

Verification
Check the datafill in table REPLDATA to confirm that this office parm is set properly.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced with software release BCS33.

Copy the existing value of the parameter when doing a dump and restore.
NSS_RDD_REPLDIGS_LENGTH_B

Parameter name
Network Services Software REPLDIGS Template Length B

Functional description of parameter NSS_RDD_REPLDIGS_LENGTH_B
To minimize the real time requirement for sending a transaction capabilities application part (TCAP) response message from the network services software (NSS) database control point (DBCP) to the NSS service switching point (SSP), templates of the REPLDIGS response message are built when the REPLDIGS subsystem is initially brought into service. These templates are of a fixed length. However, the length of a return result response message can be from 1 to 18 digits long as specified in the REPLDIGS field in table REPLDATA at the DBCP. Because it is not practical to create templates for each possible length, the office parameters NSS_RDD_REPLDIGS_LENGTH_A and NSS_RDD_REPLDIGS_LENGTH_B allow the operating company to choose the two most popular return result message length templates. If these templates are not created ahead of time, this real-time intensive task must be performed by the DBCP when the query is processed.

When a query is successfully processed at the DBCP, and the number of digits to be returned is equal to the value specified by NSS_RSS_REPLDIGS_LENGTH_A or NSS_RSS_REPLDIGS_LENGTH_B, a template is used to send the response. Otherwise, the response TCAP message will be assembled without a template, consuming a considerable amount of real-time.

Provisioning rules
This office parameter must be provisioned based on the values datafilled in table REPLDATA and the network dialing plan. For example, if the majority of the tuples in table REPLDATA have the REPLDIGS field datafilled to specify four digits, NSS_RDD_REPLDIGS_LENGTH_A must be set to 4. The next most frequent value found must be datafilled in office parameter NSS_RDD_REPLDIGS_LENGTH_B.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the REPLDIGS subsystem in the SCCPLOC level of MAPCI. This map level can be accessed by entering the following:

>mapci;mtc;css;css7;sccploc

Dependencies
Not applicable.
NSS_RDD_REPLDIGS_LENGTH_B

Consequences
Incorrectly provisioning this parameter results in the majority of TCAP messages being built without a template and consuming considerable amounts of real-time.

Verification
Check the datafill in table REPLDATA to confirm that this office parameter is set properly.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced with software release BCS33.
Copy the existing value of this parameter when doing a dump and restore.
NTC_RNGBACK_TIME

Parameter name
Notification of Time and Charge Ringback Time

Functional description of parameter NTC_RNGBACK_TIME
This parameter is required in a DMS-100 switching unit in the Japanese market with Integrated Business Network (IBN) ISDN User Part (ISUP) trunks and the Notification of Time and Charge (NTC) feature. It specifies the amount of time, in seconds, that a subscriber is allowed to answer an NTC call back during the ring back stage of NTC before the call back is released or reattempted.

Provisioning rules
Specify the length of time that ringing is applied to a subscriber line during NTC call back before the call back is released or reattempted.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>99</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The number of NTC call back reattempts is determined by office parameter NTC_REALTEMPTS in table OFCVAR.

Consequences
Overprovisioning of this parameter value may result in increased time being reserved for the hardware resources that notify the originating subscriber of an NTC call back.

Underprovisioning of this parameter value may not provide adequate time for a subscriber to answer an NTC call back.

Verification
To verify the operation of this parameter, originate and complete an NTC feature activation call. Wait for the NTC callback. Verify that the ringback time is equal to the value of this parameter.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.
Parameter history

BCS36 parameter introduced
**NUM_CALLREC_STREAMS**

Parameter name

Number of Call Recording Streams

**Functional description of parameter NUM_CALLREC_STREAMS**

This parameter specifies the number of streams that can be data filled in table CRSFMT.

This parameter is used by the following call recording platforms:

- Central Automatic Message Accounting
- CNS Standard Base Package
- IBN – Station Message Detail Recording
- ISC – Call Detail Recording
- Local Automatic Message Accounting
- TOPS Call Processing

**Provisioning rules**

Specify the number of streams that can be datafilled in table CRSFMT.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

Copy the existing value of this parameter.

---

OFCENG-480  297-1001-455  Standard 22.02  March 1994
Parameter name
Number of Dynamically Controlled Routing Extension Blocks

Functional description of parameter NUM_DCR_EXT_BLKS
This parameter appears only in a toll switch that has the Dynamically Controlled Routing (DCR) feature.

This parameter is used to allocate a pool of extension blocks for the DCR feature. One DCR extension block is allocated for each DCR call that uses a route list with field RTESEL equal to T (T-route list) from the DIRRTE field of table DESTNODE when routing the call. The DCR extension block is required for the duration of the call unless the T-route list overflows, which results in the usage and the deallocation of the extension block.

Provisioning rules
To determine the value for this parameter use the following formula:

\[
(\text{estimate of the number of high-day busy hour calls that will be routed to T-route lists in the DIRRTE field of table DESTNODE}) \times (\text{the average call holding time}) / 100
\]

Note that the average call holding time default is 180 s.

Provision the number of extension blocks required to serve this usage from erlang B tables at grade of service B.001.

The default value of 0 (zero) should be used in a switching unit that uses only S (Standard) routes in the DIRRTE field of table DESTNODE for all of its DCR destinations.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32000</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
Not applicable

Consequences
If the value of this parameter is underprovisioned, the request for a DCR extension block can overflow. This causes No Software Resources (NOSR) treatment to be set for the call.
NUM_DCR_EXT_BLKS

Verification

To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 40 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>DCR_EXTENSION</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurement EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Guide, 297-1001-814 for a description of OM group EXT.

Memory requirements

Each unit requires 5 words of memory.

Dump and restore rules

This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Number of Dynamically Controlled Routing Network Processors With Access

**Functional description of parameter NUM_DCR_NP_ACCESS**
This parameter is required in a SuperNode switching unit with the Multiple Network Access (MNA) feature. It is used to limit the number of networks that can access a DMS switch.

When the value of this parameter is set to 1, the switch is able to support only a single dynamically controlled routing (DCR) network processor (NP). When the value of this parameter is greater than 1, the switch can be accessed by multiple NPs.

**Provisioning rules**
Specify the number of network accesses for the switch based on the DCR network configuration.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
The number of entries in table DCRNETID must not exceed the value of this parameter.

**Consequences**
Not applicable

**Verification**
Add a number of DCR network identifications in table DCRNETID equal to the value of this parameter and verify network access for each.

**Memory requirements**
Each network access requires 14600 bytes of memory.

**Dump and restore rules**
This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**
BCS36 parameter description added
**NUM_ENGR_NWM_TRKGRP_CTRLRS**

**Parameter name**

Number of Engineerable Network Management Trunk Group Controls

**Functional description of parameter NUM_ENGR_NWM_TRKGRP_CTRLRS**

This parameter is used by the Network Management System and defines the maximum number of trunk groups that can be controlled simultaneously by the trunk group controls.

**Provisioning rules**

The value of this parameter must be equal to the maximum number of trunk groups with flexible reroute (FRR) controls that can be controlled simultaneously.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Cold restart

**Dependencies**

The value of this parameter must increase if the number of trunk groups with flexible reroute (FRR) controls that can be controlled simultaneously increases or the FRR feature is added.

See parameter NUM_OF_RTEB_EXTBLKS in table OFCENG for a description of the FRR feature.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

The number of words required by this parameter is determined by the following formula:

\[(\text{parameter value} \times 10) + 10\]

**Dump and restore rules**

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
NUM_IBN_IXLA_EXT_BLOCKS

Parameter name
Number of Integrated Business Network International Translation Extension Blocks

Functional description of parameter NUM_IBN_IXLA_EXT_BLOCKS
This parameter is required for a Meridian Digital Centrex (MDC) switch with International Direct Distance Dialing (IDDD) through the Automatic Route Selection (ARS) feature. It specifies the maximum number of MDC world system (international) translation extension blocks required for the engineering interval.

The value of this parameter dictates the maximum number of calls that can simultaneously route to universal translations from MDC.

Provisioning rules
Set the value of this parameter according to the following formula:

\[ \text{maximum number of outgoing MDC (trunk group type IBNTO) trunks that carry IDDD through ARS traffic that can be reached when translating through table PXHEAD)} + \text{(the number of two-way FST R2 trunks)} \]

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>32000 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

To activate a change to the value of this parameter, BSY (busy) the individual Peripheral Modules (PM), reload the static data and then RTS (return to service) the PM.

Dependencies
Not applicable

Consequences
If insufficient blocks are provided, calls receive no software resources (NOSR) treatment after the number of simultaneous MDC calls that are to route through table PXHEAD reaches the maximum value of this parameter.
NUM_IBN_IXL_EXT_BLOCKS

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 15 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
EXTH12
15  IBN_INTRNXL_EXT_BLOCK
   0       0       0       0
0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTH12 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each unit requires 26.5 words of memory.

Dump and restore rules
This parameter is new with software release BCS28.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36  provisioning rules changed to allow for FST two-way R2 trunks
**Parameter name**

Number of International Centralized Automatic Message Accounting Recording Units

**Functional description of parameter NUM_ICAMA_RECORDING_UNITS**

This parameter is required for a toll switch (international) with universal translations and the International Centralized Automatic Message Accounting (ICAMA) and/or the International Administration Accounting (IAA) feature.

This parameter specifies the maximum number of ICAMA recording units required before the next extension.

**Provisioning rules**

Set the value of this parameter equal to the number of simultaneous toll calls originating on trunks with trunk group type ANI that have the required call class and/or the number of simultaneous toll calls originating on trunks with trunk group type MTR that have field IAA equal to Y in table TRKGRP.

See table TRKGRP for trunk group types ANI and MTR.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**

Increase – immediate  
Decrease – cold restart

**Dependencies**

See parameters ICAMA_REQUESTED and IAA_REQUESTED in table OFCVAR for other parameters and tables associated with this feature.

To activate the above features, parameters ICAMA_REQUESTED and/or IAA_REQUESTED in table OFCVAR must be set to Y.

**Consequences**

Underprovisioning of this parameter results in some toll calls being unable to obtain an ICAMA recording unit.

Overprovisioning results in wasted data store.
NUM_ICAMA_RECORDING_UNITS

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 48 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ1</th>
<th>EXTSEIZ2</th>
<th>EXTOVFL</th>
<th>EXTHI1</th>
<th>EXTHI2</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>ICAMA_RECORDING_UNIT</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Measurements EXTHI1 and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

Any nonzero value in EXTOVFL indicates underprovisioning.

Memory requirements

Each unit requires 22 words of memory.

Dump and restore rules

This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of International Call Transfer Extension Blocks

Functional description of parameter NUM_ICT_EXT_BLKS
This parameter is required for an international switching unit with universal translations and the International Call Transfer (ICT) feature. It specifies the number of call transfer extension blocks.

One block is required for a call that has been transferred one or more times. This block remains linked to the call condense block (CCB) for the duration of the transferred call.

Provisioning rules
Enter the maximum number of simultaneous active call transfers or call transfer attempts.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>20</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 65 and read the following entry:

```
EXTSEIZ2 EXTOVFL EXTHI2
EXTHI2
65 ICT_INFO_BLOCK
20
0 0 0
0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements
Each extension block requires 16 words of memory.
NUM_ICT_EXT_BLKS

Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of International Recording Units

Functional description of parameter NUM_INTL_RECORDING_UNITS
This parameter is required in a local switching unit (international) with universal translations and the International Call Recording (ICR) feature. It specifies the number of recording units that are allocated for the ICR feature.

For a brief description of ICR, see parameter INTL_ICR_REQUESTED in table OFCVAR.

A log message is generated each time a toll call is made and no extension blocks are available. The call is allowed to continue and no alarms are raised.

Provisioning rules
Set the value of this parameter equal to the maximum number of toll calls (originated from lines) that can be in progress at one time.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
At extension time, the value of this parameter must increase if the number of call types defined in the provisioning rules increases.

Consequences
Not applicable

Verification
To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 38 and read the following entry:

```
EXTSEI2 EXTVOFL EXTTHI EXTSEI22
EXTHI2
37 INTL_RECORD_UNIT
 0
 0 0 0 0
 0
```

Any nonzero value in EXTOVFL indicates underprovisioning.
NUM_INTL_RECORDING_UNITS

Measurements EXTH1 and EXTH12 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

Memory requirements
Each unit requires 28 words of memory.

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of ISDN User Part Extension Blocks

Functional description of parameter NUM_ISUP_EXT_BLKS
This parameter is only required by DMS-250 switches. In all other cases, it is replaced by the office parameters NO_OF_HIS_CONTROL_BLKS and NO_OF_HIS_DATA_BLKS in table OFCENG.

Provisioning rules
Set the value to 0 (zero) for all non-DMS-250 switches.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
For all non-DMS-250 switches, verify that the value of this parameter is 0.

Memory requirements
Each unit requires 31 words of memory.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**NUM_MTR_EXT_BLOCKS**

**Parameter name**
Number of Metering Extension Blocks

**Functional description of parameter NUM_MTR_EXT_BLOCKS**
This parameter is required in a local switching unit (international) with the universal translation scheme. It specifies the number of central control (CC) metering extension blocks allocated for CC metering.

The number of extension blocks must equal the number of CC metered calls that can be in progress at any one time.

CC metered calls that require extension blocks consist of the following two types:
- custom calling featured calls requiring multiple legs
- long duration calls

The value of this parameter depends upon the size of the switch and the volume of calls the switching unit is expected to handle.

This parameter name is changed from NUM_CCMTR_EXT_BLOCKS to NUM_MTR_EXT_BLOCKS in BCS32.

**Provisioning rules**
The number of blocks is determined by the following calculation:

\[
(\text{Value of parameter } \text{NO_OF_FTR_CONTROL_BLKS} \text{ in OFCENG}) + (10\% \text{ of the value of parameter } \text{NCCBS} \text{ in table OFCENG})
\]

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**
Increase – immediate
Decrease – cold restart

**Dependencies**
See parameter CCMTR_FAILURE_FREE_CALL in table OFCENG for the routing of new calls when the software resources supplied by this parameter are not available.

**Consequences**
If insufficient extension blocks are specified, an existing call continues relying only on XMS–based peripheral modules (XPM) metering.
Verification

To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 45 and read the following entry:

```
EXTSEI2  EXTOVFL  EXTHI  EXTSEI22
EXTHI2
45  TNL_CCMTR_EXT_BLOCK
25
  0  0  0  0
  0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual*, 297–1001–814 for a description of OM group EXT.

Memory requirements

Each unit requires 13 words of memory.

Dump and restore rules

This parameter was introduced in BCS22.

Copy the existing value of this parameter when doing a dump and restore.
NUM_OF_CCIS_INWATS_BLOCKS

Parameter name
Number of Common Channel Inter-office Signaling Inward Wide Area Telephone Service Extension Blocks

Functional description of parameter NUM_OF_CCIS_INWATS_BLOCKS
This parameter is required in common channel inter-office signaling (CCIS) inward wide area telephone service (INWATS) originating screening (OS) switching units. It specifies the number of CCIS INWATS extension blocks required.

Provisioning rules
The recommended value is 3 blocks for each 1000 simultaneous CCIS INWATS calls on all Automatic Number Identification (ANI) trunks.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
At extension time the value of this parameter must be increased if the number of simultaneous CCIS calls on ANI trunks increases.

Consequences
Not applicable

Verification
To verify that sufficient extension blocks units have been allocated, use CI command OMSHOW EXT ACTIVE 4 and read the following entry:

```
EXTSEIZ EXTSEIZ 0
EXTSEIZ 4 CCIS_INWATS_BLOCK
 30
0 0 0
0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

Any nonzero value in EXTOVFL indicates underprovisioning.
Memory requirements
Each block requires 17 words of memory.

Dump and restore rules
This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
NUM_OF_INWATS_EXT_BLOCKS

Parameter name
Number of Inward Wide Area Telephone Service Extension Blocks

Functional description of parameter NUM_OF_INWATS_EXT_BLOCKS
This parameter specifies the number of inward wide area telephone service (INWATS) extension blocks allocated in a combined originating serving office (OSO) and terminating serving office (TSO).

INWATS extension blocks are used only in a combined OSO/TSO call. If the office is an OSO only or a TSO only, the office parameter should be set to 0 (zero).

Provisioning rules
Specify the maximum number of simultaneous combined OSO/TSO calls in the office. If the office does not function as a combined OSO/TSO, then the parameter value must be 0.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>300</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
The default value is 300. This was chosen based upon the default value for the NUM_OF_CCIS_INWATS_BLOCKS, which performs a similar function for CCS INWATS OSO offices.

Consequences
Overprovisioning of this office parameter wastes data store.

Underprovisioning results in combined OSO/TSO calls being blocked.

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 79 and read the following entry:

```
  EXTSEI2  EXTOVFL  EXTHI  EXTSEI22
  EXTHI2
79  INWATS  OSO/TSO  EXT  BLK
30
  0   0   0   0
0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

OFCENG-498 297-1001-455 Standard 22.02 March 1994
NUM_OF_INWATS_EXT_BLOCKS

Measurements EXTH1 and EXTH12 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurement Reference Manual*, 297-1001-814 for a description of OM group EXT.

**Memory requirements**

Each extension block requires 4 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
**NUM_OF_NSC_EXT_BLK**

**Parameter name**
Number of Number Services Call Extension Blocks

**Functional description of parameter NUM_OF_NSC_EXT_BLK**
This parameter appears only in a local or toll switching unit that has the service switching point (SSP) software package. It specifies the quantity of number services call (NSC) extension blocks that are required for E800 or 800+ type calls.

**Provisioning rules**
This parameter is provisioned according to the following formula:

\[
(Y \times \text{(# of 800 calls/s)} \times \text{avg 800 call delay before answer)}) + (Z \times \text{(# of 800 calls/s)} \times \text{avg 800 call holding time})
\]

where:

- \(Y\) = % of 800 calls for which the SCP does not request a termination information message
- \(Z\) = % of 800 calls where the SCP requests a termination information message

For example, 800+ and E008 services do not use termination information messages. The number of extension blocks required for these services is determined as follows:

Assume:
- Twenty 800 calls/s
- \(Y = 100\%\)
- \(Z = 0\%\) Average 800 call delay before answer = 30 s

The calculation would be \((1 \times 20 \times 30) = 600\)

In the case above, the number of NSC extension blocks is mainly dependent on the delay time between the sending of the SCP query message and the receipt of the answer message from the called party.

If the SCP does not request a termination information message, the NSC_EXT Block is attached to the 800 call for the duration of the SCP database query.
The following is an example of the provisioning of this parameter for E800 service. E800 service can use termination messages.

Assume:
- Twenty 800 calls/sec
- \( X = 0.8 \) \( Y = 0.2 \)
- Average 800 call delay before answer = 30 s
- Average 800 call holding time = 180 s

Calculation: 
\[
(0.8 \times 20 \times 30) + (0.2 \times 20 \times 180) = 480 + 720 = 1200
\]

In this case, the number of NSC extension blocks varies as the percentage of calls requiring a termination information message changes. No additional padding is required if the average call duration is known.

If the SCP requests a termination information message, the NSC_EXT block is attached to the 800 call for the duration of the call.

Note that the examples given are not meant to define any limits. All figures must be calculated using engineering information obtained from the operating company.

### Range Information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>150</td>
</tr>
</tbody>
</table>

### Activation

Increase - immediate  
Decrease - cold restart

### Dependencies

Not applicable

### Consequences

If insufficient blocks are provided, calls failing to obtain a block are routed to No Software Resources (NOSR) treatment.

### Verification

To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 35 and read the following entry.

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
35  NSC_EXT_BLK  150  0  0  0  0
```
NUM_OF_NSC_EXT_BLK

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual*, 297-1001-814 for a description of OM group EXT.

**Memory requirements**

Each unit requires 46 words of memory.

**Dump and restore rules**

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore from software release BCS25 to software release BCS25 and higher.
NUM_OF_NT_RECORDING_UNITS

Parameter name
Number of NT Recording Units

Functional description of parameter NUM_OF_NT_RECORDING_UNITS
This parameter is required for a switching unit that has the Automatic Message Accounting (AMA) option Centralized Automatic Message Accounting (CAMA) or Local AMA (LAMA) and field KEY in table CRSFMT set to NTFMT.

It specifies the number of NT recording units required to collect the call data while all the AMA buffers are full.

These units are required for switching units with LAMA or local/toll switching units with CAMA that have the Call Forwarding feature.

These units are required for switching units that have the Number Services Call (NSC) feature.

With the CFW or NSC, the charge unit is held for the call duration.

Provisioning rules
The recommended formula for a switching unit is

Units = 50 + (0.1 of the number of POTS lines with CFW including all remote lines)
+ (0.1 of the number of IBN lines with CFW including all remote lines)
+ (0.1 of the number of lines with Remote CFW)
+ (number of INWATS lines X 36) / 100) X 4
+ (0.2 of the number of IBN lines)
+ (50 X number of Super CAMA trunk group members, SC trunk group type / 1000)
+ (value of parameter NUM_NSC_EXT_BLK in table OFCENG)

Always round up to the next increment of 50.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32767 (reserved)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>14500 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart
NUM_OF_NT_RECORDING_UNITS

Dependencies
At extension time the value of this parameter must increase, if one or more of the items in the provisioning rules increases.

Consequences
Insufficient recording units cause a line or trunk that requires a recording unit to be routed according to the AMA_FAILURE_FREE_CALL parameter in table OFCENG.

Verification
To verify that sufficient recording units have been allocated, use CI command OM SHOW EXT ACTIVE 5 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
EXTHI2
5  NT_RECORDING_UNITS
100
0    0    0    0
0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Any nonzero value in EXTOVFL indicates underprovisioning.

See the Operational Measurements Reference Manual 297-1001-814 for a description of OM group EXT.

Memory requirements
35 words of memory are required for each recording unit.

Dump and restore rules
This parameter was introduced in BCS25

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Flexible Reroute Extension Blocks

Functional description of parameter NUM_OF_RTEB_EXTBLKS
This parameter is required for a local, toll, combined local/toll or traffic operator position system (TOPS) switching unit. It specifies the number of extension blocks that the flexible reroute (FRR) feature requires.

The FRR control is an expansive network management trunk group control that makes it possible to reroute calls from an in-chain route to a VIA when the in-chain route is overloaded or has failed.

An FRR control involves two trunk groups. The first trunk group, the in-chain route, is the one to which the FRR control is applied. This trunk group is also referred to as the controlled trunk group. Calls that cannot be carried over this trunk group are offered to the second trunk group, the VIA route. Calls offered to the VIA route are referred to as rerouted calls.

An extension block is used as part of the process to reroute a call. The extension block remains attached to a rerouted call while it moves through the routing phase of call processing.

In addition to activating FRR controls manually from the MAP they can also be activated through table PREPLANS.

The FRR Control feature requires the Basic Network Management software package to function properly.

Provisioning rules
Two extension blocks are required for each rerouted call. These extension blocks remain attached to the call until it is taken down.

The number of extension blocks required is determined by the following calculation:

\[ 2 \times (\text{the total number of rerouted calls in the setup state}) + (\text{those calls in the talking state}) \]

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5000</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart
NUM_OF_RTEB_EXTBLKS

Dependencies
See parameter NUM_ENGR_NWM_TRKGRP_CTRLS in table OFCENG for the maximum number of trunk groups with the FRR feature that can be controlled simultaneously.

Consequences
If an extension block is not available for a call that is about to be rerouted, the call continues to advance through its in-chain route list instead of being rerouted to its VIA route list.

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 52 and read the following entry:

```
EXTSEIZ EXTOVFL EXTHI EXTSEIZ2
EXTH12
52 RTEB_EXTENSION
0
0 0 0 0
0
```

Measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

Any nonzero value in EXTOVFL indicates underprovisioning.

See OM groups NWMFRRCT and NWMFRRTG for additional operational measurements associated with this parameter.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM groups EXT, NWMFRRCT and NWMFRRTG.

Memory requirements
Each unit requires 41 of words of memory.

Dump and restore rules
This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Number of Routing Characteristic Extension Blocks

Functional description of parameter NUM_RC_EXT_BLKS

This parameter specifies the number of routing characteristic (RC) extension blocks required. It is required in all switching units where calls are translated and routed based on several routing characteristics in conjunction with the called digits.

Advanced intelligent network (AIN) calls receiving analyze_route or forward_call responses use routing characteristics to translate and route the response. The operating company must ensure that sufficient extension blocks are provisioned for this additional use.

Provisioning rules

The recommended value for this parameter is determined by the following calculation:

\[ A = ccb \times tr \]

where

- \( A \) is the number of RC extension blocks
- \( ccb \) is the number of call condense blocks (CCB)
- \( tr \) is the percentage of traffic using routing characteristics

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32766</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

Not applicable

Consequences

If this parameter is underprovisioned, calls using routing characteristics are given treatment.
Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 91 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>91</td>
<td>NUM_RC_EXT_BLKS</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each unit requires 5 words of memory.

Dump and restore rules

This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  AIN impact added
**NUM_SME_CONTROL_BLOCKS**

**Parameter name**
Number of Signaling Management Environment Control Blocks

**Functional description of parameter NUM_SME_CONTROL_BLOCKS**
This parameter is required for an integrated services digital network (ISDN) switching unit with feature Signaling Management Environment (SME).

This parameter specifies the maximum number of SME control blocks required for the engineering interval.

The SME control block is used by the Signaling Management architecture (SMA) agents whose calls are supported by SME.

A SME100 log is originated during any restart if an attempt to allocate the data store required for these control blocks fails.

A SME102 log is originated if the following conditions are met:
- The number of control blocks is greater than 0 (zero) and less than the current value of this parameter prior to a restart.
- An attempt to allocate the data store required for the new and old value for the number of control blocks fails during a restart.

A SME104 log is originated if the following conditions are met:
- The number of control blocks is greater than 0 (zero) and less than the current value of this parameter prior to a restart.
- An attempt to allocate the data store required for the new value for the number of control blocks fails during a restart.
- An attempt to allocate the data store required for the old value for the number of control blocks is successful during a restart.

A SME106 log is originated if an attempt to get an unused control block has failed. The SME106 log indicates that the value of this parameter should be increased.

A SME108 log is originated if a call that has a control block attached to it is being cleaned up and the control block is being dumped.

A SME108 log is an error condition that should not occur. This LOG should be recorded and a Customer Service Report (CSR) should be generated.
NUM_SME_CONTROL_BLOCKS

Provisioning rules

SME control blocks are only required in offices that have ISDN functional basic rate access (BRA). To calculate the number of SME control blocks required, the following formula should be used:

\[ A = b \times c / d \]

where

- \( A \) is the NUM_SME_CONTROL_BLOCKS to be engineered
- \( b \) is the number of call processes in the office (value of parameter NUMCALLPROCESSES)
- \( c \) is the number of ISDN BRA terminals
- \( d \) is the total number of lines in the office

If the NUM_SME_CONTROL_BLOCKS to be engineered is greater than 0 (zero), but less than 50, the number of SME control blocks should be set to 50.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>32767 (theoretical)</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>110 (recommended)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Warm restart

Dependencies

Not applicable

Consequences

Overprovisioning the number of SME control blocks does not have any effect on the SMA or on any calls. It will, however, be a waste of data store.

Underprovisioning the number of SME Control Blocks causes some calls destined for the SMA to fail.

Verification

If a SME106 log is not generated after the restart, the SME control blocks have been successfully allocated.

Memory requirements

Each unit requires 12 words of memory.
NUM_SME_CONTROL_BLOCKS

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36  corrected formula for calculating number of SME control blocks
**NUM_SME_DATA_BLOCKS**

Parameter name
Number of Signaling Management Environment Data Blocks

**Functional description of parameter NUM_SME_DATA_BLOCKS**
This parameter is required for an Integrated Service Digital Network (ISDN) switching unit with the Signaling Management Environment (SME) feature. It specifies the maximum number of SME data blocks required for the engineering interval.

The SME data block is used by the signaling management architecture (SMA) agents with calls supported by SME.

A SME101 log is originated during any restart if an attempt to allocate the data store required for these control blocks fails.

A SME103 log is originated if the following conditions are met:
- the number of control blocks is greater than 0 and smaller than the current value of this parameter prior to a restart
- the attempt to allocate the data store required for the new and old value for the number of control blocks fails during a restart

A SME105 log is originated if the following conditions are met:
- the number of control blocks is greater than 0, and smaller than the current value of this parameter prior to a restart
- the attempt to allocate the data store required for the new value for the number of control blocks fails during a restart
- the attempt to allocate the data store required for the old value for the number of control blocks is successful during a restart.

A SME107 log is originated if an attempt to get an unused control block has failed. It indicates that the value of this parameter must be increased.

A SME109 log is originated if a call that has a control block attached to it is being cleaned up and the control block is being dumped. A SME109 log is an error condition that should not occur. This log should be recorded and a Customer Service Report (CSR) should be generated.

**Provisioning rules**
The number of SME data blocks required in an office can be determined by the following formula:

\[
\text{NUM_SME_DATA_BLOCKS} = \text{NUM_SME_CONTROL_BLOCKS} \times 2
\]

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (theoretical)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>220 (recommended)</td>
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</table>

OFCENG-512 297-1001-456 Standard 22.02 March 1994
<table>
<thead>
<tr>
<th><strong>Activation</strong></th>
<th>Warm restart</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependencies</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Consequences</strong></td>
<td>Overprovisioning the number of SME data blocks does not have any effect on the SMA or on any calls. It wastes data store. Underprovisioning the number of SME data blocks causes some calls destined for the SMA to fail.</td>
</tr>
<tr>
<td><strong>Verification</strong></td>
<td>If a SME107 log is not generated after the restart, the SME data blocks have been allocated.</td>
</tr>
<tr>
<td><strong>Memory requirements</strong></td>
<td>Each unit requires 36 words of data store.</td>
</tr>
<tr>
<td><strong>Dump and restore rules</strong></td>
<td>This parameter is new with software release BCS28. Copy the existing value of this parameter when doing a dump and restore.</td>
</tr>
</tbody>
</table>
NUMBER_OF_CDR_UNITS

Parameter name
Number of Call Detail Recording Units

Functional description of parameter NUMBER_OF_CDR_UNITS
This parameter is required by DMS-300 switches to specify the number of call detail recording (CDR) entries that can be accumulated for calls in progress.

Provisioning rules
This number should be 10% greater than the number of simultaneous calls.

Range information

<table>
<thead>
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<th>Minimum</th>
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<tr>
<td>0</td>
<td>131072</td>
<td>5000</td>
</tr>
</tbody>
</table>

Activation
Increase - immediate
Decrease - cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 30 and read the following entry.

```
EXTSEIZ           EXTOVFL    EXTHI2    EXTHI1
30  CDR300_RECORDINGUNIT  100
    0          0         0         0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operational Measurement Reference Manual, 297-1001-814 for a description of OM group EXT.

Memory requirements
Each recording unit requires 21 words of memory. For example, if this parameter is left at the default value, 105000 words of memory will be used (5000 x 21 words).
Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
**NUMBER_OF_DIGITS_PER_DN**

**Parameter name**
Number of Digits Per Directory Number

**Functional description of parameter NUMBER_OF_DIGITS_PER_DN**
This parameter is required for a local switching unit. It specifies the number of digits that are collected by the line module for a directory number before reporting.

If the number of digits dialed for a directory number is less than the value of this parameter, the calling party will be routed to Permanent Signal/Partial Dial (PSPD) treatment in the appropriate treatment table.

If the number of digits dialed for a directory number is more than the value of this parameter, the calling party will be routed to Blank Directory Number (BLDN) or Vacant Code (VACT) treatment in the appropriate treatment table.

**Provisioning rules**
For all local switching units, excluding those in the United Kingdom (UK), specify the number of digits in a local directory number.

For a switching unit in the UK, the value of this parameter shall be equal to the minimum number of digits for a local directory number.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>15</td>
<td>7</td>
</tr>
</tbody>
</table>

**Activation**
If peripheral module is not connected to an LGC or LTC, an activation of a change to this parameter is done by issuing a BUSY (BSY) and RETURN TO SERVICE (RTS) on the peripheral module.

If peripheral module is connected to an LGC or LTC, an activation of a change to this parameter is done by putting the LGC or LTC through a RTS sequence. Either BSY and RTS the entire peripheral (both sides) or perform a double warm SWACT to update both the active and inactive sides.

**Dependencies**
For additional digit collection data see parameter DIGIT_COL_OFFICE_CODE in table OFCSTD.

**Consequences**
Not applicable

**Verification**
Not applicable
Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**NUMCALLPROCESSES**

**Parameter name**

Number of Call Processes

**Functional description of parameter NUMCALLPROCESSES**

This parameter specifies the number of call processes (CP) required for the switching unit.

A CP is a software entity associated with a call whenever active processing is required (during set up, take down, and feature processing). It consists of the current location in call processing software, plus other memory needed to hold data temporarily. When a call releases a call process, this temporary data is either lost or stored in an extension block.

With call condense on, all call types, with the exceptions of AOSS, CAMA, OCC, and TOPS positions and Voice Links, have the CP released.

CPs are directly related to call volumes and holding time of the CP.

**Provisioning rules**

The value of this parameter is calculated with the following equation:

\[ \text{Num} = (a \times b \times c) + d + 20 \]

*where*

- \( \text{Num} \) is the number of call processes
- \( a \) is the peak calls per second
- \( b \) is (0.1) expected CP waits per call
- \( c \) is (5 s) average wait
- \( d \) is \( 2 \times (\text{CAMA} + \text{AOSS} + \text{TOPS} + \text{OOC} \text{ positions} + \text{VL members}) \)

The recommended value for all switching units is:

\[ \text{Num} = 70 + 2 \times (\text{CAMA} + \text{TOPS} + \text{OOC} + \text{AOSS positions}, \text{including administration positions} + \text{VL members}) \]

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2072</td>
<td>70</td>
</tr>
</tbody>
</table>

**Activation**

- Increase - immediate
- Decrease - cold restart

**Dependencies**

At extension time, the value of this parameter must change if the quantity of the above type of positions changes.
If the switching unit has the Centralized Automatic Message Accounting (CAMA) feature, see table CPOS for the number of CAMA positions.

If the switching unit has the Traffic Operator Position System (TOPS) feature, see table TOPSPOS for the number of TOPS positions.

If the switching unit has the Overseas Operator Centre (OOC) feature, see table TOPSPOS for the number of OOC positions.

If the switching unit has the Auxiliary Operator Service System (AOSS) feature, see table AOSSPOS for the number of AOSS positions.

If the switching unit has the Operator Centralized Remote (OC) feature, see table VLMEM for the number of VL members.

Consequences
Not applicable

Verification
See measurements CPSZ, CPSZ2, ORIGDENY and WAITDENY in operational measurement (OM) group CP and CPHI in OM group CP2 for the OMs associated with this parameter.

Measurement CPHI records the maximum number of call processes in simultaneous use during the current transfer period.


Memory requirements
The number of words of memory required for each call process is 130 plus the value of parameter CPSTACKSIZE in table OFCSTD.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
NUMCPWAKE

Parameter name

Number of Call Processing Wakeups

Functional description of parameter NUMCPWAKE

This parameter is required in all switching units and specifies the maximum number of call process wakeups in the system.

Wakeups are used by the system when processing of a call must wait a predetermined time for other functions to occur. The process requesting a wakeup defines the wait time and the instructions or message to be sent to the call on waking up.

Wakeups are placed on time queues until they time out at which time a message is sent to the associated call.

Wakeups are required for the maximum number of simultaneous calls for the following call types:

• Trunk to Tone
• Trunk to Announcement

If the switch is equipped with lines, additional wakeups are required when a line connects to one of the following call types:

• Alarm Sending and Checking
• Announcements
• Call Waiting Disconnect
• Call Waiting Initialization
• Centralized Automatic Message Accounting (CAMA) Recall
• Coin Biller for Local Coin Overtime
• Direct Dial Overseas
• Emergency Service Bureau
• Emergency Service Bureau Ringback
• Hotel/Motel Message Register Pulsing
• Local Coin Overtime Charging
• Local Coin Overtime Treatment
• POTS Call Forward Don’t Answer (CFDA)
• Silent Switchman
• Test Desk
• Tones (all tones in tables TONES and STN)
• Trunk Recall
• Trunk to CAMA Call
If the switch has the Meridian Digital Centrex (MDC) or the Residential Enhanced Services (RES) feature, five additional wakeups are required for each attendant console. Additional wakeups are also required for the following call types:

- Call Back Queuing
- Call Forward Don’t Answer
- Call Hold
- Call Park
- Calls Queuing for Attendant Console
- Camp-on
- Camp-on Time out
- Cut-Thru Dialing
- Expensive Route Warning Tone
- Off-Hook Queuing
- Permanent Hold
- Ring Again
- Transfer Feature
- Three-Way Call Public Announcement

If the switch is toll, additional wakeups are required for the following call types:

- CAMA Recall
- Super CAMA (trunk group type SC) and Outgoing to Traffic Operator Position System (TOPS) or Traffic Service Position System TSPS (trunk group type OP)
- Tandem Direct Dial Overseas

If the switch has the TOPS feature, additional wakeups are required for the following:

- Remote Operator Number Identification (RONI)
- TOPS Administration TTYs
- TOPS Coin Functions
- TOPS Position (one for each position)
- TOPS Trunk Check for CAMA Suspension

If no call processing wakeups are available, a SWERR message is generated and a warning message states that not enough CPWAKES have been provided.
NUMCPWAKE

**Provisioning rules**

Set the value of this parameter to 1000 unless otherwise instructed by Northern Telecom.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>20000 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

**Activation**

Increase - immediate  
Decrease - cold restart

**Dependencies**

At extension time the value of this parameter must change, if the quantity of any of the items in the provisioning rules change.

**Consequences**

If the value of this parameter is set too low along with low values for other call processing software parameters, the operational measurement overflow register WAKEOVFL pegs.

If call processing parameters are within range, underprovisioning of this parameter affects the timing that a call is moved along in call processing (for example, extension blocks) that causes a call to die. The operational measurement (OM) overflow register WAKEOVFL does not peg.

**Verification**

See measurements WAKESZ and WAKEOVFL in OM Group CP and WAKEHI in OM Group CP2 for the OMs associated with this parameter.

To verify that sufficient call processing wakeups have been allocated, use CI command OMSHOW CP ACTIVE and read the measurement WAKEOVFL in OM group CP.

Any nonzero value in measurement WAKEOVFL indicates underprovisioning.

Measurement WAKEHI in OM group CP2 records the maximum number of call processing wakeups in simultaneous use during the current transfer period.

In a switching unit with the MDC or RES feature, see OM groups CALLFWD, CALLWAIT, and CALLHOLD for OMs associated with this parameter.

See the *Operational Measurements Reference Manual* 297-1001-814 for a description of OM groups CP and CP2.
Memory requirements
Each CPWAKE block requires 33 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**NUMECCBS**

**Parameter name**  
Number of Extended Call Control Blocks

**Functional description of parameter NUMECCBS**  
This parameter is required for all switching units. It specifies the number of extended call control blocks (ECCB) provided.

This parameter is a read-only parameter. Its value cannot be changed. It can be used to see how many ECCBs have been provided.

Its value is automatically determined by the value of other parameters in the switching unit.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value of parameter NCCBS in table OFCENG</td>
<td>65</td>
</tr>
</tbody>
</table>

**Activation**  
Not applicable

**Dependencies**  
Not applicable

**Consequences**  
Not applicable

**Verification**  
The following operational measurements are assigned to this parameter:

- **PEG:** CP2_ECCBSZ
- **USAGE:** CP2_ECCBTRU
- **OVERFLOW:** CP2_ECCBOVFL

When there are no blocks available, lines are routed to Network Blockage Normal Traffic (NBLN) treatment in the treatment tables.

Any nonzero value in CP2_ECCBOVFL indicates underprovisioning.

**Memory requirements**  
13 words of memory are allocated for each block.

**Dump and restore rules**  
This parameter was introduced in BCS15.

The value of this parameter is always calculated automatically (including over dump and restore).
Parameter name  
Number of Integrated Business Network Console Queuing Extension Blocks

Functional description of parameter NUMIBNCQEXTBLK

This parameter controls the number of calls that can be associated (queued, on hold, or active) with IBN attendant consoles at any time. It represents the number of queuing extension blocks required for the switching unit.

Provisioning rules

The value of this parameter is calculated with the following equation:

\[ \text{Ext} = \text{con} \times 15 \]

where

\[ \text{Ext} \] is the number of extension blocks
\[ \text{con} \] is the number of attendant consoles

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767 (reserved)</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>16000 (programmed)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Increase – immediate
Decrease – cold restart

Dependencies

At extension time the value of this parameter must increase if the quantity of attendant consoles increases.

Consequences

Not applicable

Verification

To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 14 and read the following entry:

```
EXTSEIZ  EXTOVFL  EXTHI  EXTSEIZ2
14  IBNQCQEXT
50
0    0    0    0
0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
NUMIBNCQEXTBLK

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

Memory requirements
Each extension block requires 16 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Number of Long Buffers

Functional description of parameter NUMLONGBUFFERS

This parameter is required for switching units with the ISDN user part (ISUP). It specifies how many long incoming buffers have been provisioned for ISUP traffic. These buffers are used to handle ISUP messages that exceed the 49-byte limit of the conventional message.

Provisioning rules

This parameter no longer exists for SuperNode applications. The required number of long buffers is set internally to the value of office parameter NUMCPLETTERS.

For NT40 switches with no ISUP trunks, set the value to 0.

For NT40 switches with ISUP trunks but no featured calls, the default value is sufficient.

For NT40 switches with ISUP trunks and featured calls, use the following equation:

\[ \text{Buff} = 300 + (f \times n) \]

\textbf{where}

- \text{Buff} is the number of long buffers
- \( f \) is the number of ISUP featured calls / total number of ISUP calls
- \( n \) is the number of ISUP trunks

The percentage of featured ISUP calls is equal to the number of featured ISUP calls originating from, terminating on, or tandeming through the switching unit.

A featured ISUP call is one that carries feature information, such as network name display.

This parameter must be provisioned not only on the switch running ISUP, but also on any other switch (for example, tandem) that receives a long message in passing.
NUMLONGBUFFERS

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (feature deactivated)</td>
<td>2000</td>
<td>356 (NT40 North American loads with ISUP trunks)</td>
</tr>
<tr>
<td>300 (values 1 to 299 are invalid)</td>
<td></td>
<td>650 (NT40 international loads with ISUP trunks)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 (NT40 - no ISUP trunks)</td>
</tr>
</tbody>
</table>

Activation

Increase - immediate
Decrease - cold restart

Dependencies

Not applicable

Consequences

If this parameter is overprovisioned, store is wasted. The value of this parameter is set too high if the OM field INLBHI (group CP2) is much less than the value of this parameter.

Underprovisioning of this parameter results in lost messages, hung calls, and system degradation. The value of this parameter is too low when the OM field INLBOVFL (group CP) contains a large number.

Verification

The actual number of long buffers provisioned is the sixth information field in the OM group CP. This can be seen by using the CI command OMSHOW CP ACTIVE.

See measurements INLBSZ, INLBSZ2 and INLBOVFL in OM group CP and INLBHI in OM group CP2 for the operational measurements (OM) associated with this parameter.

Measurement INLBHI records the maximum number of long buffers in simultaneous use during the current transfer period.


Memory requirements

Each unit requires 180 words of memory.
Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
NUMOHCBQTRANSBLKS

Parameter name
Number of Off-hook and Call Back Queuing Transaction Blocks

Functional description of parameter NUMOHCBQTRANSBLKS
This parameter specifies the number of Transaction Blocks required for the Off-Hook (OHQ) and Call Back Queuing (CBQ) feature.

The value should be equal to the maximum number of calls which can be involved in OHQ or CBQ.

Provisioning rules
If the switching unit is a class 5 with the IBN feature, the maximum number that can be assigned is equal to the lesser of 10% of the value of parameter NCCBS or 1169.

If the switching unit is a stand alone IBN, the maximum number that can be assigned is equal to the lesser of 40% of the value of parameter NCCBS or 1169.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1169</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
See operational measurements groups OHQCBQCG and OHQCBQRT in the Operational Measurements Reference Manual 297-1001-814 for the OMs that can be affected by this parameter when it is underprovisioned.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each unit requires 10 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Number of Permanent Extension Blocks

Functional description of parameter NUMPERMEXT
This parameter is required for all switching units that have one or more of the elements found in the provisioning formula listed below.

Provisioning rules
For all switching units, the recommended number is given by the formula:
Value = (NO_OF_FTR_CONTROL_BLKS in table OFCENG) + (1.5 X NO_OF_SC_EXT_BLKS in table OFCENG) + (NO_LOCAL_COIN_EXT_BLKS in table OFCENG) + (40 X number of Automatic Call Distribution and Uniform Call Distribution groups)

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
At the time of an extension, recalculate the value of this parameter if the value of one or more of the formula elements changes.

Consequences
Not applicable

Verification
To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 3 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>PERM</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.
In an Integrated Business Network (IBN) switching unit, see OM group CALLWAIT for operational measurements (OM) associated with this parameter.

See the *Operational Measurements Reference Manual* 297–1001–814 for a description of OM group EXT.

**Memory requirements**

Each permanent extension block requires 32 words of memory.

**Dump and restore rules**

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Number of Terminal Linkage Blocks

**Functional description of parameter NUMTLBS**

This parameter controls the number of terminal linkage blocks used in the input and output systems for input and output not related to call processing.

**Provisioning rules**

For all switching units, excluding Bell Canada, the value of this parameter should be equal to 20 plus the number of nodes in the switching unit.

The number of nodes is defined in table NNASST and should be equal to the sum of the following:

- number of digital carrier modules
- number of digital trunk controllers
- number of input output controllers
- number of line concentrating modules
- number of line group controllers
- number of line trunk controllers
- number of maintenance trunk modules
- number of message switch and buffers
- number of network modules
- number of outside plant modules
- number of remote line concentrating modules
- number of remote line modules
- number of subscriber carrier modules
- number of trunk modules

Set the value of this parameter to 512 for Bell Canada switching units.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>4096</td>
<td>20</td>
</tr>
</tbody>
</table>

**Activation**

Warm restart

**Dependencies**

Not applicable

**Consequences**

Not applicable
NUMTLBS

Verification
Not applicable

Memory requirements
Each block requires 5 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 maximum value corrected
Parameter name
Network Management Busy Lamp Update Time

Functional description of parameter NWMTGBlU
This parameter is required in switching units with software package NTX060AB (Network Management). It indicates the network management trunk group busy lamp update time.

A busy trunk group is one with no idle trunks.

For information on Network Management, see the Network Management System Reference Manual, 297-1001-453.

Provisioning rules
Specify the network management trunk group busy lamp update time, (that is, the frequency at which the lamps are updated) in 10 second increments.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12 (2 minutes)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**NX25_RR_EACH**

**Parameter name**
NX25 Receive Ready For Each

**Functional description of parameter NX25_RR_EACH**
This parameter is required in a switching unit with NX25 software.

**Provisioning rules**
If the value of this parameter is set to Y (yes), a receive ready message is sent for each data packet received.

If the value of this parameter is set to N (No), receive ready messages are sent only when data packets are received and no data frames are ready to be transmitted (that is, no packets are available or the transmit window is full.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS23

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Operations Administration and Maintenance Hardware Present

Functional description of parameter OAM_HW_PRESENT
Software Packages NTXF93AA (ISDN Provisioning) and NTXF92AA (ISDN (OAM) Base) enable integrated service provisioning to be performed from the DMS. These packages require the datafill of Packet Handler (PH) parameters on the DMS and the existence of hardware for processing and provisioning of the PH.

This parameter enables the DMS software to detect the presence of this hardware. This feature changes the packaging restrictions to allow enhanced SERVORD functionality such as automatic DS1 channel selection and SPECCONN table datafill to function without the presence of the OAM hardware.

This parameter affects the Data Packet Network (DPN) packet handler provisioning only. It does not provide any function for the DMS packet handler.

Provisioning rules
If package NTXF93AA is installed, but the associated OAM processor hardware is not installed and in service, this parameter should be set to a value of N (no).

When the hardware is installed and in service, the parameter can be set to a value of Y (yes).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The default value of N (no OAM hardware present) is chosen because a customer typically receives a software load before the associated hardware has been installed and put into service.

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable
OAM_HW_PRESENT

Verification
To verify that this parameter is functional, set the parameter to Y and attempt to attach a LAPB or LAPD Logical Terminal Identifier (LTID) to an Integrated Services Digital Network (ISDN) line. There should be no tuples in table PHINFO for the LTID for this test. The SLT ATT command should fail with a warning that a data network address (DNA) must be added to the LTID in table PHINFO. If the LTID can be attached with the OAM_HW_PRESENT parameter set to N, and the command does not fail as described with the parameter set to Y, the parameter is not functioning properly.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
OCCTS Enhanced Feature

Functional description of parameter OCCTS_ENHANCED_FEATURE
This parameter is required for switching units with the Equal Access End Office feature. It specifies whether the operating company requires additional registers, source, and destination numbers for the Equal Access Traffic Measurement Separation System.

Provisioning rules
The value of this parameter should not be changed to Y (yes), unless the switching unit has software package NTX085AA.

For switching units without software package NTX085AA, leave the value of this parameter at the default of N (no).

If this parameter is set to Y:
- The number of OCCTS OM registers is increased from 256 to 2048.
- If more than 256 registers are required, parameter NO_OCCTS_OM_REGISTERS in table OFCENG has to be datafilled to specify the quantity.
- The number of source and destination numbers are increased from 15 to 127.
- If more than 15 source numbers are required, parameter OCCTS_IN_MAX_NUMBERS in table OFCENG has to be datafilled to specify the quantity.
- If more than 15 destination numbers are required, parameter OCCTS_OUT_MAX_NUMBERS in table OFCENG has to be datafilled to specify the quantity.

If this parameter is set to N, the number of OCCTS OM registers are 256 and the number of source and destination numbers are 15.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The OCCTS OM register numbers and OCCTS source and destination numbers are assigned in tables OCCTSINT and OCCINFO.
OCCTS_ENHANCED_FEATURE

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Other Common Carrier Traffic Separation Incoming Maximum Number

Functional description of parameter OCCTS_IN_MAX_NUMBER
This parameter is required for switching units with the Equal Access Traffic Separation Measurement System, Other Common Carrier Traffic Separation (OCCTS) feature.

This parameter specifies the maximum number of source traffic separation numbers (NSTS) that can be assigned to other common carriers in table OCCINFO to separate equal access traffic.

Provisioning rules
The following values can be assigned to this parameter:
- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127

These values provide a quantity of NSTSs as outlined in table 1.

<table>
<thead>
<tr>
<th>Table 1 Parameter values</th>
<th>Value</th>
<th>Number of DTSNs</th>
<th>NSTS numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Number</td>
<td>NSTS numbering</td>
<td></td>
</tr>
<tr>
<td>SIZE_15</td>
<td>16</td>
<td>0 to 15</td>
<td></td>
</tr>
<tr>
<td>SIZE_31</td>
<td>32</td>
<td>0 to 31</td>
<td></td>
</tr>
<tr>
<td>SIZE_63</td>
<td>64</td>
<td>0 to 63</td>
<td></td>
</tr>
<tr>
<td>SIZE_127</td>
<td>127</td>
<td>0 to 127</td>
<td></td>
</tr>
</tbody>
</table>

Changing the value of this parameter is not allowed unless package NTX085AA is present and parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y (yes).

For switching units without software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG set to N (no), leave the value of this parameter at the default of SIZE_15.

If the switching unit has software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y, the recommended value is SIZE_127.
OCCTS_IN_MAX_NUMBER

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SIZE_15</td>
</tr>
</tbody>
</table>

**Activation**

Cold restart

Once this parameter is set and a cold restart is performed, its value can not be decreased. This avoids traps that may occur in table control and call processing if OCCTS registers that were deallocated are used.

**Dependencies**

See parameter OCCTS_ENHANCED_FEATURE in table OFCENG for other parameters and tables that are associated with the OCCTS feature.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

The amount of memory used by this parameter is calculated with the following equation:

\[ \text{mem} = 3 \times \text{nst} \times \text{ndt} + 2 \times u \times \text{nstr} + 6 \times \text{nac} \times \text{nstr} \]

where

- **mem** is the amount of memory in words
- **nst** is the number of source TS numbers
- **ndt** is the number of destination TS numbers
- **u** is 2 with usage only, 6 with pegs and usage
- **nstr** is the number of assignable OM registers
- **nac** is the number of operational measurement accumulating classes defined

For example, a switching unit has chosen to allocate 64 source TS numbers, 128 destination TS numbers and 256 assignable OM registers. The usage option is equipped. Data is to be accumulated for hourly and daily intervals (2 accumulation classes).

\[ \text{mem} = 3 \times 64 \times 128 + 2 \times 2 \times 256 + 6 \times 2 \times 256 = 28672 \text{ words} \]

**Dump and restore rules**

This parameter was introduced in BCS16.

Copy the existing value of this parameter when doing a dump and restore.

OFCENG–542 297-1001-455 Standard 22.02 March 1994
Parameter name
Other Common Carrier Traffic Separation Outgoing Maximum Number

Functional description of parameter OCCTS_OUT_MAX_NUMBER
This parameter is required for switching units with the Equal Access Traffic Separation Measurement System, Other Common Carrier Traffic Separation (OCCTS). It specifies the maximum number of destination traffic separation numbers (NDTS) that can be assigned to outgoing and two-way trunk groups in table TRKGRP, announcements in table ANNS, tones in table TONES, and special tones in table STN to separate equal access traffic.

Provisioning rules
The following values can be assigned to this parameter:
- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127

These values provide a quantity of NSTSs as outlined in table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Parameter values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Number of DTSNs</td>
</tr>
<tr>
<td>SIZE_15</td>
<td>16</td>
</tr>
<tr>
<td>SIZE_31</td>
<td>32</td>
</tr>
<tr>
<td>SIZE_63</td>
<td>64</td>
</tr>
<tr>
<td>SIZE_127</td>
<td>127</td>
</tr>
</tbody>
</table>

Changing the value of this parameter is not allowed unless package NTX085AA is present and parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y (yes).

For switching units without software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG set to N (no), leave the value of this parameter at the default of SIZE_15.

If the switching unit has software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y, the recommended value is SIZE_127.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE_15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**OCCTS_OUT_MAX_NUMBER**

**Activation**

Cold restart

Once this parameter is set and a cold restart is performed its value may not be decreased. This avoids traps that may occur in table control and call processing if OCCTS registers that were deallocated are used.

**Dependencies**

See parameter OCCTS_ENHANCED_FEATURE in table OFCENG for other parameters and tables that are associated with the OCCTS feature.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

See parameter OCCTS_IN_MAX_NUMBER in table OFCENG for memory requirements.

**Dump and restore rules**

This parameter was introduced in BCS16.

Copy the existing value of this parameter when doing a dump and restore.
OFFICE_CLLI_NAME

Parameter name
Office Common Language Location Identifier Name

Functional description of parameter OFFICE_CLLI_NAME
This parameter is required for switching units with common channel
interoffice switching. It specifies the switching unit common language
location identifier (CLLI) code.

The code is required when test translations are performed on a trunk and its
circuit identification name is received. A comparison (automatic and/or
manual) can be made to verify that the test passed.

This parameter must be datafilled in all switching units because it is required
by the Technical Assistance Service (TAS) for listing of the TAS non-res
tape.

Provisioning rules
Specify the switching unit CLLI code.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$ (a null vector)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
OFFICE_DS_FUNCTION_NUMBER

Parameter name
Office Direct Signaling Function Number

Functional description of parameter OFFICE_DS_FUNCTION_NUMBER
This parameter is required for switching units with the common channel interoffice signaling (CCIS) direct signaling capability (software package NTX197AA).

The CCIS network administration centre (CNAC) assigns a unique function number to every node or separately identifiable function within a node in the network.

This parameter specifies the function number that uniquely identifies the destination of direct signaling messages destined for the node.

Provisioning rules
Specify the function number that uniquely identifies the destination of direct signaling messages destined for the node.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS14.
Copy the existing value of this parameter when doing a dump and restore.
OFFICE_DS_SQD_SAMPLING_RATE

Parameter name
Office Direct Signaling Supplementary Query Data Sampling Rate

Functional description of parameter OFFICE_DS_SQD_SAMPLING_RATE
This parameter is required for switching units with the CCIS direct signaling capability (software package NTX197AA). It specifies the office direct signaling supplementary query data (SQD) sampling rate that is used in conjunction with the mechanized calling card signaling (MCCS) direct signaling application.

Provisioning rules
Specify the office direct signaling SQD sampling rate to be used in conjunction with the MCCS direct signaling application.

The switching unit selects every nth queries (where n is the value of this parameter) and transmits an additional message that contains information to perform division of revenue studies for MCCS.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>127</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS14
Copy the existing value of this parameter when doing a dump and restore.
OFFICE_ID_ON_AMA_TAPE

Parameter name
Office Identification on Automatic Message Accounting Tape

Functional description of parameter OFFICE_ID_ON_AMA_TAPE

This parameter specifies the office identifier to be written in the Automatic Message Accounting (AMA) Service Observing tape header record.

This parameter is defined by the operating company.

Provisioning Rules
Specify the office identifier to be written in the AMA Service Observing tape header record.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>000000</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.
OFFICE_ID_ON_CDR_TAPE

Parameter name
Office Identifier On Call Detail Recording Tape

Functional description of parameter OFFICE_ID_ON_CDR_TAPE
This parameter is required in a DMS-300 switch. It specifies the office identification code on each Call Detail Recording (CDR) block header that can be stored on either tape or disk.

Provisioning rules
This parameter is set by Northern Telecom and should be changed only in consultation with Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DS1MTL</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
OFFICE_LANGUAGE

Parameter name
Office Language

Functional description of parameter OFFICE_LANGUAGE
This parameter is required for a switching unit with the Call Forwarding Remote Access (CFRA), Automatic Recall (AR), Automatic Callback (ACB) and Calling Number Delivery (CND) features.

It controls the language in which subscribers receive announcements for the above features.

This parameter consists of the following two fields:
• PRIMARY
• SECONDARY

The value of these fields can be one of the following:
• LANG1 (language 1)
• LANG2 (language 2)
• BILING (bilingual)
• NIL (no language).

The value of the PRIMARY field cannot be NIL.

The values of these fields indicate the language in which subscribers receive announcements for the above features.

Most announcements are provided in the language specified by the PRIMARY field. The exception is for subscribers who have the SL line option. They will receive announcements in the language specified by the SECONDARY field.

Provisioning rules
In unilingual areas the following values are recommended:
• PRIMARY: LANG1
• SECONDARY: NIL

In bilingual areas the following values are recommended:
• PRIMARY: LANG1
• SECONDARY: LANG2

The following configurations are also possible.
• The primary language can be set to BILING with the secondary language set to LANG1 or LANG2.
• The primary language can be set to LANG1 or LANG2 with the secondary language set to BILING.
Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LANG1 LANG2</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

The language (English or French) associated with LANG1 or LANG2 is determined in table DRMUSERS.

Consequences

Not applicable

Verification

Make a call that invokes an announcement. If the user does not have the SL line option, the announcement is presented in the language specified by the PRIMARY field.

If the user does have the SL line option, the announcement is presented in the language specified by the SECONDARY field.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
OMPRTFORMAT

Parameter name
Operational Measurement Print Format

Functional description of parameter OMPRTFORMAT
This parameter defines the number of registers that can have their contents printed on one line of output by the operational measurement printer.

The contents of one register occupies the space of eleven characters.

Provisioning rules
Specify the number of registers that can have their contents printed on one line of output by the operational measurement printer.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
OMTAPESUPPRESSION

Parameter name
Operational Measurement Tape Suppression

Functional description of parameter OMTAPESUPPRESSION
This parameter enables or disables the suppression of zero data from the operational measurement tape.

Provisioning rules
If the value is set to Y (yes), the unequipped members of D records are not output to tape.

If the value is set to N (no), the unequipped members of D records are output to tape.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
OMTELCOLABEL

Parameter name
Operational Measurement Operating Company Label

Functional description of parameter OMTELCOLABEL
This parameter specifies the label to be put on operational measurement (OM) tapes. This label is defined by the operating company.

Provisioning rules
Specify the operational measurement (OM) tape label.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$ (a nil vector)</td>
</tr>
</tbody>
</table>

Activation
The parameter value takes effect when the next OM tape is mounted.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Operational Measurement Transfer

Functional description of parameter OMXFR
This parameter specifies the time interval in which active OM registers are copied to the holding registers.

Provisioning rules
This parameter can have a value of 15 minutes (X15) or 30 minutes (X30).

This value is usually left at 30 minutes, but can be changed to 15 at the discretion of the operating company.

If the switching unit has the engineering administration data acquisition system (EADAS) and option EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to N (no), this parameter must have the value of X30.

If the switching unit has the engineering administration data acquisition system (EADAS) and option EADAS_SHORT_XFER_ALLOWED in table OFCOPT is set to Y (yes), this parameter can have the value of X15 or X30.

If office parameter OMHISTORYON is set to Y, this parameter is disabled in table OFCENG and there is a 5 minute OM transfer period.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X30</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**ORIGS_TO_BLEED**

**Parameter name**

Originations To Bleed

**Functional description of parameter ORIGS_TO_BLEED**

This parameter is required only for an access tandem (AT) switching unit. It controls the amount of origination bleeding that occurs during batching.

If this parameter is activated, (set to a nonzero value), there is no significant effect on call processing when occupancy is low in AT switching units. The effects of this parameter become noticeable above 50% call processing (CP) occupancy.

Bleeding improves overall performance in an AT switching unit that is batching. This only occurs in a few select switching units. If a switching unit is not batching, bleeding may have a negative effect on system performance.

The batching syndrome that manifests itself in an AT environment becomes evident in a switching unit when very large numbers of ORIGDENY's appear even when the switching unit is not at capacity. The ORIGDENY's are indications of large origination delays and a loss of an orig message before service is given.

The batching syndrome occurs due to the small number of call types, the lack of variation on the timings of the calls (for example, all trunks with the same signaling format - MF wink) and the above priority scheme. The calls have a tendency to synchronize themselves into batches of progress and origination work.

Origination bleeding allows a variable amount of origination work into the system during the long periods of progress work. The value of this parameter specifies the amount that it is varied.

With bleeding, the batching still exists to a certain extent, as it does in all switches, however the number of ORIGDENY's almost disappears and the number of INEFDENY's is reduced significantly at high load. This is where the capacity savings occur.
Provisioning rules

To turn on the origination bleeding feature, set the parameter to one of the following values. The value of this parameter has the approximate implications outlined in table 1.

<table>
<thead>
<tr>
<th>Value</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>bleed 10% of offered originations at capacity</td>
</tr>
<tr>
<td>2</td>
<td>bleed 20% of offered originations at capacity</td>
</tr>
<tr>
<td>3</td>
<td>bleed 30% of offered originations at capacity</td>
</tr>
</tbody>
</table>

Leave the value of this parameter at the default of 0 to turn off the origination bleeding feature.

The following message is displayed if an attempt is made to alter this parameter to a value other than 0 to 3.

VALUE MUST BE IN (0 - 3) RANGE

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3 (programmed)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>32767 (reserved)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

Immediate

The following warning is displayed each time this parameter value is changed:

** WARNING ** – DO NOT CHANGE THIS PARAMETER TO A NON ZERO VALUE. THIS PARAMETER SHOULD ONLY BE CHANGED IN ACCESS TANDEM OFFICES. CHANGES TO THIS OFFICE PARAMETER ARE PERFORMANCE AFFECTING AND MAY DEGRADE OFFICE CAPACITY.

Dependencies

Not applicable

Consequences

Changing this parameter to a value other than 0 outside the access tandem environment is not recommended. This office parameter affects all call processing and could be performance affecting if activated.
ORIGS_TO_BLEED

Consequences observed before capacity is reached and this parameter is incorrectly implemented or a switching unit is not batching may be:

- Extreme progress queue delays. The higher this parameter is set, the longer the progress delays will be in a non-batching switching unit.
- Large numbers of CPLOOVFLs
- A reduction in calls per hour at capacity

Verification

See OM GROUP CP for the definitions of INEFDENY and ORIGDENY.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Origination Threshold

Functional description of parameter ORIGTHRES

This parameter is required in all switching units. It specifies the number of CPLETTERS reserved for system progress messages during high load. During this interval, pending origination work is buffered in the CPLETTERS. In order to protect calls in progress, the number of pending originations is limited by ORIGTHRES.

This parameter is calculated by the software and should not be reset. It is used to threshold call originations depending on the available number of CP letters. Under very serious degradation where the switch is having difficulty recovering, call processing originations can be turned off. This must only be done by TAS.

Except for the above, this parameter must not be changed. This parameter is automatically updated when parameter NUMCPLETTERS is changed and a cold restart is initiated.

Provisioning rules

For a World Switch the value is 500. This represents the value of parameter NUMCPLETTERS minus 1500. Therefore, with the fixed value of 2000 for parameter NUMCPLETTERS, the value of the parameter is 500.

For an NT-40 switching unit the value is 1744. This represents the value of parameter NUMCPLETTERS minus 256. Therefore, for an NT-40 switching unit with the fixed value of 2000 for parameter CPLETTERS, the value of the parameter is 1744.

For a SuperNode switching unit, the value is 1550. This represents the value of parameter NUMCPLETTERS minus 450. Therefore, for a SuperNode switching unit with the fixed value of 2000 for parameter NUMCPLETTERS, the value of the parameter is 1550.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>500 (World switch)</td>
<td>1550</td>
</tr>
<tr>
<td></td>
<td>1744 (NT-40)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1550 (SuperNode)</td>
<td></td>
</tr>
</tbody>
</table>

Activation

This parameter is activated immediately if parameter NUMCPLETTERS in table OFCENG is changed and a cold restart is initiated.

Dependencies

Not applicable
Consequences

Not applicable

Verification

The following operational measurements track this threshold value:

- OM group CP
  - fields CPLOSZ, CPLOVLF and CPLLOW

Any nonzero value in CPLOVLF indicates underprovisioning of CPLETTERS or the occurrence of a severe overload condition. The overload condition can be verified by nonzero values in the ORIGDENY OM.

See the Operational Measurements Reference Manual, 297-1001-814 for a description of OM group CP.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS15.

The value of this parameter is calculated by software and should not be reset.
Parameter name
Operator Services Calls Waiting Queue Size

Functional description of parameter OS_CALLS_WAITING_Q_SIZE
This parameter specifies the maximum number of queued calls that can be in the operator services automatic call deflection (ACD) system at one time.

Provisioning rules
Set this parameter equal to the maximum number of queued calls that should be allowed in the operator services ACD system at one time.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Underprovisioning causes overflows in the queues during peak times. Overprovisioning wastes data store.

Verification
Not applicable

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
OS_CT_SEARCH_DEPTH

Parameter name
Operator Services Controlled Traffic Search Depth

Functional description of parameter OS_CT_SEARCH_DEPTH
This parameter specifies the number of positions that are searched in the controlled traffic position queue to look for an operator that can handle the incoming call under the operator services Automatic Call Distribution (ACD) system.

Provisioning rules
Set the parameter to the number of positions that should be searched in the controlled traffic position queue to look for an operator that can handle the incoming call under the operator services ACD system based on the number of operators available for this function.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
There is no memory usage associated with this parameter.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Operator Services Number of Call Queues

Functional description of parameter OS_NUM_CALL_QUEUES
This parameter specifies the number of call queues that are available in the operator services Automatic Call Distribution (ACD) system for calls to be queued on.

Provisioning rules
Set this parameter equal to the number of call queues that should be available for calls to be queued on within the operator services ACD system.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>64</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
Underprovisioning of this parameter value causes queueing to be too general. The specialties of certain operators are not used. Overprovisioning can increase the time it takes for a call to find the correct queue to queue on.

Verification
Not applicable

Memory requirements
Each unit requires 3 words of memory.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
OS_NUM_POSITIONS

Parameter name
Operator Systems Number of Positions

Functional description of parameter OS_NUM_POSITIONS
This parameter specifies the maximum number of positions for operator services Automatic Call Distribution (ACD) that are active in the office at one time.

Provisioning rules
Set this parameter equal to the maximum number of operator services ACD positions that may be active in the office at one time.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1024</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
Not applicable

Consequences
If this parameter value is underprovisioned, the queueing system can not handle all of the positions present. If it is overprovisioned, there is an increase in the real-time usage for the queueing system.

Verification
Not applicable

Memory requirements
Each unit requires 7 words of memory.

Dump and restore rules
This parameter was introduced in BCS31.
Copy the existing value of this parameter when doing a dump and restore.
Password Lifetime

This parameter determines the duration, in number of days, for which a password may be used.

The interval is timed from the date of the last password change for the corresponding user identification.

If this feature is not required, set the parameter to the maximum value (32767 days).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32767</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation

Immediate

Expired passwords cannot be rejuvenated by changing the value of this parameter.

Dependencies

This parameter appears only if ENHANCED_PASSWORD_CONTROL in table OFCOPT is set to Y (yes).

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter, unless it is an extension and the operating company specifically requests a change.
PATCH_BUNDLE

Parameter name
Patch Bundle

Functional description of parameter PATCH_BUNDLE
This parameter is used to enable or disable patch bundle hiding. Before the implementation of this parameter, all patches in the patch package appeared individually in the PATCHER INFORM list. PATCH_BUNDLE allows all patches inside the package to be hidden with the exception of the last patch. All patches remain on the switch and are applied.

In documentation, prior to BCS33, this parameter is listed as SHOW_BUNDLE_GUTS.

Provisioning rules
PATCH_BUNDLE has the following two settings:
• SHOW
• HIDE

Set the value of this parameter to HIDE to allow patch bundle hiding. Set the value of this parameter to SHOW to leave all patches in the package visible.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHOW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most operating companies do not bundle patches. Therefore they are unaffected, even when this parameter is set to HIDE

Activation
Immediate

Dependencies
Not applicable.

Consequences
Not applicable.

Verification
Not applicable.

Memory requirements
Each unit requires 1 word of memory.
Dump and restore rules

This parameter was introduced with software release BCS32.

Copy the existing value of this parameter when doing a dump and restore.
PHINFO_AUDIT_TIME

Parameter name
Packet Service Data Audit Time

Functional description of parameter PHINFO_AUDIT_TIME
This parameter applies to Integrated Services Digital Network (ISDN) switching units. It specifies the start time of the packet service data audit that runs every 24 hours. The audit checks for mismatched data between the DMS and the packet handler.

This parameter affects the Data Packet Network (DPN) packet handler only. It does not affect the function of the DMS packet handler.

Provisioning rules
The parameter input has an hour field and a minute field. Set the hour field at a value within the range of 0 to 23. Set the minute field at a value within the range of 0 to 59. Specify the desired (24 hr) audit start time.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 00</td>
<td>23 59</td>
<td>20 (2:00 a.m.)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Verification
Not applicable.

Consequences
Not applicable.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
PLUS48V_OVERTIME_COIN_TEST

Parameter name
Plus 48 Volts Overtime Coin Test

Functional description of parameter PLUS48V_OVERTIME_COIN_TEST
This parameter appears only in switching units with the Local Coin Overtime Charging feature (feature package NTX090AA). It specifies the voltage for the overtime coin present test.

Provisioning rules
Overtime coin present tests can be done by applying either -48V or +48V to the tip side.

If this parameter is set to a value of Y (yes), the overtime coin present test is performed using +48V.

When the value of this parameter is set to N (no), the overtime coin present test is performed using -48V.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
PM_PCM_PROTOCOL_SELECTION

Parameter name
Peripheral Module Pulse Code Modulation Protocol Selection

Functional description of parameter PM_PCM_PROTOCOL_SELECTION
This parameter is required by a digital trunk module (DTM) (for enhanced DRAM) and a conference trunk module (CTM) to specify the pulse code modulation (PCM) protocol.

In BCS35, field TONESET is added to this parameter. It is used to derive a second global data byte to be sent to a CTM when it is reloaded. Fields LAW, INVERSION, CEP, and RANGE are used to derive the first global data byte that is sent to the CTM or DTM when it is reloaded.

Field TONESET is used only for the CTM. It specifies the equivalent of the Group Codec card tone set that resides on the CTM card. In other words, it is the product engineering code (PEC) of the pack that would have been used in a standard maintenance trunk module (MTM) configuration with the NT3X67 conference pack.

Provisioning rules
This parameter consists of the following five fields as outlined in table 1.

<table>
<thead>
<tr>
<th>Field name</th>
<th>Range of values</th>
<th>Description</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW</td>
<td>MU, A</td>
<td>PCM laws</td>
<td>MU</td>
</tr>
<tr>
<td>INVERSION</td>
<td>NONE, EVEN, ODD, BOTH</td>
<td>bit inversion schema</td>
<td>NONE</td>
</tr>
<tr>
<td>CEP</td>
<td>Y, N</td>
<td>with or without CEP (tone mode selector)</td>
<td>N</td>
</tr>
<tr>
<td>RANGE</td>
<td>K48, K32</td>
<td>PM SRAM ranges</td>
<td>K48</td>
</tr>
<tr>
<td>TONESET</td>
<td>NT2X59AA, NT2X59AB, NT2X59AC, NT2X59BA, NT2X59CA, NT2X59CB, NT2X59DA, NT2X59EA</td>
<td>tone set selected by corresponding Group Codec PEC</td>
<td>NT2X59AA</td>
</tr>
</tbody>
</table>

In the above table the term SRAM refers to Static Random Access Memory.
Table 2 illustrates some valid market-specific combinations for the values of fields LAW, CEP, and TONESET.

<table>
<thead>
<tr>
<th>Application</th>
<th>LAW (1st field)</th>
<th>CEP (3rd field)</th>
<th>TONESET (5th field)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic (North America)</td>
<td>Mu</td>
<td>N</td>
<td>NT2X59AA</td>
</tr>
<tr>
<td>Teleglobe</td>
<td>Mu</td>
<td>N</td>
<td>NT2X59AB</td>
</tr>
<tr>
<td>CTS–MTM</td>
<td>Mu</td>
<td>N</td>
<td>NT2X59AC</td>
</tr>
<tr>
<td>Turkey</td>
<td>A</td>
<td>Y</td>
<td>NT2X59BA</td>
</tr>
<tr>
<td>A–Law with CEP tones</td>
<td>A</td>
<td>Y</td>
<td>NT2X59DA</td>
</tr>
</tbody>
</table>

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MU NONE N K48 NT2X59AA</td>
</tr>
</tbody>
</table>

Activation

All CTMs and DTMs in the switch must be reloaded.

Dependencies

Not applicable

Consequences

If this parameter is not datafilled correctly, CTM operations fail.

Verification

Change the values of this parameter and load the CTM. Test the CTM at both the peripheral module (PM) and trunk test position (TTP) levels of the MAP. Set up a conference call and check that confirmation is obtained as each new conference is added.

Memory requirements

This parameter requires 10 words of memory.

Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter history

BCS36 table of valid LAW, CEP, and TONESET fields added
Parameter name
Peripheral Processor Message Buffers

Functional description of parameter PPMBUFFS
This parameter is required in all switching units and specifies the number of peripheral processor (PP) message buffers required for sending messages to peripheral modules (PM).

If 90% of the PP message buffers are used, a PM139 log is generated. The log is invoked by an audit process that runs every 3 min.

Provisioning rules
The recommended value is the result of the following formula or 244, whichever is less.

\[ A = 24 + [(0.3 \times b) + c + (d/10) + (e/20) + (f/2000) + g] \]

where
- \( A \) is the number of PP message buffers required
- \( b \) is the number of CPOS
- \( c \) is the number of devices
- \( d \) is the number of DGT and MF receivers
- \( e \) is the size of the largest trunk group
- \( f \) is the total number of lines
- \( g \) is the total number of peripheral modules

For a SuperNode office, the recommended value is 244.

In the provisioning formula for NT40, devices entails any input/output (I/O) device where a line test position (LTP) or trunk test position (TTP) can be run.

PMs include all peripherals (hosts, tributaries, and remotest) such as: LGCs, LTCs, DTCs, LCMs, RLMs, RLCMs, OPMs, SCMs, RSCs, RMMs, RSMs, DRCCs, SMU–RCUs, SMR–RCTs, SMS–RCSs, DCMs, TM, MTMs, and so on.

Universal tone receiver (UTR) requirements are included under total number of PMs.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>244</td>
<td>80</td>
</tr>
</tbody>
</table>

Activation
Cold restart or NORESTARTSWACT (Refer to the procedure in section “The NORESTARTSWACT utility”.)
PPMBUFFS

Dependencies
Re-engineer the value of this parameter using the above formula.

Consequences
If the value of this parameter is set too low, switch degradations can occur. The usage of PPMBUFFS is dynamic. During high traffic situations (or high maintenance situations due to unexpected and severe facility failures such as subscriber cable cuts) a greater than normal number of PPMBUFFS is required. The given formula incorporates a safety margin to handle high usage occurrences.

Verification
Not applicable

Memory requirements
Each buffer requires 140 words of memory.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 provisioning rules updated and NORESTARTSWACT activation added
**PREEMPTABLE_CONF6_THRESHOLD**

**Parameter name**
Preemptable Six-port Conference Circuit Threshold

**Functional description of parameter PREEMPTABLE_CONF6_THRESHOLD**
This parameter is required for a switching unit with the Integrated Business Network (IBN) and the Present Conferencing or Progressive Conferencing feature.

It specifies the percentage of the total number of six port conference circuits (NT3X67AA) in the switching units that are available for use by the preset and progressive conferencing features.

**Provisioning rules**
Specify the percentage of the total number of six port conference circuits (NT3X67AA) in the switching units that are available for use by the preset and progressive conferencing features.

For example, if there are 10 six port conference circuits in a switching unit and this parameter is set to a value of 40, the total number of six port conference circuits in use at any one time by the conference features cannot exceed 4.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

The change is effective after the next audit.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Dump and restore rules**
This parameter was renamed in software release BCS31. When doing a dump and restore from a software release less than BCS31 to software release BCS31 or higher, copy the value of parameter PRESET_CONF6_THRESHOLD.
**PRINT_NET102_LOGS**

**Parameter name**
Print NET102 Logs

**Functional description of parameter PRINT_NET102_LOGS**
This parameter specifies whether NET102 logs are generated.

The NET102 logs are still sent to the integrity level buffer, regardless of the value of this parameter.

**Provisioning rules**
If the value of this parameter is left at the default of Y(yes), NET102 logs are generated.

When the value is set to N (no), no NET102 logs are sent to the log system and a message indicating this is displayed when the INTEG level of the map is entered.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
To determine if the parameter is set correctly look in table OFCENG. If the value is Y, NET102 logs should be generated. If the value is N, no NET102 logs should be generated.

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.

---

**OFCENG-576 297-1001-455 Standard 22.02 March 1994**
Parameter name

PSTN Global Title Translations Size

Functional description of parameter PSTN_GT_SIZE

This parameter allows Custom Local Area Signaling Service (CLASS) global title translations to be varied from 6 to 10 digits.

This parameter allows an office to change the CLASS GTT size for table C7GTT. This means that adjoining offices that have ambiguous NPA NXX combinations can extend the GTT size up to 10 to establish uniqueness.

Provisioning rules

Set the parameter to the desired maximum CLASS GTT size.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

If this parameter is set too low, ambiguous global title translations can occur.

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
**QMSFM_NUM_QUEUES**

Parameter name
Queue Management System Force Management Number of Queues

**Functional description of parameter QMSFM_NUM_QUEUES**
This parameter specifies the total number of Traffic Operator Position System (TOPS) queue management system (QMS) call queues that are reported on by force management.

**Provisioning rules**
TOPS QMS force management reports on all TOPS QMS call queues in the range of 0 to (QMSFM_NUM_QUEUES –1) up to a maximum value of 256.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>256</td>
<td>9</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Underprovisioning of this parameter results in incomplete queue information.

Overprovisioning of this parameter results in wasted system store.

**Verification**
Check QMFADS, QFADS, and QTADS reports to ensure that information pertaining to queues 0 to (QMSFM_NUM_QUEUES –1) is included.

**Memory requirements**
Each unit requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS34.
Copy the existing value of the parameter when doing a dump and restore.
Parameter name
Queue Management System Force Management Number of Services

Functional description of parameter QMSFM_NUM_SERVICES
This parameter specifies the total number of Traffic Operator Position System (TOPS) queue management system (QMS) services that are reported on by force management.

Provisioning rules
TOPS QMS force management reports on all TOPS QMS services in the range of 0 to (QMSFM_NUM_SERVICES -1) up to a maximum value of 16.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
Underprovisioning of this parameter results in incomplete service information.

Overprovisioning of this parameter results in wasted system store.

Verification
Check QMFADS, QFADS, and QTADS reports to ensure that information pertaining to services 0 to (QMSFM_NUM_SERVICES -1) is included.

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**QMSFM_NUM_STUDY_REG**

**Parameter name**
Queue Management System Force Management Number of Study Registers

**Functional description of parameter QMSFM_NUM_STUDY_REG**
This parameter specifies the total number of Traffic Operator Position System (TOPS) queue management system (QMS) study registers that are allocated.

**Provisioning rules**
Specify the total number of TOPS QMS study registers that are allocated.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>450</td>
<td>100</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable.

**Consequences**
Underprovisioning of this parameter results in administrators running out of study registers.

Overprovisioning of this parameter results in wasted system store.

**Verification**
Use the command RQ at a QFADS TTY to see how many study registers are allocated.

**Memory requirements**
Each unit requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Analog Answer Filter Time

Functional description of parameter R2_AN_ANSWER_FLTR_TIME
This parameter is required in a switching unit with R2 signaling. It specifies the length of time that the answer line signal must be present before it is recognized as a valid signal and not a glitch.

Provisioning rules
Specify the length of time for answer signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
R2_AN_BLK_FLTR_TIME

Parameter name

R2 Analog Block Filter Time

Functional description of parameter R2_AN_BLK_FLTR_TIME

This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time for blocking or abnormal line signaling during idle.

Provisioning rules

Specify the filter time for blocking or abnormal line signaling during idle. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation

Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

R2 Analog Clear Back Filter Time

**Functional description of parameter R2_An_Clr_Bck_Fltr_Time**

This parameter is required in an office with R2 analog signaling. It specifies the time that the clear back line signal must be present before it is recognized as a valid signal and not a glitch.

**Provisioning rules**

Specify the time for clear back signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents a period of 100 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

**Activation**

Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
R2_AN_CLR_FWD_FLTR_TIME

Parameter name
R2 Analog Clear Forward Filter Time

Functional description of parameter R2_AN_CLR_FWD_FLTR_TIME
This parameter is required in a switching unit with R2 analog signaling. It specifies the length of time that the clear forward line signal must be present before it is recognized as a valid signal and not a glitch.

Provisioning rules
Specify the length of time for clear forward line signal recognition. The value of this parameter is expressed in 10–ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Analog Idle Filter Time

Functional description of parameter R2_AN_IDLE_FLTR_TIME
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time for a valid idle line signal after a clear forward signal.

Provisioning rules
Specify the filter time for a valid line signal after a clear forward signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
**R2_AN_OG_CSM_FLTR_TIME**

**Parameter name**
R2 Analog Outgoing Channel Supervision Message Filter Time

**Functional description of parameter R2_AN_OG_CSM_FLTR_TIME**
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time on channel supervision messages (CSM) for recognizing a valid clear forward line signal.

**Provisioning rules**
Specify the filter time on CSM for valid clear forward signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 8 represents 80 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>8</td>
</tr>
</tbody>
</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
R2 Analog Reanswer Filter Time

**Functional description of parameter R2_AN_RE_ANS_FLTR_TIME**
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time for recognition of a valid reanswer signal after a clear back signal.

**Provisioning rules**
Specify the filter time for recognition of a valid reanswer signal after a clear back signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 30 represents 300 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</tr>
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**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
R2_AN_RLS_ACK_FLTR_TIME

Parameter name
R2 Analog Release Acknowledgement Filter Time

Functional description of parameter R2_AN_RLS_ACK_FLTR_TIME
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time for recognizing a valid release acknowledgement line signal.

Provisioning rules
Specify the filter time for recognizing a valid release acknowledgement line signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
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<tr>
<th>Minimum</th>
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</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
R2 Analog Ready To Send Guard Time

**Functional description of parameter R2_AN_RTS_GUARD_TIME**
This parameter is required in a switching unit with R2 analog signaling. It specifies the time that is waited for a clear forward signal after a ready to send signal is received from an outgoing trunk.

**Provisioning rules**
Specify the time that is waited for a clear forward signal after a ready to send signal has been received from an outgoing trunk. The value of this parameter is expressed in 160-ms units. For example, the default value of 15 represents a wait of 2.4 s.

**Range information**

<table>
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<tbody>
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**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2_AN_SEIZE_FLTR_TIME**

**Parameter name**
R2 Analog Seize Filter Time

**Functional description of parameter R2_AN_SEIZE_FLTR_TIME**
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time for recognition of a valid seize line signal.

**Provisioning rules**
Specify the filter time for seize signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 8 represents 80 ms.

**Range information**

<table>
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</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Analog Wait Before Clear Forward

Functional description of parameter R2_AN_WAIT_BEFORE_CF
This parameter is required in a switching unit with R2 analog signaling. It specifies the length of time that is waited after a seize message is sent before a clear forward signal is sent.

Provisioning rules
Specify the length of time that is waited after a seize message is sent before a clear forward signal is sent. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
R2_AN_WAIT_FOR_ANSWER

Parameter name
R2 Analog Wait For Answer

Functional description of parameter R2_AN_WAIT_FOR_ANSWER
This parameter is required in a switching unit with R2 analog signaling. It specifies the length of time that a trunk waits for an answer signal after receiving all of the address digits.

Provisioning rules
Specify the length of time that a trunk waits for an answer signal after receiving all of the address digits. The value of this parameter is expressed in seconds.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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</thead>
<tbody>
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</tr>
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</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Analog Wait For Idle

Functional description of parameter R2_AN_WAIT_FOR_IDLE
This parameter is required in a switching unit with R2 analog signaling. It specifies the length of time that a trunk waits for idle after receiving a release acknowledgement signal.

Provisioning rules
Specify the length of time that a trunk waits for idle after receiving a release acknowledgement signal. The value of this parameter is expressed in 160-ms units. For example, the default value of 15 represents a value of 2.4 s.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Analog Wait For Release Acknowledgement

Functional description of parameter R2_AN_WAIT_FOR_RLS_ACK
This parameter is required in a switching unit with R2 analog signaling. It specifies the length of time that is waited for a release acknowledgement signal after a clear forward signal is received.

Provisioning rules
Specify the length of time that is waited for a release acknowledgement signal after a clear forward signal is received. The value of this parameter is expressed in 160-ms units. For example, the default value of 15 represents a wait of 2.4 seconds.

Range information

<table>
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</thead>
<tbody>
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Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Digital Abnormal Signaling Condition During Idle

Functional description of parameter R2DIG_ABNRML_DURING_IDLE
This parameter is required in a switching unit with R2 digital signaling. It specifies the timer used by logutil for reporting a log after an abnormal signaling condition occurs during idle.

Provisioning rules
Specify the timer used by logutil for reporting a log after an abnormal signaling condition occurs during idle. The value of this parameter is expressed in seconds.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
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</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_ABNRML_DURING_OPLS**

**Parameter name**
R2 Digital Abnormal During Outpulse

**Functional description of parameter R2DIG_ABNRML_DURING_OPLS**
This parameter is required in a switching unit with R2 analog signaling. It specifies the filter time that is used to determine a change of line signaling during outpulsing. Any change of line signaling lasting for a period of time less than that specified by this parameter is ignored.

**Provisioning rules**
Specify the filter time that is used to determine a change of line signaling during outpulsing. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents a filter time of 100 ms.

**Range information**

<table>
<thead>
<tr>
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**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Digital Answer Filter Time

Functional description of parameter R2DIG_ANSWER_FLTR_TIME
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that the answer signal must be present before it is recognized as a valid signal and not a glitch.

Provisioning rules
Specify the length of time that the answer signal must be present before it is recognized as a valid signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</thead>
<tbody>
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</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
R2DIG_BLK_FLTR_TIME

Parameter name
R2 Digital Block Filter Time

Functional description of parameter R2DIG_BLK_FLTR_TIME
This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time for blocking of abnormal line signaling during idle.

Provisioning rules
Specify the filter time for blocking of abnormal line signaling during idle. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents a filter time of 100 ms.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
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</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
R2DIG_CD_BITS

Parameter name
R2 Digital CD Bits

Functional description of parameter R2DIG_CD_BITS
This parameter is required in a switching unit with R2 digital signaling. It specifies the two-bit hex string for initialization of the CD bits.

Provisioning rules
Specify the two-bit hex string for initialization of the CD bits. The allowable values are 00, 01, 10, and 11.

Range information

<table>
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<tbody>
<tr>
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<td></td>
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</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_CLR_BCK_FLTR_TIME**

**Parameter name**
R2 Digital Clear Back Filter Time

**Functional description of parameter R2DIG_CLR_BCK_FLTR_TIME**
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that the clear-back signal must be present before it is recognized as a valid signal and not a glitch.

**Provisioning rules**
Specify the length of time for clear-back signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 30 represents 300 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Digital Clear Forward Filter Time

Functional description of parameter R2DIG_CLR_FWD_FLTR_TIME
This parameter is required in a switching unit with R2 digital signaling. It represents the length of time that a clear forward signal must be present before it is recognized as a valid signal and not a glitch.

Provisioning rules
Specify the length of time for clear forward signal recognition. The value of this parameter is expressed in 10-ms units. For example, the default value of 20 represents 200 ms.

Range information
<table>
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<tr>
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Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_HOLD_SZ_IN_GLARE**

**Parameter name**
- R2 Digital Hold Seize In Glare

**Functional description of parameter R2DIG_HOLD_SZ_IN_GLARE**
- This parameter is required in a switching unit with R2 digital signaling. It specifies the time that a trunk stays in the seized condition after double seizure.

**Provisioning rules**
- Specify the time that a trunk stays in the seized condition after double seizure. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
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<tr>
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**Activation**
- Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
- Not applicable

**Consequences**
- Not applicable

**Verification**
- Not applicable

**Memory requirements**
- This parameter has no memory impact.

**Dump and restore rules**
- This parameter was introduced in BCS25.
  - Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_IDLE_AFTER_GLARE**

**Parameter name**
R2 Digital Idle After Glare

**Functional description of parameter R2DIG_IDLE_AFTER_GLARE**
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that a trunk stays in the idle condition after returning to idle following double seizure.

**Provisioning rules**
Specify the length of time that a trunk stays in the idle condition after returning to idle following double seizure. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents 100 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
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**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_IDLE_FLTR_TIME**

**Parameter name**
R2 Digital Idle Filter Time

**Functional description of parameter R2DIG_IDLE_FLTR_TIME**
This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time for a valid idle line signal after a clear-forward signal is received.

**Provisioning rules**
Specify the filter time for a valid idle line signal after a clear-forward signal is received. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents a filter time of 100 ms.

**Range information**

<table>
<thead>
<tr>
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</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
R2 Digital Outgoing CSM Filter Time

**Functional description of parameter R2DIG_OG_CSM_FLTR_TIME**
This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time on CSM for recognizing a valid reanswer signal following a clear-back signal.

**Provisioning rules**
Specify the filter time on CSM for recognizing a valid reanswer signal following a clear-back signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 10 represents a filter time of 100 ms.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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<td>10</td>
</tr>
</tbody>
</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_RE_ANS_FLTR_TIME**

**Parameter name**
R2 Digital Recognition of Answer Filter Time

**Functional description of parameter R2DIG_RE_ANS_FLTR_TIME**
This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time for recognition of a valid reanswer signal following a clear-back signal.

**Provisioning rules**
Specify the filter time for recognition of a valid reanswer signal following a clear-back signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 30 represents a filter time of 300 ms.

**Range information**

<table>
<thead>
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<tr>
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<td>30</td>
</tr>
</tbody>
</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

R2 Digital Seize Acknowledgement Filter Time

**Functional description of parameter R2DIG_SEIZE_ACK_FLTR_TIME**

This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time for recognition of a valid seize acknowledgement line signal.

**Provisioning rules**

Specify the filter time for recognition of a valid seize acknowledgement line signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 2 represents a filter time of 20 ms.

**Range information**

<table>
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</thead>
<tbody>
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</tbody>
</table>

**Activation**

Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2DIG_SEIZE_FAILURE_TIME**

**Parameter name**
R2 Digital Seize Failure Time

**Functional description of parameter R2DIG_SEIZE_FAILURE_TIME**
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that a trunk waits for the next line signal while in the seize acknowledgement or wait for answer state.

**Provisioning rules**
Specify the length of time that a trunk waits for the next line signal while in the seize acknowledgement or wait for answer state. The value of this parameter is expressed in seconds.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>20</td>
</tr>
</tbody>
</table>

**Activation**
Busy (BSY) and return to service (RTS) the affected peripheral modules.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Digital Seize Filter Time

Functional description of parameter R2DIG_SEIZE_FLTR_TIME
This parameter is required in a switching unit with R2 digital signaling. It specifies the filter time for recognition of a valid seize line signal.

Provisioning rules
Specify the filter time for recognition of a valid seize line signal. The value of this parameter is expressed in 10-ms units. For example, the default value of 2 represents 20 ms.

Range information
<table>
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</thead>
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<td>255</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
R2DIG_WAIT_FOR_ANSWER

Parameter name
R2 Digital Wait For Answer

Functional description of parameter R2DIG_WAIT_FOR_ANSWER
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that a trunk waits for answer after receiving all of the address digits.

Provisioning rules
Specify the length of time that a trunk waits for answer after receiving all of the address digits. The value of this parameter is expressed in seconds.

Range information

<table>
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</thead>
<tbody>
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<td>300</td>
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</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 Digital Wait For Seize Acknowledgement

Functional description of parameter R2DIG_WAIT_FOR_SEIZE_ACK
This parameter is required in a switching unit with R2 digital signaling. It specifies the length of time that a trunk waits for a seize acknowledgement signal following a seize signal.

Provisioning rules
Specify the length of time that a trunk waits for a seize acknowledgement signal following a seize signal. The value of this parameter is expressed in 160-ms units. For example, the default value of 20 represents 3.2 s.

Range information

<table>
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<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>20</td>
</tr>
</tbody>
</table>

Activation
Busy (BSY) and return to service (RTS) the affected peripheral modules.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**R2SM_TIMEOUT**

**Parameter name**

R2 Simplified Test Timeout

**Functional description of parameter R2SM_TIMEOUT**

This parameter is for use with the R2 Simplified Test. During this test, the incoming exchange translates incoming register signals and routes the call to the appropriate test line termination. After returning the answer signal, a composite 1020 + 1140 Hz tone is returned to the originating exchange in the answer state. The originating exchange transmits a composite tone of 1380 + 1980 Hz to acknowledge the test. The incoming exchange then stops the sending of the composite tone.

The originating exchange continues to transmit the tone for a period defined by this parameter. This acknowledgement is datafillable in time periods ranging from 0.5 seconds to 5 seconds.

**Provisioning rules**

Set this parameter to the required acknowledgement interval in increments of 0.5 seconds. This value must be an integer, so the time interval must be multiplied by two before datafilling. For example, the default value of 4 denotes an interval of two seconds.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (0.5 seconds)</td>
<td>10 (five seconds)</td>
<td>4 (two seconds)</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable.

**Consequences**

Not applicable.

**Verification**

Not applicable.

**Memory requirements**

Each unit requires 1 word of memory.

**Dump and restore rules**

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
R2 T3 Line Signaling Wait For Answer Automatic

Functional description of parameter R2T3_WAIT_FOR_ANSWER_AUTO
This parameter is associated with the T3 Line Signaling feature that provides the T3 line signaling protocol for the Australian DMS-300 gateway. It provides a timer that defines the maximum time a call may be in an unanswered state.

For operator assisted calls (semi-automatic) the default time is 20 minutes while direct dialed calls (automatic traffic) are timed for a default of 3 minutes. These timers are set up on a per-call basis after register signaling determines the call type.

This parameter defines the timing if the call is direct dialed. When this timer expires the call is taken down.

Provisioning rules
Leave the value of this parameter at the default unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>180</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
R2T3_WAIT_FOR_ANSWER_SEMIAUTO

Parameter name
R2 T3 Wait For Answer Semi-automatic

Functional description of parameter R2T3_WAIT_FOR_ANSWER_SEMIAUTO
This parameter is associated with the T3 Line Signaling feature that provides the T3 line signaling protocol for the Australian DMS-300 gateway.

This parameter specifies a timer that defines the maximum time that a call may be in an unanswered state. For operator assisted calls (semi-automatic) this time defaults to 20 minutes while direct dialed calls (automatic traffic) defaults to 2 minutes. These timers are set up on a per-call basis after register signaling determines the call type.

This parameter defines the timing if the call is operator assisted. When this timer expires the call is taken down.

Provisioning rules
Leave the value of this parameter at the default unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32,767</td>
<td>1200</td>
</tr>
</tbody>
</table>

Activation
Immediate

 Dependencies
Not applicable

 Consequences
Not applicable

 Verification
Not applicable

 Memory requirements
This parameter has no memory impact.

 Dump and restore rules
This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
RECOVERY_INTERVAL_AFTER_RELOAD

Parameter name
Recovery Interval After Reload

Functional description of parameter RECOVERY_INTERVAL_AFTER_RELOAD
This parameter is common to all switching units. It regulates the amount of time, in minutes, that the scheduler uses to assign higher percentages of call processing unit (CPU) time to guaranteed terminals and maintenance following a reload restart. This is done at the expense of call processing and takes effect only if guaranteed terminals and maintenance need the extra time.

As a result, login and terminal response from guaranteed terminals and maintenance activities speeds up immediately after a reload restart in a heavily loaded switch.

Once the time specified by this parameter expires, the CPU time available for the various scheduler classes reverts to normal proportions. These proportions are defined by the value of the parameter GUARANTEED_TERMINAL_CPU_SHARE in table OFCENG.

There should be no visible effect on a switching unit that is not loaded. The scheduler gives any unused time to any class that needs it.

Provisioning rules
The default value should be used unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>45</td>
<td>10</td>
</tr>
</tbody>
</table>

Activation
A new value takes effect immediately and applies to the next reload restart.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
RECOVERY_INTERVAL_AFTER_RELOAD

Dump and restore rules

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**RECOVERY_INTERVAL_AFTER_WARMCOLD**

**Parameter name**
Recovery Interval After Warm or Cold Restart

**Functional description of parameter**

This parameter is common to all switching units. It specifies the amount of time, in minutes, that the scheduler assigns 16% of the call processing unit (CPU) time to the guaranteed terminals scheduler class after a warm or a cold restart.

This percentage applies only if the switch is under a heavy load and the extra time is required by the guaranteed terminal class. The scheduler enforces only the percentages given to the various classes if there is no free CPU time available. More available time for guaranteed terminals speeds up login and response time at guaranteed terminals after a restart. The extra time offered to guaranteed terminals is taken from the time normally offered to call processing.

When the time specified by this parameter expires, the CPU time available for the various scheduler classes reverts to the normal proportions. These proportions are defined by the value of the parameter GUARANTEED_TERMINAL_CPU_SHARE in table OFCENG.

There should be no visible effect on a switching unit that is not loaded. The scheduler gives any unused time to any class that requires it.

**Provisioning rules**
The default value should be used unless otherwise specified by Northern Telecom.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16</td>
<td>2</td>
</tr>
</tbody>
</table>

**Activation**
A new value takes effect immediately and applies to the next reload restart.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable
RECOVERY_INTERRVAL_AFTER_WARMCOLD

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Remote Terminal Equipped

**Functional description of parameter REMTERMEQP**
This parameter is required for a local SuperNode switch. It indicates to the DMS-CORE computing module (CM) routine exercise (REX) test software whether a terminal is connected to the CM remote terminal interface (RTIF) remote channel.

CM REX test software can verify the consistency of this parameter with the RTIF status data.

**Provisioning rules**
If this parameter is left at the default of Y, the CM REX test software can verify that the RTIF status data indicates the appearance of a remote terminal. If this parameter is set to a value of Y, and there is no remote terminal, the REX test fails.

Set this parameter to a value of N if no remote terminal is equipped.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
An incorrect value for this parameter results in either an invalid failure of the CM REX test or incomplete CM REX test RTIF diagnostic coverage.

**Verification**
To verify that this parameter has been correctly set, use CI command sequence TABLE OFCENG, POS REMTERMEQP and verify the given result.

**Dump and restore rules**
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
REVERSE_EC_EQUIP

Parameter name
Reverse Echo Canceller Equipped

Functional description of parameter REVERSE_EC_EQUIP
This parameter is used in a DMS-100 switch for trunks using the United
Kingdom (UK) variant of national User Part (BTUP) signaling system. It
specifies the connection configuration of the echo canceller (EC) modules
connected to the switch. This information is passed directly to the central
control (CC). It is also passed on to the XMS–based peripheral module
(XPM) by static downloading.

Provisioning rules
To specify the conventional EC connection configuration, set the value of
this parameter to N (no).

To specify the reverse wired EC connection configuration, set the value of
this parameter to Y (yes).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate (in the CC).

The XPM must receive information about a change in the value of this
parameter. This can be done in the following 3 ways:
• WARM SWACT the XPM twice.
• COLD SWACT the XPM.
• Manually busy (BSY) and return to service (RTS) the XPM.

Dependencies
Not applicable

Consequences
If the value of this parameter does not match the connection configuration,
the call processing logic of the activation of the EC modules is incorrect.

Verification
Check the EC modules connection configuration and verify that the value of
this parameter matches the configuration.

Memory requirements
Each unit requires 1 word of memory.
Dump and restore rules

This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
**REVRING**

Parameter name

Revertive Ringing

**Functional description of parameter REVRING**

This parameter is required for a switching unit with revertive ringing. It controls the operation of the revertive ringing feature.

**Provisioning rules**

The value of this parameter can be set to CONDITIONAL_REVRING, REVRING or NO_REVRING.

When the value is REVRING and an 8 or 10 party line makes a call to a party on the same line, the calling party does not receive a ring splash if the call is from tip to ring, or ring to tip. When the call is from tip to tip or ring to ring, both parties hear ringing.

When the value is REVRING and a two or four party line makes a call to a party on the same line, the calling party receives a ring splash if the call is from tip to ring or ring to tip. When the call is from tip to tip or ring to ring, both parties hear ringing.

When the value is CONDITIONAL_REVRING and a 2, 4, 8, or 10 party line with coded ringing makes a call to a party on the same line, the calling party receives a ring splash if the call is from tip to ring or ring to tip. When the call is from tip to tip or ring to ring, both parties hear ringing.

When the value is CONDITIONAL_REVRING and a 4 or 8 party line with coded ringing makes a call to a party on the same line, the calling party receives a ring splash if the call is from tip to ring or ring to tip. When the call is from tip to tip or ring to ring, both parties hear ringing.

When the value is NO_REVRING and a 2, 4, 8, or 10 party line makes a call to a party on the same line, the calling party does not receive a ring splash if the call is from tip to ring or ring to tip. When the call is from tip to tip or ring to ring, both parties hear ringing.

When the value is CONDITIONAL_REVRING in a switching unit with superimposed ringing and a 4 party line with the ONI option (8 party line is automatically ONI), if the party line dials a 7 digit number that is a reverting call, the calling party receives dial tone and must dial the party identification code. The calling party then receives Originating Revertive Multi-party treatment. When the calling party goes on-hook both parties are rung. The calling party gets ring splash and the called party gets normal ringing.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>REVRING</td>
</tr>
</tbody>
</table>

OFCENG–622 297-1001-455 Standard 22.02 March 1994
Activation
Immediate

Dependencies
The operating company is responsible for supplying each subscriber of a 4PTY or 8PTY ONI line with a party identification digit as outlined in tables 1 and 2.

Four party superimposed ringing subscribers are identified with the following digits:

<table>
<thead>
<tr>
<th>Party Digit</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring party negative (R–)</td>
<td>2</td>
</tr>
<tr>
<td>TIP party negative (T–)</td>
<td>3</td>
</tr>
<tr>
<td>Ring party positive (R+)</td>
<td>4</td>
</tr>
<tr>
<td>TIP party negative</td>
<td>5</td>
</tr>
</tbody>
</table>

Eight party superimposed ringing subscribers are identified with the following digits:

<table>
<thead>
<tr>
<th>Party Digit</th>
<th>Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RING party negative (R–)</td>
<td>2</td>
</tr>
<tr>
<td>TIP party negative (T–)</td>
<td>3</td>
</tr>
<tr>
<td>RING party positive (R+)</td>
<td>4</td>
</tr>
<tr>
<td>TIP party positive (T+)</td>
<td>5</td>
</tr>
<tr>
<td>Ring party negative (R–)</td>
<td>6</td>
</tr>
<tr>
<td>TIP party negative (T–)</td>
<td>7</td>
</tr>
<tr>
<td>RING party positive (R+)</td>
<td>8</td>
</tr>
<tr>
<td>TIP party positive (T+)</td>
<td>9</td>
</tr>
</tbody>
</table>

Consequences
Not applicable

Verification
Not applicable
REVRING

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Ringing Number Answer Timeout

Functional description of parameter RING_NO_ANSWER_TMO
This parameter is required for an International Switching Centre with R1 signaling. It allows the operating company to specify the timeout period for a connection to be released if an answer signal is not received within the timeout period.

The default value for this parameter is T3, a 3.3 minute timeout.

Table 1 outlines additional values that can be assigned to this parameter.

<table>
<thead>
<tr>
<th>Value</th>
<th>Timeout</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2</td>
<td>2 minutes</td>
</tr>
<tr>
<td>T4</td>
<td>4 minutes</td>
</tr>
<tr>
<td>T30</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

Range information
Minimum | Maximum | Default
--------|---------|--------
         |         | T3     |

Activation
No restart is required.
Reload the affected peripheral modules (PM).
Reload the EXECs in all peripherals with incoming R1 trunks.

For T8As use the following command string:
- BSY;LOADPM EXEC;RTS.
For DTCs perform the following:
1  BSY INACTIVE
2  LOADPM INACTIVE CC EXEC
3  RTS INACTIVE
4  Wait for inactive data sync SWACT
5  Warm swact
6  Repeat the BSY, LOADPM .. EXEC, RTS for the newly inactive unit
RING_NO_ANSWER_TMO

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Remote Line Concentrating Module Emergency Stand Alone Notify Tone

Functional description of parameter RLCM_ESA_NOTIFY_TONE
This parameter allows the customer to specify a cadenced (on/off) tone instead of standard dial tone to alert users going off-hook that a remote line concentrating module (RLCM) is in emergency stand alone (ESA) mode.

Provisioning rules
Set the value of this parameter to Y (yes) to specify a cadenced tone to alert users going off-hook that an RLCM is in ESA mode.

Set the value of this parameter to N (no) to specify a standard dial when an RLCM is in ESA mode.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Activation is immediate within the CC, but it takes effect at the time of the nightly update of ESA static data or, after manually using the LOADPM command (with ESADATA command option) for the specified ESA module.

Dependencies
Not applicable

Consequences
Not applicable

Verification
If the parameter is present and set to Y (yes) the station user receives continuous bursts of tone (.25s on / .25s off) instead of standard dial tone when the XPM hosting the station is in ESA mode.

Memory requirements
This parameter has no memory requirements.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.
**RLCM_ESAENTRY_BADCSIDE**

**Parameter name**
Remote Line Concentrating Module Emergency Stand Alone Entry Bad C-side

**Functional description of parameter RLCM_ESAENTRY_BADCSIDE**
This parameter is used to control the performance of the remote line concentrating module (RLCM) emergency stand alone (ESA) feature and to control the performance of the remote digital line module (RDLM) ESA feature.

**Provisioning rules**
The value of this parameter is the desired delay between failure of the RLCM’s or RDLM’s communication with the C-side peripheral and dropping into ESA mode. This condition is detected by the loop around message mechanism.

The time is defined in minute intervals. For example a value of 6 specifies a period of 6 minutes.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>15</td>
</tr>
</tbody>
</table>

**Activation**
BUSY (BSY) and return to service (RTS) the RLCMs or RDLMs.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS21.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Remote Line Concentrating Module Emergency Stand Alone Entry Bad Link

Functional description of parameter RLCM_ESAENTRY_BADLINK
This parameter is used to control the performance of the remote line concentrating module (RLCM) emergency stand alone (ESA) feature and to control the performance of the remote digital line module (RDLM) ESA feature.

Provisioning rules
Set the value of this parameter to the desired delay between links failure and the RLCM or RDLM dropping into ESA mode.

The delay time is defined in 10-s intervals. For example, a value of 6 indicates a delay of 60 s).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>100</td>
<td>3</td>
</tr>
</tbody>
</table>

Activation
BUSY and return to service (RTS) the RLCMs or RDLMs.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**RLCM_ESASDUPD_BOOL**

**Parameter name**
Remote Line Concentrating Module Emergency Stand Alone Static Data Update Boolean

**Functional description of parameter RLCM_ESASDUPD_BOOL**
This parameter is used to control the performance of the remote line concentrating module (RLCM) emergency stand alone (ESA) feature and the remote digital line module (RDLM) ESA feature.

**Provisioning rules**
The value of this parameter determines whether ESA static data is downloaded to all ESA equipped RLCMs or RDLMs during the nightly update of ESA static data.

If the value of this parameter is left at the default value of Y (yes), the static data is downloaded during the nightly update.

If the value of this parameter is set to N (no), the static data is not downloaded during the nightly update.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Remote Line Concentrating Module Emergency Stand Alone Static Data Update Hour

Functional description of parameter RLCM_ESASDUPD_HOUR
This parameter is used to control the performance of the remote line concentrating module (RLCM) emergency stand alone (ESA) feature and the remote digital line module (RDLM) ESA feature.

Provisioning rules
The value of this parameter is the daily starting time for downloading of ESA static data to all RLCMs, sequentially, according to the data defined in table LCMINV. It is also used as the daily starting time for downloading of ESA static data to all RDLMs, sequentially, according to data defined in table DLMINV.

Specify the time in hour intervals (for example, a value of 4 represents four o'clock in the morning).

The value should be chosen such that:
• It is a time of low traffic on the switch.
• It is not the same time as the weekly LCM or DLM REX test.
• It is not the same time as the RSC nightly update. See parameter RSC_ESASDUPD_HOUR in table OFCENG.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>4</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
RLCM_ESASDUPD_HOUR

Dump and restore rules

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Remote Line Concentrating Module XMS-based Peripheral Module
Emergency Stand Alone Exit

**Functional description of parameter RLCM_XPMESAEXIT**

This parameter is used to control the performance of the remote line concentrating module (RLCM) emergency stand alone (ESA) feature and the remote digital line module (RDLM) ESA feature.

**Provisioning rules**

The value of this parameter is the desired delay between links being restored (or communication with C-side peripheral recovered) and RLCM or RDLM coming out of ESA mode.

Specify the time in 10-s intervals. For example, a value of 2 represents a delay of 20 s).

A value of 0 (zero) indicates that a manual RTS (return to service) is required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
RNG_TIMEOUT_NO_OF_SECS

Parameter name
Ringing Timeout Number of Seconds

Functional description of parameter RNG_TIMEOUT_NO_OF_SECS
This parameter is required for a local switching unit in North America or a local (international) switching unit with universal translations and specifies the number of seconds before ringing on a line times out, in 1-s intervals.

This value is downloaded to the appropriate peripheral modules (PM).

For a PM connected to an international line group controller (ILGC) in a local (international) switching unit, a parameter value of 0 (zero) indicates no timeout on ringing.

Provisioning rules
Set the value of this parameter, in 1-s intervals, to equal the number of seconds before ringing on a line times out.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (North America)</td>
<td>326</td>
<td>240 (4 min)</td>
</tr>
<tr>
<td>0 (International)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
For all PMs supporting line concentrating devices (LCD), except those connected to an extended multiprocessor system (XMS)-based PM (XPM), a BSY and RTS is required. For LCDs connected to an XPM, a BSY and RTS need only be performed on one LCD for each XPM, but both units of that LCD must be busied at the same time (BSY PM, RTS PM).

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 corrected activation information

OFCENG-634 297-1001-455  Standard 22.02 March 1994
RNG_TMEOUT_TKLN_SECS

Parameter name
Ringing Timeout Trunk to Line in Seconds

Functional description of parameter RNG_TMEOUT_TKLN_SECS
This parameter defines the time, in seconds, that is allowed for the application of ringing tone during trunk to line calls.

When subscriber A calls subscriber B (during a trunk to line call) and B does not answer, ringing can be applied for the duration specified by this parameter. When this time expires, the ringing is stopped from the terminating office.

Provisioning rules
Specify the length of time that is allowed for the application of ringing tone during trunk to line calls.

The value of this parameter must be higher than the preanswer timeouts for toll and international calls specified by field PREANSTO in table CTRLTMRS.

If the preanswer timeout for a given call class is equal to 0 or has a value greater than the value of this parameter, the ringing timeout for that call class will be equal to the value of this parameter.

If the value of this parameter is left at the default of 0 (zero), the ringing timeout specified by office parameter RNG_TMEOUT_NO_OF_SECS in table OFCENG is used for trunk to line calls.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>326</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Office parameter RNG_TMEOUT_NO_OF_SECS in table OFCENG specifies the length of time that ringing tone can be applied for line to line calls.

Consequences
If the value of this parameter is kept below the preanswer timeout for toll and international calls, this parameter will have control over the answer timeout of these calls.
Verification

To verify that this parameter is functional perform the following steps:
1. Set PREANSTO fields in table CTRLTMRS to any value smaller than the value of this parameter except 0.
2. Verify that the answer timeouts are equal to the PREANSTO values.
3. Set PREANSTO fields in table CTRLTMRS to 0.
4. Verify that the ringing timeouts are equal to the value of this parameter.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS36.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter introduced
**Parameter name**
Remote Office Test Line Out of Service Level

**Functional description of parameter ROTL_OUT_OF_SERVICE_LEVEL**
This parameter is required for all switching units with the remote office test line (ROTl) unit. It specifies the percentage of trunks that can be put out of service by ROTL.

**Provisioning rules**
The values that can be assigned to this parameter are
- NA (NO ALARM)
- MN (MINOR ALARM)
- MJ (MAJOR ALARM)
- CR (CRITICAL ALARM).

To convert these values into a percentage read fields MINALM, MAJALM, or CRITALM in table CLLIMTCE.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MJ</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
See fields MINALM, MAJALM, or CRITALM in table CLLIMTCE.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
Copy the existing value of this parameter when doing a dump and restore.
**ROTL_TIME_IN_20MIN**

**Parameter name**
Remote Office Test Line Time In 20 Minute Intervals

**Functional description of parameter ROTL_TIME_IN_20MIN**
This parameter is required for all switching units with the remote office test line (ROTL) unit. It specifies the maximum time, in twenty minute intervals, that is waited for any incoming message from ROTL test ports and its scan points.

**Provisioning rules**
Specify the maximum time, in twenty minute intervals, that is waited for any incoming message from ROTL test ports and its scan points.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact

**Dump and restore rules**
Copy the existing value of this parameter when doing a dump and restore.
ROUTE_ON_FOT

Parameter name
route on forward transfer

Functional description of parameter ROUTE_ON_FOT
This parameter applies to DMS-300 gateway switching units. It determines how forward transfer signals are handled on CCITT #5 and #6 signaling trunks.

Provisioning rules
When this parameter is set to a value of Y (yes), forward transfer signals received on CCITT #5 or #6 signaling trunks cause existing connections to CCITT R1 or #7 signaling trunks to be dropped.

An attempt to establish another connection is made using the digits held in office parameter FOT_DIGITS.

When this parameter is set to N (no), forward transfer signals are handled in the usual manner (on most inter-workings the forward transfer is propagated).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate.

Dependencies
Not applicable

Consequences
See parameter FOT_DIGITS in table OFCVAR.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
**RSC_ESA_NOTIFY_TONE**

**Parameter name**
Remote Switching Centre Emergency Stand Alone Notify Tone

**Functional description of parameter RSC_ESA_NOTIFY_TONE**
This parameter is associated with the Distinctive Tone Burst For Emergency Operation feature that enhances the existing emergency stand alone (ESA) abilities of suitably equipped remote cluster controllers (RCC). It allows, short bursts of tone preceding standard dial tone to remote switching terminals (RST) to alert users that have gone off-hook that emergency operation is in effect.

**Provisioning rules**
Set the parameter to Y (yes), to activate the Distinctive Tone For Emergency Stand Alone Operation feature.

Set the parameter to N (no), to deactivate the Distinctive Tone For Emergency Stand Alone Operation feature.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This value is selected to ensure that the normal and emergency modes of switch operation are transparent to most customers.

**Activation**
Immediate

Activation is immediate within the CC, but takes effect at the time of the nightly update of RCC ESA static data or after manually using the LOADPM command (with the ESADATA command option) for the specified peripheral.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

Verify that the station user receives approximately 6 short bursts of tone preceding standard dial tone when the XMS-based peripheral module (XPM) hosting the station is in ESA mode when this parameter is set to Y.
Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.
Copy the existing value of this parameter when doing a dump and restore.
**RSC_ESAENTRY_BADCSIDE**

**Parameter name**
Remote Service Centre Emergency Stand Alone Entry Bad C-side

**Functional description of parameter RSC_ESAENTRY_BADCSIDE**
This parameter is required and appears only in a switching unit with the remote cluster controller (RCC) and the Emergency Stand Alone (ESA) feature.

**Provisioning rules**
Set the value of this parameter to the desired delay between failure of the remote service centre's communication with the C-side peripheral and dropping into ESA mode. This condition is detected by the loop around message mechanism.

The time is defined in one minute intervals. For example a value of 6 represents a delay of 6 minutes.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>60</td>
<td>5</td>
</tr>
</tbody>
</table>

**Activation**
Done at the time of the nightly update of RCC ESA static data, LOADPM with ESADATA option, and RTS (return to service) if needed.

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.

**Parameter history**
BCS36 default value corrected
RSC_ESAENTRY_BADLINK

Parameter name
Remote Service Centre Emergency Stand Alone Entry Bad Link

Functional description of parameter RSC_ESAENTRY_BADLINK
This parameter is required and appears only in a switching unit with the remote cluster controller (RCC) and the emergency stand alone (ESA) feature.

Provisioning rules
Set the value of this parameter to the desired delay between a link failure and the remote switching centre dropping into ESA mode.

The delay time is defined in 10-s intervals. For example, a value of 6 results in a 60 s delay.

The recommended value for this parameter is the default of 0 (zero).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Done at the time of the nightly update of RCC ESA static data. A LOADPM with ESADATA option and return to service (RTS) is needed.

Dependencies
Not applicable

Consequences
If this parameter is not set to a value of 0, an intermittent link fault can cause the control control (CC) to query an RCC during the RSC_ESAENTRY_BADLINK timeout, determine that it is not in ESA mode, and begin a return to service (RTS) process that fails due to the link fault.

Verification
Not applicable

Dump and restore rules
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Remote Service Centre Emergency Stand Alone Static Data Update Boolean

**Functional description of parameter RSC_ESASDUPD_BOOL**
This parameter is required and appears only in a switching unit with the remote cluster controller (RCC) and the emergency stand alone (ESA) feature.

The value of this parameter determines whether ESA static data should be downloaded to all RCCs during the nightly update of the remote switching centre (RSC) static data.

**Provisioning rules**
If the value is left at the default value of Y (yes), the static data is downloaded during the nightly update.

If the value of this parameter is set to N (no), the static data is not downloaded during the nightly update.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Remote Service Centre Emergency Stand Alone Static Datat Update Hour

**Functional description of parameter RSC_ESASDUPD_HOUR**
This parameter is required and only appears in a switching unit with the remote cluster controller (RCC) and the emergency stand alone (ESA) feature.

**Provisioning rules**
The value of this parameter is the daily starting time for downloading ESA static data to all remote service centres, sequentially, according to the datafill in table RCCINV.

The time is defined in hour intervals. For example a value of 2 specifies a start time of two o’clock in the morning.)

**Range information**
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS20.
Copy the existing value of this parameter when doing a dump and restore.
**RSC_XPMESAEXIT**

**Parameter name**
Remote Cluster Controller Xms-based Peripheral Module Emergency Stand Alone Exit

**Functional description of parameter RSC_XPMESAEXIT**
This parameter is required and appears only in a switching unit with the remote cluster controller (RCC) and the emergency stand alone (ESA) feature.

**Provisioning rules**
Set the value of this parameter to the desired delay between links being restored (or communication with C-side peripheral recovered) and the remote service centre coming out of ESA mode.

The time is defined in 10-s intervals (for example, a value of 2 indicates a delay of 20 s).

A value of 0 (zero) indicates that a manual return to service (RTS) is required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>6</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter value requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
SAPARMS

Parameter name
Service Analysis Parameters

Functional description of parameter SAPARMS
This parameter is required for switching units with the Service Analysis feature (software package NTX065AA).

This parameter is required in a Turkey Local and Toll switching unit with software package NTX906AA International Service Analysis.

The format for P_SAPARMS is as follows:

<table>
<thead>
<tr>
<th>Description of field names</th>
<th></th>
<th>Entry</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field name</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| OFC                         |   | alphabetic | Office name.
|                             |   |       | Enter the office name. Default is OFFICE. |
| MAXTSECS                    |   | 1 - 120 | Maximum talk seconds.
|                             |   |       | Enter the time, in seconds, that the voice monitor is on. Default is 30. |
| MAXUSERS                    |   | 1 - 5  | Number of service analysis users.
|                             |   |       | Enter the maximum number of service analysis users. Default is 3. |
| SYSTONE                     |   | Y or N | Tone.
|                             |   |       | Enter Y (yes) when automatic report of connection of tone in analyzing switching unit is required, otherwise enter N (no). Default is Y. |
| SYSANN                      |   | Y or N | Announcement.
|                             |   |       | Enter Y (yes) when automatic report of connection of announcement in analyzing switching unit is required, otherwise enter N (no). Default is Y. |

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>OFFICE 30 3 Y Y</td>
</tr>
</tbody>
</table>

Activation
Warm restart

Dependencies
Not applicable

Consequences
Not applicable
SAPARMS

Verification
Not applicable

Memory requirements
This parameter has no memory requirements.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

SC and OP Trunk Automatic Number Identification Request Time

Functional description of parameter SC_OP_ANI_REQ_TIME

This parameter is required for switching units with the 4X Operation – Bell Format automatic number identification (ANI) feature. It specifies the maximum time, in 1 second intervals, that an OP trunk waits for the ANI request signal from the far end for a call that originates from a SuperCAMA (SC) trunk.

Provisioning rules

If other than 15 seconds, specify the time, in 1-s intervals, that an OP trunk waits for the ANI request signal from the far end for a call that originates from a SC trunk.

If this option is not required, leave the value of this parameter at the default value.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>59</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Verification

Set up a call between an SC and OP trunk with no ANI request signal from the far end and verify how long the OP trunk wait for an ANI request signal.

Consequences

If the time interval is too short, calls from SC to OP trunks are routed to ANIFAIL.

If the time interval is too long, the holding time for calls from SC to OP trunks could increase.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
SCREEN_AC_LOGIDS

Parameter name
Screen Attendant Console Login Identifiers

Functional description of parameter SCREEN_AC_LOGIDS
This parameter is required for a Meridian Stored Logic 100 (MSL100) switching unit. It specifies whether the validation of an attendant LOGIN ID is required.

If the value of this parameter is set to Y (yes), and an attendant attempts to login with an ID that is datafilled in table ACLOGID, the office parameter check is ignored and the attendant is permitted to log in if all other checks are met.

If the attendant attempts to login with an ID that is not datafilled in table ACLOGID, the login attempt is rejected and the attendant receives the message “DISALLOWED” on the key lamp display, and a LOGFAIL report is generated.

If the value of this parameter is left at the default value, the attendant is still allowed to log in with an ID that is not datafilled in table ACLOGID unless an attendant is already logged in using the same ID.

The attendant can login using any three-digit login IDs, except 000 and numbers that are already being used by other attendants at other console positions.

Provisioning rules
Set the value of this parameter to Y, if validation of an attendant’s login ID is required.

Leave the value of this parameter at the default value, if validation of an attendant’s login ID is not required.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable
SCREEN_AC_LOGIDS

Verification
If the value of this parameter is Y, login at an attendant console with a login ID that is not datafilled in table ACLOGID.

The login attempt will be rejected and the message “DISALLOWED” will be displayed on the key lamp display, and a LOGFAIL report will be generated.

If value of parameter is N, login at an attendant console with a login ID that is not datafilled in table ACLOGID. The LOGIN will be accepted.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
SDB_QUERY_TIMEOUT

Parameter name
Services Database Query Timeout

Functional description of parameter SDB_QUERY_TIMEOUT
This parameter is required for a switching unit with Telecom Canada automated calling card service (ACCS). Operating companies that use BellCore ACCS use the field TIMEOUT in tables CCVPARMS and BNSPARMS to provide the function of this parameter.

Provisioning rules
The value of this parameter specifies the length of time (in seconds) that the system waits before generating a timeout error after a services database (SDB) query has been sent but not received.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation
immediate

Dependencies
Not applicable.

Verification
Not applicable.

Consequences
Not applicable.

Memory requirements
This parameter value requires 1 word of memory.

Dump and restore rules
Prior to BCS34, this parameter was named ACCS_QUERY_TIMEOUT. When performing dump and restore from BCS33 or lower to BCS34 or higher, a reformat procedure (QUERY_TIMEOUT_RFMT) deletes the office parameter in offices that use BellCore ACCS and renames it in offices that use Telecom Canada ACCS.

This parameter was introduced with software release BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Signalizing Engineering And Administration System Buffer Volume

Functional description of parameter SEAS_BUFFER_VOL

This parameter is required for a DMS signal transfer point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application-level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the disk volume name on which the buffer file is to be defined for storing outgoing messages when the communication links to the SEAC are not operational. This volume is also used to store SEAS operational measurement (OM) data. The size of this volume is described in the SEAS Reference Guide, 297-5101-020.

If the disk containing the buffer volume is removed from service, only UAL messages can be transmitted if at least one Permanent Virtual Circuit (PVC) is INSV. When the disk has returned to service, UPL messages can again be transmitted.

SEAS files can not be deleted from the disk volume.

There are 75 files created on this disk volume. Of the 75 files, 74 of them are related to SEAS OM data collection.

If a Good Morning (GM) message is received while the disk volume is not INSV or ISTB, the message is accepted and processed accordingly.

If the DSKALLOC command REINIT is issued on the disk volume when a SEAS message is to be transmitted and all PVCs are SYSB, a SEAS103 log is generated and the message is not transmitted. The SEAS files are recreated when the disk volume is returned to service and UPL messages can be transmitted and received.

If the SEAS state is MANBd from an OFFL state and the disk volume is MANB, SEAS files are not allocated on the disk, the files can be allocated once the disk is returned to service.
If the SEAS state is OFFLd from an MANE state, all SEAS files are erased from the disk volume. If the SEAS state is OFFLd from a MANB state and the disk volume is MANB, SEAS files are not de-allocated on the disk. The files can be de-allocated once the disk is returned to service.

If the disk volume is removed from service, when a message is to be transmitted and no PVCs are inservice, a disk log is generated and the message is not transmitted. Messages can be transmitted once the disk volume is returned to service.

If the disk volume becomes full while a SEAS message is being received, a SEAS log is generated and the message is discarded. When space becomes available on the disk volume, messages can again be written to it and transmitted once SEAS PVCs become available.

If the disk volume is MANB and there are PVCs INSV, no abnormal logs are generated (i.e., the transmission audit may try to find files on the disk).

When the disk volume is returned to service and contains a SEAS message while there are PVCs INSV, the SEAS message on the disk file is transmitted.

If a message is to be transmitted and all PVCs are SYSB, the message is written to the disk volume. If a message is to be transmitted while all PVCs are SYSB and one message is already stored in the buffer file, the message is not stored and a log is generated.

If the buffer file contains a SEAS message and the first PVC becomes available, the message is transmitted.

If all PVCs go SYSB while awaiting confirmation of a message and the confirmation timer expires, the SEAS message is written to the buffer file located on the disk volume.

**Provisioning rules**

Specify the 1 to 12 character name assigned to the disk volume on which the buffer file is to be defined for storing outgoing messages when the SEAS links are not operational.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D000SEASBF</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

To affect a change to this parameter requires SEAS and the PVC concerned to be off-line.
SEAS_BUFFER_VOL

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS26.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Signaling Engineering and Administration System Number of Message Blocks

Functional description of parameter SEAS_MSG_BLK_NUM

This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application-level support for the STP.

SEAS is an operations-support software system with a database developed by Belcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter sets the number of message blocks defined for use by the applications in the SEAS interface.

Message blocks are used to receive commands and to send responses.

Provisioning rules

If the number of message blocks required for use by the applications in the SEAS interface is not 100, specify the quantity required.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation

Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be off-line.

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable
Memory requirements

This parameter has no memory requirements.

Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Signal Engineering and Administration System Message Block Volume

Functional description of parameter SEAS_MSG_BLK_VOL

This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application-level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the 1 to 12 character disk volume name on which the incoming and outgoing SEAS message blocks to be stored in the format of one file for each message block.

If the disk volume name is removed from service while a SEAS message is being received, that message and all messages sent from the SEAC are not received until the disk is returned to service. When the disk is returned to service, messages can again be received.

SEAS files can not be deleted from the disk volume.

If a Good Morning (GM) message is received while the disk volume is not INSV or ISTB, the message is accepted and processed accordingly.

If the DSKALLOC command REINIT is issued on the disk volume when incoming SEAS messages are received, a SEAS103 log is generated and the message is not confirmed. The SEAS files are recreated when the volume is returned to service and UPL messages can again be transmitted and received.

If the SEAS state is MANBd from an OFFL state and the disk volume is MANB, SEAS files are not allocated on the disk, the M/B flag remains set to false and the files may be allocated once the disk is returned to service.

If the SEAS state is OFFLd from an MANB state, all SEAS files are erased from the disk volume. If the SEAS state is OFFLd from a MANB state and the disk volume is MANB, SEAS files are not de-allocated on the disk, the M/B flag remains set to true and the files may be de-allocated once the disk is returned to service.
If the disk volume is removed from service, a disk log is generated and the message is not confirmed when a message is received. Messages may be received and confirmed when the disk volume is returned to service.

If the disk volume becomes full while a SEAS message is being received, a SEAS log is generated and the message is discarded. When space becomes available on the disk volume, SEAS messages can again be transmitted and received.

The size of this volume is described in the SEAS operations manual.

**Provisioning rules**

Specify the 1 to 12 character disk volume name.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D000SEASBK</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

To affect a change to this parameter, the SEAS and the PVC concerned must be off-line.

**Dependencies**

The number of SEAS files created on the disk volume is equal to the value of parameter SEAS_MSG_BLK_NUM in table OFCENG.

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
SEAS_SEG_SIZE

Parameter name
Signaling Engineering and Administration System Segment Size

Functional description of parameter SEAS_SEG_SIZE
This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application-level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the size of the message segment used to split a long message into smaller units (segments).

If the value is 4060, the size of transmitted segments is 4060 bytes (including UAL and UPL).

The segment length in multi-segment messages can be smaller than or equal to the size specified by this parameter.

Provisioning rules
If other than 4060, specify the size of the message segment to be used to split up a long message into smaller units (segments).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>2048</td>
<td>4096</td>
<td>4060</td>
</tr>
</tbody>
</table>

Activation
Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be off-line.

Dependencies
Not applicable

Consequences
Not applicable

OFCENG-660 297-1001-455 Standard 22.02 March 1994
Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS26.
Copy the existing value of this parameter when doing a dump and restore.
**SEAS_TIME_ZONE**

**Parameter name**
Signaling Engineering And Administration System Time Zone

**Functional description of parameter SEAS_TIME_ZONE**
This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative centre (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the time zone in which an STP is located. The time zone is used as part of a time stamp in messages that are sent to the SEAC.

**Provisioning rules**
If other than the Uninitialized Value (NTZ), enter one of the following values as outlined in table 1.

<table>
<thead>
<tr>
<th>Value</th>
<th>Time Zone</th>
<th>Standard/Daylight</th>
</tr>
</thead>
<tbody>
<tr>
<td>NST</td>
<td>Newfoundland</td>
<td>Standard time</td>
</tr>
<tr>
<td>NDT</td>
<td>Newfoundland</td>
<td>Daylight time</td>
</tr>
<tr>
<td>AST</td>
<td>Atlantic</td>
<td>Standard time</td>
</tr>
<tr>
<td>ADT</td>
<td>Atlantic</td>
<td>Daylight time</td>
</tr>
<tr>
<td>EST</td>
<td>Eastern</td>
<td>Standard time</td>
</tr>
<tr>
<td>EDT</td>
<td>Eastern</td>
<td>Daylight time</td>
</tr>
<tr>
<td>CST</td>
<td>Central</td>
<td>Standard time</td>
</tr>
<tr>
<td>CDT</td>
<td>Central</td>
<td>Daylight time</td>
</tr>
<tr>
<td>MST</td>
<td>Mountain</td>
<td>Standard time</td>
</tr>
<tr>
<td>MDT</td>
<td>Mountain</td>
<td>Daylight time</td>
</tr>
<tr>
<td>PST</td>
<td>Pacific</td>
<td>Standard time</td>
</tr>
</tbody>
</table>

---continued---

OFCENG–662  297-1001-455  Standard 22.02  March 1994
Table 1
SEAS_TIME_ZONE values (continued)

<table>
<thead>
<tr>
<th>Value</th>
<th>Time Zone</th>
<th>Standard/Daylight</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDT</td>
<td>Pacific</td>
<td>Daylight time</td>
</tr>
<tr>
<td>YST</td>
<td>Yukon</td>
<td>Standard time</td>
</tr>
<tr>
<td>YDT</td>
<td>Yukon</td>
<td>Daylight time</td>
</tr>
<tr>
<td>HST</td>
<td>Hawaiian-Alaskan</td>
<td>Standard time</td>
</tr>
<tr>
<td>HDT</td>
<td>Hawaiian-Alaskan</td>
<td>Daylight time</td>
</tr>
<tr>
<td>BST</td>
<td>Bering</td>
<td>Standard time</td>
</tr>
</tbody>
</table>

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NTZ</td>
</tr>
</tbody>
</table>

Activation

Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be offline.

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
**SEAS_UAL_RETRY_COUNT**

**Parameter name**

Signaling Engineering And Administration System User Application Layer Retry Count

**Functional description of parameter SEAS_UAL_RETRY_COUNT**

This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application level support for the STP.

SEAS is an operations—support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter defines the number of retries that are attempted for message transmission between the SEAC and the DMS—STP nodes over a specific permanent virtual circuit (PVC).

The value of this parameter is equal to the number of times an unconfirmed message is to be transmitted.

When a SEAS message has been retransmitted over a PVC the number of times specified by this parameter, the PVC is set to a SYSB state and Good Morning 1 (GMI) messages are transmitted. When GMI messages are transmitted, the far end removes the link from service also. An attempt is then made to transmit the original SEAS message over the next INSV PVC.

**Provisioning rules**

If other than 1, specify the number of times an unconfirmed message is to be transmitted.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be off line.
SEAS_UAL_RETRY_COUNT

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
**SEAS_UAL_SEAC_NODE_NAME**

**Parameter name**
Signaling Engineering and Administration System User Application Layer  
Signaling Engineering and Administrative Center Node Name

**Functional description of parameter SEAS_UAL_SEAC_NODE_NAME**
This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the destination node field used for filling part of the header of outgoing messages. It is also used to verify the source of incoming SEAS messages.

The first character of the destination node field must be E.

**Provisioning rules**
Specify the 1 to 12 character name assigned to the destination node field. The first character must be an upper case E. This first character is used to identify the type of CCS network element. The upper case E is used to identify the network element as a SEAC.

The remaining 11 characters must be upper case alphanumericics (that is A thru Z plus 0 thru 9, with no special characters allowed).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ESEASNJPYRRC</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

To affect a change to this parameter SEAS and the PVC concerned must be off-line.

**Dependencies**
Not applicable

**OFCENG-666** 297-1001-455  Standard 22.02  March 1994
**SEAS_UAL_SEAC_NODE_NAME**

**Consequences**
If the value of the parameter is not the same as the name used by the SEAC, the incoming message is discarded, a SEAS102 log is generated with an information error message, and no UAL site-to-site confirmation is given.

**Verification**
Verify that the name assigned to this parameter is the same that is used by the SEAC to identify itself.

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
**SEAS_UAL_SITE_TO_SITE_TIMER**

**Parameter name**
Signaling Engineering and Administration System User Application Layer
Site To Site Timer

**Functional description of parameter SEAS_UAL_SITE_TO_SITE_TIMER**
This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative centre (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the timeout period for acknowledgement handshakes between the SEAC and the DMS-STP nodes.

When a single segment message is transmitted with the confirmation flag set to 01 and no GM4 message is received within the timeout period specified by this parameter, the message is retransmitted.

The value of this parameter is equal to the site-to-site confirmation timeout period. Retransmission of messages continues until the site-to-site confirmation times out. The value of this parameter is also equal to the timeout period for GM1 messages (T2) and GM2 messages (T3).

**Provisioning rules**
If other than 15 seconds, specify the timeout period for acknowledgement handshakes between the SEAS and the DMS-STP nodes, in one second intervals.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>95</td>
<td>15</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be offline.

OFCENG-668 297-1001-455 Standard 22.02 March 1994
SEAS_UAL_SITE_TO_SITE_TIMER

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
**SEAS_UAL_STP_NODE_NAME**

**Parameter name**
Signal Transfer Point Node Name

**Functional description of parameter SEAS_UAL_STP_NODE_NAME**
This parameter is required for a DMS Signal Transfer Point (STP) switching unit with the signaling engineering and administration system (SEAS) software package. This package supports the user application layer (UAL) interface to the signaling engineering and administrative center (SEAC). It also supports the user program layer (UPL). The UAL interface is synonymous with the transport layer of the OSI communications protocol model. The UPL software layer provides SEAS application level support for the STP.

SEAS is an operations-support software system with a database developed by Bellcore. It provides personnel of the operating company SEAC with mechanized support capabilities to provision, engineer, and administer the network of STPs and signaling links for each regional Bell company or Bell Operating Company (BOC).

This parameter specifies the source node field to be used for filling part of the header of outgoing SEAS messages. It is also used to verify that the DMS-STP is the proper receiver of incoming messages.

The name assigned to the value of this parameter must be a combination of numerics or upper case alphabetic characters, any others are disallowed. The first character of the source node field must be T.

**Provisioning rules**
Specify the 1 to 12 character name assigned to the Source Node Name.

The first character must be an upper case T. This first character is used to identify the type of CCS network element. The upper case T is used to identify the network element as an STP. The remaining 11 characters MUST be upper case alphanumeric (that is A thru Z plus 0 thru 9, with NO special characters allowed)

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TBNROTTAWA00</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

To affect a change to this parameter, SEAS and the PVC concerned must be off-line.

OFCENG–670 297-1001-455 Standard 22.02 March 1994
SEAS_UAL_STP_NODE_NAME

**Dependencies**
Not applicable

**Consequences**
If the value of this parameter is not the same as the SEAC uses to identify
the DMS-STP, the incoming message is discarded, a SEAS102 log is
generated with an information error message and no UAL site-to-site
confirmation is given.

**Verification**
Verify that the name assigned to this parameter is the same that is used by
the SEAC to identify the DMS-STP.

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
**SEP_EQUIPPED**

**Parameter name**
Service Evaluation System Equipped

**Functional description of parameter SEP_EQUIPPED**
This parameter is required for a local, toll or combined local/toll switching unit and specifies whether the DMS Service Evaluation System (SES) interface feature resides in software.

The value of this parameter is set to Y (yes), if the DMS SES interface resides in software. This parameter can only be set to Y, in switching units with the DMS SES Interface feature (software package NTX215AA).

This feature is part of the interface between the DMS and the No.2 Service Evaluation System (No.2 SES). The No.2 SES evaluates call completion and produces statistics on call disposition. Call completion and disposition information generated by the No.2 SES can stimulate maintenance on facilities with poor performance records and help detect some fraudulent uses of network resources.

The DMS/No.2 SES interface is an entirely automated system for service evaluation.

Depending on type of switching unit, the DMS performs two types of service evaluation:

1. **Incoming Trunk Service Evaluation (ITSE)** which evaluates calls incoming from an InterLATA Carrier Point of Presence through an access tandem to an end switching unit.
2. **Dial Line Service Evaluation (DLSE)** which evaluates calls that originate from lines and fit the standard North American numbering plan.

**Provisioning rules**
The value of this parameter can only be changed by Northern Telecom personnel.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
This feature requires the Multi-Protocol Controller software package (NTX273AA) to function properly.

Table SEILINKS is required, if the value of this parameter is set to Y.
SEPREQUIPPED

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS23.
Copy the existing value of this parameter when doing a dump and restore.
**SET_TO_UNBALANCE**

**Parameter name**
Set To Unbalance

**Functional description of parameter SET_TO_UNBALANCE**
This parameter informs the Automatic Line Testing (ALT) feature that a balance test must be performed on all new plain ordinary telephone service (POTS) lines with a padgroup of STDLN.

**Provisioning rules**
Set the value of this parameter to Y (yes) so that, when a command is issued in a service order on a POTS line, and table LNINV is set to STDLN and the manual overdrive (MNO) field is set to N (no), the padgroup is changed by the service order to the setting of UNBAL.

A restart sets the value of this parameter to N. The value of this parameter is always N when an office load arrives on sight.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable.

**Consequences**
Not applicable.

**Verification**
This parameter can be verified by performing a command on a POTS line with table LNINV set to STDLN and the MNO set to N. After execution of the new command, the padgroup of the line is set to UNBAL and a balance test is requested.

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS32.

Set the value of this parameter to N when doing a dump and restore from software release BCS32 to software release BCS32 or higher.
Parameter name
Silent Switchman Timeout

Functional description of parameter SILENT_SWITCHMAN_TIMEOUT
This parameter is required for a local switching unit with maintenance assistance package software and Integrated Business Network (IBN) switching units with proprietary business set software.

This parameter is required for the silent switchman feature. It specifies the length of time that a line is cut off for testing of an open circuit.

A tester dialing the silent switchman access code receives busy tone for 10 seconds. Then the line is cut off for the time specified by this parameter to allow for testing of an open circuit.

Provisioning rules
If the time allowed for testing an open circuit is other than 100 seconds, specify the time in one second intervals.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The silent switchman code can be a three or seven digit number.

A pseudo fixed code of SSMAN is required in the CLLI table for the silent switchman feature.

If a three digit number is chosen, the number must be assigned in the HNPACODE table with code type SCD3.

If a seven digit number is chosen, the number must be assigned in the WRDN table.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
SILENT_SWITCHMAN_TIMEOUT

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Screening List Editing Items In Segment

Functional description of parameter SLE_ITEMS_IN_SEGMENT

This parameter is associated with the screening list editing (SLE) portion of the Call Screening Feature. Call screening services allow subscribers to screen out certain incoming calls. For each call screening feature a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

This parameter works with parameter SLE_MAX_SEGMENT_COUNT to determine the size of the RESFEAT and SLELIST tables.

The value of this parameter limits the maximum length of any list since all items for one list must be stored within the same segment.

This parameter can only be changed when no store is allocated for SLE data, (that is, RESFEAT and SLELIST tables are empty, and parameter SLE_MAX_SEGMENT_COUNT is set to zero).

Provisioning rules

Set the parameter value to the largest possible size of any list over the engineering interval based on the following formula:

\[ A = 10L + N \]

where

- \( A \) is the maximum length of a SLE list
- \( L \) is the number of lists in the office. This is the sum of all instances of SLE features, and will become the number of tuples in the RESFEAT table pertaining to SLE.
- \( N \) is the total number of all entries in all lists in the office. This should be estimated assuming that all lists will be fully used.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024</td>
<td>8191</td>
<td>1024</td>
</tr>
</tbody>
</table>

Activation

This parameter can only be reset when the RESFEAT and SLELIST tables are empty, and the SLE_MAX_SEGMENT_COUNT has been set and activated to 0. For this reason, it should only be set on initial load build, or during dump and restore, before the SLE_MAX_SEGMENT_COUNT parameter is set.
SLE_ITEMS_IN_SEGMENT

Dependencies
Calculate the value of this office parameter before activating the SLE_MAX_SEGMENT_COUNT parameter.

Consequences
Underprovisioning of this office parameter results in subscribers not being able to fully assign their lists, or assign new lists.

Overprovisioning wastes data store.

Verification
Not applicable

Memory requirements
This parameter works with the SLE_MAX_SEGMENTS_COUNT parameter to provide store for SLE lists. The store consumption is:

\[ 3 \times \text{SLE\_MAX\_SEGMENT\_COUNT} \times (2 + \text{SLE\_ITEMS\_IN\_SEGMENT}) \]

The data store impact of the SLE feature is determined by the number of SLE TCAP transaction identifiers, the number of tuples in the SLELIST table and the number of tuples in the RESFEAT table which pertain to SLE lists.

Dump and restore rules
This parameter was introduced in BCS29.

This value should be recalculated each time the office data is restored, and for initial loads in new offices. It should be calculated based on maximum values to the next restore.
**Parameter name**

Screening List Editing Maximum Programmers

**Functional description of parameter SLE_MAX_PROGRAMMERS**

This parameter is associated with the screening list editing (SLE) aspect of the Call Screening feature.

Call Screening services allow subscribers to screen out certain incoming calls. For each call screening feature a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

This parameter specifies the maximum number of simultaneous SLE sessions that can be supported in an office.

**Provisioning rules**

Set the value of this parameter equal to the lowest number of SLE announcements contained on any one digital recorded announcement machine (DRAM). For example, if there are two DRAMS with SLE announcements in the office, with 18 and 24 announcements respectively the parameter value should be set to 18.

The maximum number of SLE programmers should not exceed the maximum number of SLE announcement circuits available in the office.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>127</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Overprovisioning results in an excessive number of users receiving NOSC treatment. Underprovisioning results in an excessive number of users receiving NOSR treatment.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
SLE_MAX_PROGRAMMERS

Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
**SLE_MAX_SEGMENT_COUNT**

**Parameter name**

Screening List Editing Maximum Segment Count

**Functional description of parameter SLE_MAX_SEGMENT_COUNT**

This parameter is associated with the screening list editing (SLE) portion of the Call Screening feature. Call screening services allow subscribers to screen out certain incoming calls. For each call screening feature a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

This parameter defines the maximum amount of store that can be allocated for SLE lists. This parameter value can be increased or decreased. A restart is required to activate the change. This does not reflect the amount of store actually assigned, as the system only allocates store as required, and has the means to ensure that store is used efficiently. Decreasing the value does not mean that store is reclaimed. No data is lost as a result of reducing this number. Store is not released until it has been de-assigned. However, new store cannot be allocated above the set value.

**Provisioning rules**

Determine the value of office parameter SLE_ITEMS_IN_SEGMENT before doing this calculation.

The formula for determining the value of this parameter is:

\[ A = 5L + \frac{N}{v} \]

where

- \( A \) is the value of this parameter
- \( L \) is the the number of lists in the office. This is the number of tuples in the RESFEAT table that pertain to SLE lists.
- \( N \) is the total number of all entries in all lists in the office. This is the number of tuples in the SLELIST table.
- \( v \) is the value of SLE_ITEMS_IN_SEGMENT

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2048</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Warm restart

**Dependencies**

The value of parameter SLE_ITEMS_IN_SEGMENT must be set before the value of this parameter.
SLE_MAX_SEGMENT_COUNT

Consequences
Underprovisioning of this parameter can result in subscribers being unable to fully assign their lists or assign new lists.

Verification
Not applicable

Memory requirements
This parameter works with parameter SLE_ITEMS_IN_SEGMENT to provide store for SLE lists. The store consumption is:

\[ 3 \times SLE_MAX_SEGMENT_COUNT \times (2 + SLE_ITEMS_IN_SEGMENT) \]

The data store impact of the SLE feature is determined by the number of SLE transaction capability application part (TCAP) transaction ids, the number of tuples in table SLELIST and the number of tuples in table RESFEAT that pertain to SLE lists.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

SLE_TCAP_RESPONSE_TIME

Functional description of parameter SLE_TCAP_RESPONSE_TIME

This parameter is associated with the screening list editing (SLE) aspect of the Call Screening feature.

Call Screening services allow subscribers to screen out certain incoming calls. For each call screening feature, a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

The SLE feature must validate all DNs entered on a screening list. To validate intermodal DNs, SLE uses the transaction capability application part (TCAP) and the signaling connection control part (SCCP) of the CCS7 protocol to access DN data from the terminating switch.

DN validation is achieved by a TCAP query/response transaction.

This parameter defines, in seconds, how long the system waits for TCAP to respond to an interoffice query for DN validation. If the parameter value is reached before a response is received, the DN data is assumed to be unavailable and the DN is not added to the subscriber's SLE list.

Provisioning rules

This parameter should remain at the Bellcore recommended value of 3 unless an unacceptable number of short-term denials of response occur.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.
SLE_TCAP_RESPONSE_TIME

Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
**SLE_TRANSACTION_THRESHOLD**

**Parameter name**
Screening List Editing Transaction Threshold

**Functional description of parameter SLE_TRANSACTION_THRESHOLD**
This parameter is associated with the screening list editing (SLE) portion of the Call Screening Feature. Call screening services allow subscribers to screen out certain incoming calls. For each call screening feature a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

Data store associated with these lists is allocated as required. It is not reclaimed when data is unassigned, although it will be reused, when possible. This can lead to store fragmentation, resulting in inefficient store use. An audit style process, referred to as the compaction process, runs on a daily basis to eliminate the fragmentation. See the description of office parameter SLE_WAKEUP_TIME in table OFCENG.

The compaction process can also be triggered to start once a certain number of transactions have occurred. This prevents excessive fragmentation on days when SLE is being heavily used.

This parameter specifies the number of transactions (list additions or deletions) that can occur before the compaction process runs autonomously.

**Provisioning rules**
This parameter should remain at the default value, unless an excessive number of SLE103 logs, indicating NO DATA STORE as the reason associated with the log, are being generated. If this occurs, the parameter value should be reduced to half the value of transactions that have occurred in the most recent SLE104 logs.

An SLE104 log is generated when the process completes. It contains store consumption statistics, such as the store reclaimed, allocated and used by the SLE Process.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024</td>
<td>32767</td>
<td>32767</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable
SLE_TRANSACTION_THRESHOLD

Consequences
Underprovisioning of this parameter value causes the compaction process to run too often, wasting system real-time.

Overprovisioning can cause SLE data to become fragmented. As a result, SLE users may be unable to add entries to their lists, until the next run of the compaction process runs.

See office parameter SLE_MAX_SEGMENT_COUNT in table OFCOPT.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Screening List Editing Wakeup Time

Functional description of parameter SLE_WAKEUP_TIME
This parameter is associated with the screening list editing (SLE) portion of the Call Screening feature. Call screening services allow subscribers to screen out certain incoming calls. For each call screening feature, a list of directory numbers (DN) identifying incoming calls for special treatment is maintained by the switch. SLE allows these lists to be created and modified by the subscriber.

Data store associated with these lists is allocated as required. It is not reclaimed when data is unassigned, although it will be reused, when possible. This can lead to store fragmentation, resulting in inefficient store use. An audit style process, referred to as the compaction process, runs on a daily basis to eliminate the fragmentation.

This parameter specifies the time of day, using a 24-hour clock, when the compaction process runs (0–23 hrs, 0–59 minutes).

Provisioning rules
Set the parameter value to the start of a low traffic period to ensure the compaction process runs as quickly as possible.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0</td>
<td>23 59</td>
<td>1 37</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
The parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.
Copy the existing value of this parameter when doing a dump and restore.
**SOUTHBOUND**

**Parameter name**
South Bound

**Functional description of parameter SOUTHBOUND**
This parameter is associated with the BCS30 enhancements to the 800+ Southbound feature that provides the capability to route U.S. 800 numbers to any U.S. carriers that provide 800 service screening and routing to the 800 U.S. customer. This parameter enables a phased implementation of the feature by assigning one of three different values (OFF, TRANSIENT, ON).

This feature allows the U.S. customer to purchase 800 service zone coverage in Canada and to provide multiple carrier routing capability.

**Provisioning rules**
Set the parameter value to OFF to turn off the Southbound routing.

When the value of this parameter is set to OFF, calls are routed to INWATS tables if the number returned from the 800+ database query is of the form 800+NXX+XXXX. If the returned number is not preceded by 800 the call retranslates by way of normal translation.

Set the parameter value to TRANSIENT if the operating company wants to pre-datafill table NSCSNPA with special routing code (SRC) entries. This is blocked when this parameter is set to OFF.

It is recommended to initially set the parameter to OFF in order to datafill the 800+ southbound translations and, at a later time, the parameter should be set to ON when all translations are set up appropriately.

When this parameter is set to TRANSIENT, calls originating in the office on incoming trunks impulsing an SRC stream with a number service code (NSC) selector datafilled for that call, proceed to table NSCSNPA. An 800+ database query is made if there was a match on the SRC. The call routes as explained in the OFF mode after the 800+ database query.

It is important to coordinate the status of the network when deploying Southbound according to the following criteria:
- Is the service control point (SCP) setup for enhanced Southbound?
- Are other switches impulsing SRCs to this switch?
- Are U.S. offices expecting SRC/00Y to be outpulsed?

The value ON is used when full Southbound service is required.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ON</td>
</tr>
</tbody>
</table>

OFCENG-688 297-1001-455 Standard 22.02 March 1994
Activation
   Immediate

Dependencies
   Not applicable

Consequences
   Not applicable

Verification
   Not applicable

Memory requirements
   This parameter has no memory impact.

Dump and restore rules
   This parameter was introduced in BCS30.

   Copy the existing value of this parameter when doing a dump and restore.
SPANISH_OUTGOING_RINGING_TIMEOUT

Parameter name
Spanish Outgoing Ringing Timeout

Functional description of parameter SPANISH_OUTGOING_RINGING_TIMEOUT
This parameter is required for a PBX switching unit in Spain. It specifies the time that the originating party is allowed to listen to audible ringing when the call is outgoing on PCM30 trunks.

Provisioning rules
Specify the time, in 1-s intervals, that the originating party is allowed to listen to audible ringing for an outgoing call on a PCM30 trunk.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>720</td>
<td>600</td>
</tr>
</tbody>
</table>

Activation
EXECs must be reloaded in all PCM30 digital trunk controllers (PDTC) using the following procedure:
1 Busy (BSY) and return to service (RTS) the inactive unit.
2 Perform a warm SWACT.

Dependencies
If this parameter is required, parameter RNG_TIMEOUT_NO_OF_SECS in table OFCENG must be set to a value greater than 60 s. The originating switching unit for a call incoming to the DMS in the Spanish network provides 60 s of ring-no-answer timing.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS23.
Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36 activation changed from cold restart
### SPCCLITIMEOUT

**Parameter name**

Stored Program Control Calling Line Information Timeout

**Functional description of parameter SPCCLITIMEOUT**

This parameter is associated with the SPC-CMS feature that permits inclusion of stored program control (SPC) switches in the call management service (CMS) network to provide one-way CMS.

One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to the DMS subscribers but not to the SPC subscribers. SPC switches are stored program control switches, specifically SP-l/2W and #1ESS.

Data store is provided to hold the Calling Line Information (CLI) from an SPC Switch while waiting for the associated voice call to arrive. A timer is started when a CLI FTRQ block is enqueued. When the timer expires, the calling line information is considered invalid and the FTRQ block is released.

This parameter specifies the length of time, in seconds, that the CLI from an SPC switch remains accessible by an incoming call before being discarded.

**Provisioning rules**

Specify, in seconds, the worst case time difference between the PTS (per trunk signaling) circuit seizure by the SPC switch and the collection of the last digit at the DMS end for all SPC trunk circuits in the office.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32</td>
<td>9</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

If the timeout value is set too high, the feature queue block resource used to hold the CLI data could be exhausted.

If the timeout value is set too low, the CLI data would be lost before the voice call arrives.

**Verification**

Not applicable
SPCCLITIMEOUT

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
**SPDD_DIGIT**

**Parameter name**
Single Party Direct Dial Digit

**Functional description of parameter SPDD_DIGIT**
This parameter defines the circle digit for single, two, four, eight and ten party lines.

The circle digit feature permits 8 and 10 party line subscribers to dial direct when making a toll call. Each member of the party line is assigned one circle digit from 0 to 9.

The format of calls supported are:
- 1+ (circle digit) + 7/10 digits
- 0+ (circle digit) + 7/10 digits

This office parameter keeps the switching unit's numbering plan consistent by having single party, two party, and four party lines dial a circle digit as well.

If the switching unit does not support the circle digit feature, leave the value of this parameter at the default value of 0 (zero).

If the switching unit has the circle digit, but not the equal access feature (parameter EA_WITH_CD in table OFCENG equal to N), the value of this parameter ranges from 0 to 10. The value of 10 represents the circle digit 0 (zero). The value of 0 disables the circle digit feature.

If the switching unit has the circle digit and equal access feature, (parameter EA_WITH_CD in table OFCENG equal to Y), the value of this parameter can range from 0 to 9. Circle digit 0 corresponds to the SPDD_DIGIT value 10.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
If the user attempts to change the value of this parameter to 10, when the value of parameter EA_WITH_CD in table OFCENG is set to Y, the following message appears at the MAP:

**THIS VALUE INCOMPATIBLE WITH EA_WITH_CD**

The value of the parameter remains unchanged in this case.
SPDD_DIGIT

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**  
Spill Automatic Number Identification 9

**Functional description of parameter SPILL_ANI_9**  
This parameter is required in a local or combined local and toll switching unit. It specifies whether the automatic number identification (ANI) specified by office parameter BELL_ANI_INTERCEPT_ID in table OFCENG is out pulsed on intercept calls on a trunk group with trunk group type OP.

**Provisioning rules**  
Set the value of this parameter to Y (yes) if the ANI identification digit is to be out pulsed on intercept calls on a trunk group with trunk group type OP.

Set the value of this parameter to N (no) if the ANI identification digit is not required on intercept calls on a trunk group with trunk group type OP.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**  
Immediate

**Dependencies**  
See office parameter BELL_ANI_INTERCEPT_ID in table OFCENG.

**Consequences**  
Not applicable

**Verification**  
Not applicable

**Memory requirements**  
This parameter has no memory impact.

**Dump and restore rules**  
Copy the existing value of this parameter when doing a dump and restore.
SPMS_START_OF_MONTH

Parameter name
Switch Performance Monitoring System Start Of Month

Functional description of parameter SPMS_START_OF_MONTH
This parameter is required in all switching units with the switch performance monitoring system (SPMS). It specifies the day of the month for the start of the report month.

SPMS is an optional feature available on all members of the DMS-100 and Meridian SL-100 families of switches. It provides, on demand, reports of index values that describe how well the switch is operating at various levels of detail. The indexes are computed from switch-generated operational measurements (OM) day by day and as an average over the customer defined report month.

The report month index values are suitable for use in customer administrative plans for evaluating the quality of switch performance and of the maintenance and provisioning effort that underlies that performance. Either the report month or the daily index values may be used in a systematic effort to find and clean up trouble spots within the switch.

The operating company frequently makes use of index plans to evaluate the operation of switches over long periods of time. The indexes used in these plans have numeric values typically ranging from 100 (for perfect performance) down to 0 (for worst possible performance). Index values of 98.5 or better are excellent. Index values in the range 96 to 98.5 are good.

Poor index values correlate with higher levels of customer trouble reports attributable to switch performance. This correlation is enhanced by the choice of importance that are applied to the index components.

While the indexes themselves have a common interpretation regardless of the switching technology involved, their components are calculated based on technology-specific standards. The determination of these standards frequently requires a lengthy calibration period for the technology concerned.

The indexes are typically reported as averages over a reporting month. The duration of the reporting month is determined by the calendar, but the month may start on a day other than day 1 for administrative convenience.

Provisioning rules
Specify the day of the month for the start of the report month. The allowable values range from day 1 to day 28.
Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28</td>
<td>1</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**
The following tables that are automatically datafilled at load time are required for this feature:

- SPMSIDX
- SPMSRSLT
- SPMSMTD.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
SPP_MAX_PROGRAMMERS

Parameter name
Station Programmable Personal Identification Number Maximum Number of Programmers

Functional description of parameter SPP_MAX_PROGRAMMERS
This parameter is required for a switching unit with the Station Programmable PIN (SPP) feature. It specifies the maximum number of users that can simultaneously perform a personal identification number (PIN) change using the SPP feature.

If SPP lines are connected to pre-XMS-based peripheral modules, additional digitone receivers (DGT) are required for this feature to ensure that the use of this feature does not affect standard call processing.

In a switching unit where all the line and trunk peripherals are XMS-based peripheral modules (XPM) with universal tone receivers (UTR), no DGT receivers are used by this feature.

The value of this parameter should not exceed the number of receivers or UTRs in the switching unit.

Provisioning rules
Set this parameter to a value equal to the number of SPP announcement members that are datafilled in table ANNMEM. Although UTR and digitone usage is affected by this parameter, the number of SPP announcement members directly affects simultaneous capabilities.

The default value of 0 (zero) is not recommended. It does not allow any SPP use.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>127</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
If this parameter is underprovisioned, an excessive number of users receive no software resource (NOSR) treatment.

Verification
If this parameter is datafilled correctly, simultaneous SPP use is enabled for the number of users specified by this parameter.
See Operational Measurement (OM) group SPP in the *Operational Measurements Reference Manual*, 297-1001-814 for the measurements that are associated with this feature.

**Memory requirements**

This parameter value requires 1 word of memory.

**Dump and restore rules**

This parameter was introduced in BCS32.

Copy the existing value of the parameter when doing a dump and restore.
**SRDBUPD_SWITCH_ID**

**Parameter name**
Selective Routing Database Update Switch Identifier

**Functional description of parameter SRDBUPD_SWITCH_ID**
This parameter is associated with E911 that provides a centralized emergency service through a DMS-100 or 100/200 switch functioning as an E911 tandem.

This parameter is the office identifier that is assigned to the switch by the automatic location identification (ALI) database from which recent change (RC) files are received. RC files are requested from the ALI database with names in the form of (mmmdx.SEQ) where “mmm” represents the first three characters of the month, “dd” is the two-digit day of the month and “x” is the one-character switch identification assigned by the ALI database and datafilled as the value of this parameter.

**Provisioning rules**
The value of this parameter is assigned by the remote ALI database from which RC files are received. Datafill of this parameter should be coordinated with ALI database administration. The range of values for this parameter is $ and A to Z. The default value is $ and must be changed before datafilling table SRDBXFER with a tuple where field DIRECT is set to a value of OUTGOING.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable.

**Consequences**
Not applicable.

**Verification**
Not applicable

**Memory requirements**
This parameter requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
SS7 CONGESTION_CONTROL_TIME

Parameter name
SS7 Congestion Control Time

Functional description of parameter SS7_CONGESTION_CONTROL_TIME
This parameter is associated with the SS7 Dynamic Overload Control (DOC) feature that uses SS7 signaling to transmit machine congestion (MC) signals to the connecting switches of an overloaded switch.

It applies only to DMS-300 switching units with package NTXF43AA.

Congestion controls applied to an overloaded switch are activated when either of the following messages are received from the overload switch:
- an ISDN User Part (ISUP) release message containing the automatic congestion level parameter
- a CCITT blue book telephone user part (TUP) ACC message, received on an outgoing trunk after having sent a clear guard message and before receiving a release guard message in reply

This parameter specifies the length of time (in seconds) that congestion controls are applied to SS7 trunks terminating to an overloaded switch.

Congestion controls remain active for the duration of the value specified by this parameter. Subsequent ISUP release messages, containing the automatic congestion level parameter, reset the value of this parameter.

The parameter must be increased to the maximum value during maintenance activity to prevent the congestion controls from toggling on and off.

Connecting switches respond to the overload notification by activating pre-planned controls through their receiver dynamic overload controls (RDOC) programs.

Provisioning rules
Set the parameter to 15, unless otherwise specified by Northern Telecom.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>5</td>
</tr>
</tbody>
</table>

The default value was chosen because 5 seconds is the shortest amount of time to apply congestion controls to SS7 trunks terminating to an overloaded switch.

Activation
Immediate
SS7_CONGESTION_CONTROL_TIME

Dependencies
Not applicable

Consequences
If this parameter is underprovisioned, congestion controls to the overloaded switch are not applied long enough to alleviate the overloaded condition.

Verification
To verify the SS7_CONGESTION_CONTROL_TIME, a connecting switch needs to go into overload. The congestion controls applied to the overloaded switch should be for the length of this timer.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS30.
Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Service Switching Point Equal Access Acknowledgement Wink Delay Time

Functional description of parameter SSP_EA_ACKWINK_DELAY_TIME
This parameter appears only in a local or toll switching unit that has the Service Switching Point (SSP) software package.

Provisioning rules
The value of this parameter is equal to the time, in 10-ms intervals, that the Access Tandem / Service Switching Point (AT/SSP) delays before sending the acknowledgement wink back to the Equal Access End Office (EAEOD), on receiving called number from the EAO.

The AT/SSP must delay at least 200 ms, but no more than 1 s before sending an acknowledgment wink to the EAEO.

The default value is 20 (200 ms).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100</td>
<td>20</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

Copy existing value of parameter when doing dump and restore.

Parameter history
BCS36 changed activation from cold restart to immediate and corrected minimum parameter value from 10 (100 ms) to 20 (200 ms)
SSP_NSC_CARRIER_ID

Parameter name
Service Switch Point Number Services Code Carrier Identifier

Functional description of parameter SSP_NSC_CARRIER_ID
This parameter appears only in a local or toll switching unit that has the Service Switch Point (SSP) software package. It determines whether an E800 call is routed to the BOC or interLATA carrier (IC) for completion following a Transaction Capabilities Application Part (TCAP) query.

If the the four-digit carrier identification code (CIC) returned in the TCAP response is the same as the service code digits specified in this parameter, the call is routed to the BOC. Otherwise, the call is routed to the IC specified by the CIC digits.

Prior to BCS36, the value of this parameter was a three-digit CIC code. For BCS36 and higher, a four-digit code must be specified.

Provisioning rules
Specify the 4-digit number service code (NSC) value.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>9999</td>
<td>0110</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS21.

During a dump and restore from BCS35 and lower to BCS36 and higher the three-digit value of this parameter is automatically converted to a four-digit value by prefixing the previous value with a 0 (zero).
Parameter history

BCS36 activation requirements changed and 4-digit CIC code information added
**ST_AUDIT_START_TIME**

Parameter name

Signaling Terminal Audit Start Time

Functional description of parameter ST_AUDIT_START_TIME

This parameter specifies the time of day (start time) at which the signaling terminal daily diagnostics audit runs.

Provisioning rules

Specify the start time, hour (0 to 23) and the minute (0 to 59) that the ST daily diagnostics start running.

For example, if the start time is 2:30 a.m., the value is 2 30.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 00</td>
<td>23 59</td>
<td>2 30</td>
</tr>
</tbody>
</table>

Activation

A change to this parameter value is activated on the next audit cycle.

Dependencies

Not applicable

Consequences

If set to a busy time, the daily diagnostics starts running. This should not cause any problems, but uses real time in the switch that should be used for other audits.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Signaling Terminal Inventory Block Size

Functional description of parameter STINV_BLOCK_SIZE

This parameter is required to specify how much the Signaling Terminal Inventory (STINV) table is increased by when there are no free locations in which to store data.

The craftsperson can control how much the memory is fragmented by with this parameter. It can also decrease the amount of wasted memory.

If a switching unit has a large number of signaling terminals, the table is extended in size by the value of this parameter each time a new data storage location for an ST is required, and there are no free locations. These elements are then used until again the table needs to be extended.

If the value of this parameter is small, the table must be extended many times for a switching unit with a large number of signaling terminals (ST).

If the value of this parameter is large, the table is only be extended once when the first value for the parameter is entered. This improves performance since extending the table takes time as all the entries from the small table are copied into the new larger table.

When a table is extended and the items are copied into the new table, the old table is returned to the system. If this occurs many times, the memory in the switch contains many of these returned tables that are too small to be useful and are wasted.

Provisioning rules

The recommended value for this parameter is one greater than the number of STs in a switching unit.

If the parameter is set to a value less than the default value, the default value of 15 is used.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1023</td>
<td>15</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable
STINV_BLOCK_SIZE

Consequences
Overprovisioning means that a larger amount of memory than needed is allocated by the table control routine. This memory is not used and therefore is held needlessly.

Underprovisioning means that table STINV causes memory to become fragmented and unusable.

Verification
Not applicable

Memory requirements
This parameter has no memory requirements.

Dump and restore rules
This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
**SUPPRESS_ANI_TO_CLID_DISPLAY**

**Parameter name**
Suppress Automatic Number Identification to Calling Line Identification Display

**Functional description of parameter SUPPRESS_ANI_TO_CLID_DISPLAY**
Automatic Number Identification (ANI) digits received over Super Centralized Automatic Message Accounting (SC) and TOPS trunks at the DMS-200 toll office can be converted into the address digits of an outgoing CCS7 initial address message (IAM) calling party number parameter. This parameter provides a choice to suppress the display of ANI digits to the terminating subscriber for these call types on a per office basis.

**Provisioning rules**
Set this parameter to Y (yes) to suppress the ANI display by coding the calling party number parameter as “presentation restricted”.

Set this parameter to N (no) to enable the ANI display. Note that the ANIATTRS screening table is still checked to determine if the ANI should be suppressed from display.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable.

**Consequences**
Not applicable.

**Verification**
Not applicable.

**Memory requirements**
This parameter value requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS33.

Copy the existing value of this parameter when doing a dump and restore.
SWCT_AMA_PREBILLING

Parameter name
Switch Of Activity Automatic Message Accounting Prebilling

Functional description of parameter SWCT_AMA_PREBILLING
This parameter provides the ability to process all unprocessed Automatic Message Accounting (AMA) data and output to the current AMA device during a warm SWACT.

Provisioning rules
If this parameter is set to Y (yes), calls that are billable at the time of the next warm SWACT are billed according to the duration of the call up to the time at which they are processed for premature billing.

Only calls with Centralized Automatic Message Accounting (CAMA) or Local Automatic Message Accounting (LAMA) (TOPS data not included) recordings in switching units using the NT or Bellcore formats are billed prematurely during a warm SWACT.

DMS-250 and DMS-300 switching units do not use premature billing during a warm SWACT.

Station Message Detail Recording (SMDR), Integrated Business Network (IBN), and TOPS data are not affected (that is, data records are not output for these types of data).

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of parameter.
Parameter name

T108 Integrated Services Digital Network Timeout In Minutes

Functional description of parameter T108ISDN_TIMEOUT_IN_MINUTES

When a T108 integrated services digital network (ISDN) test line call is made from an ISDN phone, a loopback is applied (at the line card) towards the customer premises on the B channel. It remains set for the number of minutes specified by this parameter. When the specified time has elapsed, the call is taken down and the loopback is released.

Provisioning rules

The recommended value for this parameter is the default of 20, which represents a time of 20 min.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (min)</td>
<td>1440 (min)</td>
<td>20 (min)</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.
TABLE_ADJNODE_INUSE

Parameter name
Table ADJNODE In Use

Functional description of parameter TABLE_ADJNODE_INUSE
This parameter specifies whether table ADJNODE is used by the switching unit.

Table ADJNODE contains nodal information pertaining to adjacent nodes and must be datafilled for ISDN user part (ISUP) and Primary Rate Interface (PRI) trunks. An index exists in each table TRKSGRP tuple that points to the applicable ADJNODE tuple for a particular trunk subgroup.

This parameter provides the capability to remove reference to the table ADJNODE by providing a NIL index in table TRKSGRP for all ISUP trunks.

Provisioning rules
If the value of this parameter is set to Y (yes), all entries for ISUP trunks in table TRKSGRP display the real index. This may be an index pointing to table ADJNODE or a value of NIL.

If the value of this parameter is set to N (no), all entries for ISUP trunks in table TRKSGRP are affected. Field ADJNODE in table TRKSGRP displays NIL regardless of the actual datafill. However, the index stored in the physical store remains unchanged.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

OFCENG-712 297-1001-455 Standard 22.02 March 1994
Dump and restore rules

This parameter was introduced in BCS36.

If the value of this parameter is set to N during a BCS upgrade, the value NIL is stored in physical store and ISUP trunk information in table TRKSGRP is lost.

Parameter history

BCS36 parameter introduced
TAPEXLATE

Parameter name
Tape Translation

Functional description of parameter TAPEXLATE
This office parameter is for use with the following features:
• Local Features II
• Toll Features II
• International Switching Centre (ISC) Basic
• CNS Operational Measurement on Tape

This parameter specifies the type of translation to be applied to operational measurement (OM) registers as they are written to tape or disk.

Provisioning rules
The value of this parameter is dependant upon the operating company downstream processor type.

The following types of translation can be specified:
• EBCDIC – character representation in EBCDIC
• ASCII – character representation in ASCII
• ASCII_BINARY – numeric representation in ASCII
• EBCDIC_BINARY – numeric representation in EBCDIC

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBCDIC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate (following a DIRP manual rotation)

Dependencies
Not applicable

Consequences
Any change to the value of this parameter is ignored unless a rotate is performed. There is no automatic rotation upon changes to this parameter so a manual rotate must be performed from the device independent recording package (DIRP) level of the MAP.

Verification
Not applicable

Memory requirements
This parameter value requires 1 word of memory.
Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
TCM_SYNC_LINES

Parameter name

Time Compressed Multiplex Synchronization Lines

Functional description of parameter TCM_SYNC_LINES

This parameter is required for switching units with the Datapath feature. It specifies the maximum number of Datapath lines that are monitored at one time.

Due to messaging constraints, only 30 Datapath lines (30 is the default value for this parameter) are monitored at any one time.

The process is similar to an audit program, cycling through 30 Datapath lines at a time, monitoring each group for a period of time identified by the office parameter TCM_SYNC_MONITOR_PERIOD in table OFCENG. This continues until all the Datapath lines have been tested, or a TCMMON STOP command has been issued.

Monitoring for Datapath’s time compressed multiplex (TCM) synchronization (SYNC) losses can be initiated by the CI command TCMMON at the MAP.

The command, TCMMON START, prompts for the starting line equipment number (LEN) and the ending LEN. The LENs may span over one or more peripheral boundaries, (for example, HOST 1 0 0 0 to HOST 2 1 1 2 4).

Only 6X71AA and 6X71AB line cards are monitored. Messaging to DPX lines can not be done.

Provisioning rules

Specify, the maximum number of Datapath lines that can be monitored at one time.

It is recommended that the parameter be left at the default value of 30.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

The number of lines specified by this parameter are monitored for a period of time identified by the office parameter TCM_SYNC_MONITOR_PERIOD in table OFCENG.

OFCENG-716 297-1001-455 Standard 22.02 March 1994
Consequences
The messaging load on the LCM increases as more faulty Datapath lines are monitored. If most Datapath lines are known to be in satisfactory condition, the value of this parameter may be increased.

Verification
Start a TCM monitoring test on the maximum number of Datapath lines. The test should be complete by the time defined for parameter TCM_MONITOR_PERIOD in table OFCENG has expired.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS27.
Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Time Compressed Multiplex Synchronization Monitor Period

**Functional description of parameter TCM_SYNC_MONITOR_PERIOD**

This parameter is required for switching units with the Datapath feature. It specifies the time duration, in one hour intervals, for the monitoring of each set of Datapath lines.

The Datapath time compressed multiplex (TCM) synchronization (SYNC) losses are counted over this period of time.

The value of this parameter is used by the TCMMON command at the LTPDATA level of the map. The TCMMON command can be deactivated by setting the value of this parameter to zero.

**Provisioning rules**

Specify the time duration, in one hour intervals, for monitoring each set of Datapath lines.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>4</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

The parameter TCM_SYNC_THRESHOLD in table OFCENG specifies the maximum number of sync losses, allowed during the interval specified by this parameter, on a per line basis.

The parameter TCM_SYNC_LINES in table OFCENG specifies the maximum number of Datapath lines that are monitored at one time.

**Consequences**

The test must be long enough to catch as many TCM sync problems as are expected.

**Verification**

Start a TCM monitoring test on a Datapath line. The test should be complete after the time specified by this parameter.

**Memory requirements**

This parameter has no memory impact.
Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
**TCM_SYNC_THRESHOLD**

**Parameter name**
Time Compressed Multiplex Synchronization Threshold

**Functional description of parameter TCM_SYNC_THRESHOLD**
This parameter is required for switching units with the Datapath feature. It specifies the number of Datapath time compressed multiplex (TCM) synchronization (SYNC) losses that are allowed on a per line basis during the period of time defined by parameter TCM_SYNC_MONITOR_PERIOD in table OFCENG.

If the number of losses equals or exceeds this threshold, the line is flagged as a faulty Datapath line.

**Provisioning rules**
Specify the maximum number of TCM SYNC losses allowed on a per line basis during the period of time defined by parameter TCM_SYNC_MONITOR_PERIOD in table OFCENG.

TCM SYNC losses are not desired, therefore the value of this parameter should be kept low.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>3</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
This parameter specifies the number of Datapath TCM synchronization SYNC losses allowed on a per line basis during the period of time defined by parameter TCM_SYNC_MONITOR_PERIOD in table OFCENG.

**Consequences**
If the number of TCM SYNC losses equals or exceeds the value of this parameter, then it will show up on the log report.

Bad lines should be replaced.

**Verification**
Deliberately cause number of sync losses equal to or greater than the value of this parameter. Check if report is generated.

**Memory requirements**
This parameter has no memory impact.
TCM_SYNC_THRESHOLD

Dump and restore rules

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**
Traffic Separation Default Register Log

**Functional description of parameter TFAN_DEFAULT_REG_LOG**
This parameter is required for the Traffic Separation (TFAN) feature. It is used to enable or disable the Traffic Separation Measurement System (TSMS) information log, to indicate that data has accumulated in the default OM register.

This parameter has three fields, that are used to control the following three event types used by Traffic Separation:

- attempt peg
- set-up usage
- connect usage.

For switching units (international) with universal translations, only the attempt peg and connect usage fields are significant. Set-up usage is not accumulated by International.

**Provisioning rules**
If any of the fields are set to Y (yes), that type of event generates the information log when the default OM register accumulates information.

This report should only be turned on after the TSMS data has been filled in.

For a list of the parameters and tables associated with this feature, see parameter TFAN_ENHANCED_FEATURE in table OFCLOPT.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N N N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
See OM group TFCANA for the operational measurements associated with this parameter.
Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
**TFAN_IN_MAX_NUMBER**

**Parameter name**
Traffic Separation Measurement System Incoming Maximum Number

**Functional description of parameter TFAN_IN_MAX_NUMBER**
This parameter is required for switching units with the Traffic Separation Measurement System (TFAN). It is required if the office parameter TFAN_ENHANCED_FEATURE in table OFCOPT is set to Y (yes) and more than 16 source traffic separation numbers (STSN) are required.

This parameter specifies the maximum number of source traffic separation numbers (STSN) that can be assigned to:
- incoming and two way trunk groups in table TRKGRP
- lines in table LINEATTR
- network class of service numbers in table NCOS.

**Provisioning rules**
The following values can be assigned to this parameter:
- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127.

The above values provide the following quantities of STSNs:

<table>
<thead>
<tr>
<th>Value</th>
<th>Number of STSNs</th>
<th>STSN numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE_15</td>
<td>16</td>
<td>0 to 15</td>
</tr>
<tr>
<td>SIZE_31</td>
<td>32</td>
<td>0 to 31</td>
</tr>
<tr>
<td>SIZE_63</td>
<td>64</td>
<td>0 to 63</td>
</tr>
<tr>
<td>SIZE_127</td>
<td>128</td>
<td>0 to 127</td>
</tr>
</tbody>
</table>

For switching units without software package NTX085AA or NTX470AA, the value must be left at the default value.

Changing the value of this parameter is not allowed unless package NTX085AA or NTX470AA is present and option TFAN_ENHANCED_FEATURE in table OFCOPT is set to Y (yes).

NTX470AA is equivalent to NTX085AA, but it is to be used in switching units (international) with universal translations.
For a switching unit in the United States with software package NTX085AA and the value of option TFAN_ENHANCED_FEATURE in table OFCOPT is Y (yes), the recommended value is SIZE_63.

No restrictions are placed on the number of Outgoing Traffic Separation Numbers based upon the number of Incoming Traffic Separation numbers (i.e., both incoming and outgoing may use 127).

### Range Information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SIZE_15</td>
</tr>
</tbody>
</table>

### Activation

Cold restart

Once this parameter is set and a cold restart done its value may not be decreased. This avoids traps that may occur in table control and call processing if TFAN registers that were deallocated are used.

### Dependencies

See parameter TFAN_ENHANCED_FEATURE in table OFCOPT for other parameters and tables that are associated with the TFAN feature.

### Consequences

Not applicable

### Verification

These registers are under the operational measurement (OM) group name TFCANA and can be queried from the CI level.

### Memory requirements

For memory allocation, see parameter TFAN_ENHANCED_FEATURE in table OFCOPT.

### Dump and restore rules

For switching units with software package NTX085AA or NTX470AA, copy the existing value of this parameter when doing a dump and restore.

For switching units without software package NTX085AA or NTX470AA, leave the value at the default of SIZE_15.
**TFAN_OUT_MAX_NUMBER**

**Parameter name**

Traffic Separation Measurement System Outgoing Maximum Number

**Functional description of parameter TFAN_OUT_MAX_NUMBER**

This parameter is required for switching units with the Traffic Separation Measurement System (TFAN). It is required if the office option TFAN_ENHANCEDFEATURE in table OFCOPT is set to Y (yes) and more than 16 destination traffic separation numbers (DTSN) are required.

This parameter specifies the maximum number of DTSN that can be assigned to:
- outgoing and two way trunk groups in table TRKGRP
- lines in table LINEATTR
- network class of service numbers in table NCOS
- announcements in table ANNS
- tones in table TONES
- special tones in table STN

**Provisioning rules**

The following values can be assigned to this parameter:
- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127.

The above values provide the following quantities of STSNs:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>STSNs by parameter value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value</strong></td>
<td><strong>Number of STSNs</strong></td>
</tr>
<tr>
<td>SIZE_15</td>
<td>16</td>
</tr>
<tr>
<td>SIZE_31</td>
<td>32</td>
</tr>
<tr>
<td>SIZE_63</td>
<td>64</td>
</tr>
<tr>
<td>SIZE_127</td>
<td>127</td>
</tr>
</tbody>
</table>

For switching units without software package NTX085AA or NTX470AA, the value must be left at the default value.

Changing the value of this parameter is not allowed unless package NTX085AA or NTX470AA is present and option TFAN_ENHANCEDFEATURE in table OFCOPT is set to Y (yes).
NTX470AA is equivalent to NTX085AA, but it is to be used in switching units (international) with universal translations.

For a switching unit in the United States with software package NTX085AA and the value of office parameter TFAN_ENHANCED_FEATURE in table OFCOPT set to Y (yes), the recommended value is SIZE_127.

No restrictions are placed on the number of outgoing traffic separation numbers based upon the number of incoming traffic separation numbers (that is, both incoming and outgoing may use 127).

### Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SIZE_15</td>
</tr>
</tbody>
</table>

### Activation

Cold restart

Once this parameter is set and a cold restart done its value may not be decreased. This avoids traps that may occur in table control and call processing if TFAN registers that were deallocated are used.

### Dependencies

See option TFAN_ENHANCED_FEATURE in table OFCOPT for other parameters and tables that are associated with the TFAN feature.

### Consequences

Not applicable

### Verification

These registers are under the operational measurement group name TFCANA and can be queried from the CI level.

### Memory requirements

For memory allocation see parameter TFAN_ENHANCED_FEATURE, in table OFCOPT.

### Dump and restore rules

For switching units with software package NTX085AA or NTX470AA, copy the existing value of this parameter.

For switching units without software package NTX085AA or NTX470AA, leave the value of this parameter at the default of SIZE_15.
**TLINK_DELAY**

Parameter name

T-link Delay

Functional description of parameter TLINK_DELAY

This parameter is used for activating a timer on all data unit (DU) terminations. The value assigned to the parameter is transmitted to all line group controllers (LCG) or line trunk controllers (LTC) and stored there in global data.

This parameter specifies the delay, in 1-s intervals, before a "start T-link handshaking" message is sent to a DU after it has answered a call. This delay prevents the DU from going into data mode for the 2 seconds specified by the Federal Communications Commission for all data communication devices.

Provisioning rules

This parameter should be set to the time required by the Federal Communication Commission for all data transmission devices to delay (after answer) before going into data mode. This value is currently 2 seconds.

The office parameters TLINK_DELAY, TLINK_DET_TIMEOUT and TLINK_EST_TIMEOUT are all closely related, and certain restrictions have been imposed on their values. Parameter TLINK_DELAY must be at least 2 seconds less than TLINK_DET_TIMEOUT which in turn must be at least 1 second less than TLINK_EST_TIMEOUT.

TLINK_DELAY can be set to 0 (zero) independently of the other two parameters.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation

Change the value of this parameter and busy (BSY) and return to service (RTS) all affected LCG and LTC nodes containing DUs. Until that is done, the change does not take effect.

Dependencies

Parameter TLINK_DELAY must be at least 2 seconds less than TLINK_DET_TIMEOUT in table OFCENG which in turn must be at least 1 second less than TLINK_EST_TIMEOUT in table OFCENG.

Consequences

Not applicable
Verification
   Not applicable

Memory requirements
   This parameter has no memory impact.

Dump and restore rules
   This parameter was introduced in BCS21.

   Copy the existing value of this parameter when doing a dump and restore.
**TLINK_DET_TIMEOUT**

**Parameter name**

T-link Detect Timeout

**Functional description of parameter TLINK_DET_TIMEOUT**

This parameter is used to activate a timer on all data units (DU) originations and terminations. The value assigned to this parameter is transmitted to all line group controllers (LCG) or line trunk controllers (LTC) and stored there in global data.

This parameter specifies the length of time, in 1-s intervals, that is waited (after the call is answered) for a message from a DU indicating that the T-link handshake protocol has been detected from the far end. If the timer expires before receiving the message a “drop to data mode” message is sent to the DU.

**Provisioning rules**

This timeout after 2 to 4 seconds enables high speed data units (HSDU) to communicate with public switched digital service (PSDS) devices without establishing T-Link synchronization.

The default value of 0 (zero) seconds, deactivates the feature.

On activation of the feature, the recommended value is 4 seconds. This value is chosen because it allows sufficient time for a HSDU to detect the T-link handshake from an SL/1 ADM through several SL/1 tandem switches.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**

Change the value of this parameter and busy (BSY) and return to service (RTS) all affected LCG and LTC nodes containing DUs. Until this is done, the change does not take effect. Then, all LGCs and RCCs will go in service trouble (ISTB). They must be busied and returned to service.

When changing the value of this parameter or parameter TLINK_EST_TIMEOUT from 0 to some nonzero value, the other parameter's value is changed automatically. This is also true when changing from some nonzero value back to 0. For example, if the value of this parameter is changed from 0 to 3, the value of the TLINK_EST_TIMEOUT parameter is changed to 7.

**Dependencies**

This parameter and parameters TLINK_DELAY and TLINK_EST_TIMEOUT in table OFCENG are all closely related, and therefore certain restrictions have been imposed on their values. The
following assignment rules define the possible range of values under various conditions.

Parameter TLINK_DELAY must be at LEAST 2 seconds less than the value of this parameter which in turn must be at LEAST 1 second less than TLINK_EST_TIMEOUT.

If this parameter or parameter TLINK_EST_TIMEOUT has a value of zero, then the other one MUST ALSO have a value of zero (that is, either both zero or both nonzero).

**Consequences**

This parameter can not assume a value of 10 (even though the TLINK_DET_EST_TIME type indicates that the range of possible values is from 0 to 10). Remember the value of this parameter must be less than that of TLINK_EST_TIMEOUT.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**TLINK_EST_TIMEOUT**

**Parameter name**
T-link Establish Timeout

**Functional description of parameter TLINK_EST_TIMEOUT**
This parameter activates a timer on all data unit (DU) originations and terminations. The value assigned to this parameter is transmitted to all line group controllers (LCG) or line trunk controllers (LTC) and stored there in global data.

This parameter specifies the length of time to wait (after the timer specified by the TLINK_DET_TIMEOUT office parameter has expired) for a message from a data unit indicating that t-link synchronization has been established with the far end. If the timer expires before receiving the message a “drop to data mode” message is sent to the DU.

This timeout, after 7 seconds, enables high speed data units (HSDU) to communicate with public switched digital service (PSDS) devices without establishing t-link synchronization.

**Provisioning rules**
The default value of 0 (zero) seconds, deactivates the feature.

On activation of the feature, the recommended value is 7 seconds. This value is chosen because it allows sufficient time for an HSDU to detect the t-link synchronization from an SL/1 ADM through several SL/1 tandem switches.

**Range information**

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>0</td>
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</table>

**Activation**
Change the value of this parameter and busy (BSY) and return to service (RTS) all affected LCG and LTC nodes containing DUs. Until that is done, the change does not take effect.

**Dependencies**
This parameter and parameters TLINK_DELAY and TLINK_DET_TIMEOUT in table OFCENG are all closely related. Restrictions have been imposed on their values. The following assignment rules define the possible range of values under various conditions.

Parameter TLINK_DELAY must be at least 2 seconds less than TLINK_DET_TIMEOUT which in turn must be at least 1 second less than the value of this parameter.
If this parameter or parameter TLINK_DET_TIMEOUT has a value of zero, the other one must also have a value of zero (that is, either both zero or both nonzero).

When changing the value of either this parameter or TLINK_DET_TIMEOUT from 0 to some nonzero value, the other parameter’s value is changed automatically. This is also true when changing from some nonzero value back to 0. For example, if the value of this parameter is changed from 0 to 7, the value of parameter TLINK_DET_TIMEOUT is changed to 3.

**Consequences**

This parameter can not assume a value of 1 (even though the TLINK_DET_EST_TIME type indicates that the range of possible values is from 0 to 10). Remember that the value of this parameter must be greater than TLINK_DET_TIMEOUT but, also, either both must be zero or both must be nonzero.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS21.

Copy the existing value of this parameter when doing a dump and restore.
**TOLL_OFFICE_DELAYED_BILLING**

**Parameter name**
Toll Office Delayed Billing

**Functional description of parameter TOLL_OFFICE_DELAYED_BILLING**
This parameter is required in a switching unit with the Uniform Call Distribution (UCD) feature. It is provided to satisfy operating company tariffs (AMA records).

The value of this parameter specifies when billing is to commence. An offhook condition is caused to notify the switching unit where billing is to start.

**Provisioning rules**
When the value of this parameter is set to N (no), billing starts at the time the caller enters the queue.

When the value of this parameter is set to Y (yes), billing does not start until the caller is answered by an idle agent.

If a call is answered by an attendant console (AC) before being extended to the UCD position, an offhook condition is reported back to the switching unit where billing takes place, to start billing regardless of the value of this parameter.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System 0+ LOCAL

Functional description of parameter TOPS_0PLUS_LOCAL
This parameter specifies the set of calling service classes (coin, hotel, station, or restricted) that are allowed to make 0+ local calls. For example, if the parameter has the value COIN HOTEL, all 0+ local coin calls and 0+ local hotel calls are allowed and all 0+ local station calls and 0+ local restricted billing calls are not allowed and are routed to reorder treatment.

If it is not possible to determine the type of call (for example, Automatic Number Identification (ANI) failure), the call is routed to reorder treatment unless this parameter is set to ALL, in which case the call is allowed to complete.

0+ local calls to be billed to a credit card using the Mechanized Calling Card Service (MCCS) feature or to a third number are handled as any other toll call presented at a DMS-200 TOPS, except that the call is billed at a flat rate charge as for a local call.

Existing Bellcore or NT Automatic Message Accounting (AMA) format is used for 0+ local calls. The Bellcore format of Station Special Calling (call code 15) is used with structure codes of 718 to 723 depending on the type of origination (coin, hotel, etc.).

When a 0+ local call is presented to an operator position, the called number digits are displayed and identified as being dialed as a 0+ local call.

This parameter applies only to trunk-to-TOPS calls in a DMS-200 office. It does not allow 0+ local calls for standard line to TOPS calls (single party line, coin line, or hotel line). These type of calls are routed to a treatment.

Provisioning rules
If this feature is not required, leave the parameter value at the default of NONE.

If this feature is required, set the value to one or more of the following calling service classes, COIN, HOTEL, STATION, RESTRICT or ALL.

For example if calling service classes COIN and STATION are allowed to make 0+ local calls, set the value to: COIN STATION

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
<tr>
<td>NONE</td>
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</table>

Office Parameters Reference Manual, volume 1 of 2 BCS36 and up OFCENG-735
TOPS_0PLUS_LOCAL

Activation
   Immediate

Dependencies
   Not applicable

Consequences
   Not applicable

Verification
   Not applicable

Memory requirements
   This parameter has no memory impact.

Dump and restore rules
   This parameter was introduced in BCS20.

   Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Automated Calling Card Service
Automatic Call Gapping

Functional description of parameter TOPS_ACCS_ACG
This parameter is required for a Bell operating company (BOC) Traffic Operator Position System (TOPS) with the Automatic Call Gapping (ACG) to Automated Calling Card Service (ACCS) feature.

ACG refers to the control of queries to a service control point (SCP) for an overload condition.

The ACG message specifies the rate at which the queries for a specific billing NPA-NXX should be sent to an SCP.

This parameter is used to turn the ACG feature on or off. This parameter will normally be set to Y indicating that ACG is turned on. However, it can be set to N if the feature consumes too much real time.

Since this parameter applies to call processing only, the CI command ACCSVER is not affected by this parameter.

Provisioning rules
Set the value of this parameter to N (no), to turn off the ACG feature.

Leave the value of this parameter at the default value of Y (yes), to activate the ACG feature.

Range information

<table>
<thead>
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<th>Maximum</th>
<th>Default</th>
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</thead>
<tbody>
<tr>
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<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Verification that ACG for a particular code is coming from the line information database (LIDB) by using the CI command ACCSVER. Then, by using the the CI command OMSHOW, the OM group ACCSCCV or ACCSBNS can be viewed to see if the operational measurements (OM) CCVBACGBL or BNSACGBL are pegged.
TOPS_ACCS_ACG

See OM groups ACCSCCV and ACCSBNS for the OMs associated with this parameter.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduce in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Automated Calling Card Service
Automatic Call Gapping Size

Functional description of parameter TOPS_ACCS_ACG_SIZE
This parameter is required for a Bell operating company (BOC) Traffic Operator Position System (TOPS) switching unit with the Automatic Call Gapping (ACG) to Automated Calling Card Service (ACCS) feature.

ACG refers to the control of queries to a service control point (SCP) for an overload condition. The ACG message specifies the rate at which the queries for a specific billing NPA-NXX should be sent to an SCP.

For an SCP overload, the SCP/line information database (LIDB) sends an ACG in the response to a query from the operator services system. During normal operations, when the SCP is not in overload, no ACG is present in the responses. The LIDB returns the first six digits (generally the NPA-NXX) of the service key as the code in the ACG.

If a special billing number is used for calling card queries, the service key is in the form RAO-0/1XX where, RAO is the three-digit revenue accounting office number.

A control list is maintained to keep track of inserting and deleting each six-digit code. The control list for these codes accommodates up to 1024 NPA-NXXs. In order to search a control list of this size a hashing function is used. This requires the use of a target table of a prime number size to randomize the function as much as possible. This minimizes collisions when the NPA-NXX digits are mapped onto the target table.

This parameter allows the BOC to specify one of 3 prime numbers, PRIME1, PRIME2 or PRIME3 for the target table size with PRIME1 being the smallest size and PRIME3 being the largest size for the target table.

The target table should only be increased in size when the maximum number of probes are exceeded due to collisions in hashing.

Provisioning rules
This parameter should be left at the default value.

If operational measurements BNSNOACG or CCVNOAGS are pegged, the maximum number of probes is being exceeded. The value of this parameter should be increased to the next size followed by a cold restart.

Range information

<table>
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<tr>
<th>Minimum</th>
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</thead>
<tbody>
<tr>
<td>PRIME1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**TOPS_ACCTS_ACG_SIZE**

**Activation**

Cold restart

The following message is displayed when a change is made to this parameter:

`WARNING: A COLD RESTART MUST BE PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.`

**Dependencies**

Not applicable

**Consequences**

For an overload condition, underprovisioning may cause link failure to the LIDB.

**Verification**

Verification that ACG for a particular code is coming from the LIDB is done by using the CI command ACCSVER. Then, by using the CI command OMSHOW, the OM group ACCSCCV or ACCSBNS can be viewed to see if the operational measurements CCVBACGBL or BNSACGBL gets pegged.

See operational measurement (OM) groups ACCSCCV and ACCSBNS for the OM's associated with this parameter.

**Memory requirements**

The number of data store words for the LOOK_UP_TABLE is governed by the value of this parameter. The number of words required by each value as follows:

- PRIME1 1031 words
- PRIME2 1901 words
- PRIME2 4093 words

**Dump and restore rules**

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Automatic Coin Toll Service

Functional description of parameter TOPS_ACTS
This parameter specifies whether the TOPS Automatic Coin Toll Service ACTS feature is active in the office.

With the exception of the initial period, coin collects are done at the beginning of an overtime period after a customer has deposited coins to pay for a previous overtime period. This speeds up automatic ringback on ACTS coin calls and allows the use of the combined coin collect operator released coin signal which is supported by the expanded inband coin signaling method.

The points of a call when a coins are collected are dependant upon the value of this parameter.

Provisioning rules
If the value of this parameter is set to Y (yes), coin collects are done:
• at the end of the initial period (INP)
• at the beginning of each subsequent CRP after a customer has deposited money for a previous CRP
• at the end of the call when the customer has been recalled to an operator or ACTS to collect overtime charges

If the value of this parameter is set to N (no), coin collects are done:
• At the end of the CIRP.
• At the beginning of each subsequent CRP after a customer has deposited money for a previous CRP.
• At the end of the call when the customer has been recalled to an operator to collect overtime charges.

CIRP defines the amount of time from the beginning of the coin call until the first recall to a TOPS operator or to ACTS.

INP defines the period that the customer initially pays for (CIRP >= INP). CIRP can equal the initial period. Quite often, coin customers pay for an initial period which is less than the coin initial recall period. For example, a customer may pay for an initial period of 1 minute and be recalled to an operator at 3 minutes at which point the customer owes for 2 minutes of conversation.

CRP is the amount of time after being recalled to an operator at the CIRP that conversation is permitted before being recalled to an operator or to ACTS. Unlike the INP, the customer pays for each CRP at the end of the period.
### TOPS_ACTS

#### Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Not applicable

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_ACCS_MANUAL_VALIDATION

Parameter name
Traffic Operator Position System Automatic Calling Card Service Manual Validation

Functional description of parameter TOPS_ACCS_MANUAL_VALIDATION
This parameter is required in a switching unit with the Traffic Operator Position System (TOPS) and either the Telecom Canada Automatic Calling Card Service (ACCS) feature or the United States Exchange Alternate Billing Service (EABS) feature.

This parameter determines whether all customer-dialed ACCS calls using calling card numbers (CCN) that require inward validation are brought to an operator for validation or only those from private stations.

Provisioning rules
If this parameter is set to the default value of ALL, each customer-dialed ACCS call using CCNs that require inward validation is brought to an operator for inward validation.

When validation must be performed manually for alternately billed TOPS calls, this parameter determines whether these calls should route to a TOPS position for validation to occur.

If this parameter is set to the value PUBLIC, only customer-dialed ACCS calls from a public phone using CCNs requiring inward validation are brought to an operator for inward validation.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ALL</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The following parameters are also associated with this feature.
- ACCS_QUERY_TIMEOUT in table OFCENG
- ACCSDB_RESPONSE_DELAY in table OFCENG
- MCCS_SEQ_CALL_LIM in table OFCVAR
- TOPS_ACCS_CCV_QUERY_BLK in table OFCENG
- TOPS_MCCS_CCV in table OFCVAR
- TOPS_MCCS_BNS in table OFCVAR

Input is also required for tables C7LOCSSN, C7GTTYPE and C7GTT.
TOPS_ACCS_MANUAL_VALIDATION

Consequences
Not applicable

Verification
See OM Group ACCSCCV for the operational measurements associated with this parameter.

See the Operation Measurements Reference Manual, 297-1001-814 for a description of OM Group ACCSCCV.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
TOPS_ASST_POS

Parameter name
Traffic Operator Position System ASST Positions

Functional description of parameter TOPS_ASST_POS
The value of this parameter is equal to the number of Traffic Operator Position System assistance and incharge positions.

Provisioning rules
The recommended value is three times the value of office parameter TOPS_NUM_TRAFFIC_OFFICES in table OFCENG.

Note that, if any assistance position is being used for monitoring, it cannot handle assistance calls at the same time.

Range information

<table>
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<th>Minimum</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>126</td>
<td>0</td>
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</table>

Activation
Remove positions from service by entering BSY; BSY INB from the TTP level of the MAP, delete all entries from table TOPSPOS, change the value of this parameter, re-datafill table TOPSPOS, then return the positions to service (BSY; RTS from the TTP level of the MAP).

Dependencies
The value of this parameter should increase if the value of office parameter TOPS_NUM_TRAFFIC_OFFICES increases.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
19 words of memory are required for each TOPS assistance position.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
TOPS_BRAND_DISPLAY

Parameter name
Traffic Operator Position System Brand Display

Functional description of parameter TOPS_BRAND_DISPLAY
This parameter is associated with the TOPS Branding feature where certain TOPS calls receive a recorded announcement before being connected to the TOPS operator (referred to as branding).

The parameter specifies whether the indication the operator receives is associated with a branded or an unbranded call.

Provisioning rules
This parameter can have the following 2 values:
- DISPLAY_WHEN_BRANDED
- DISPLAY_WHEN_NOT_BRANDED

If the majority of calls in an office are branded, set the parameter value to DISPLAY_WHEN_NOT_BRANDED.

If branding is in effect for certain trunk groups or for automated systems only, the parameter should remain at the default of DISPLAY_WHEN_BRANDED.

Range information

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<tr>
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<td>DISPLAY_WHEN_BRANDED</td>
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</table>

Activation
Immediate.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Brand Inwards

Functional description of parameter TOPS_BRAND_INWARDS
This parameter is associated with the TOPS Branding feature where certain TOPS calls receive a recorded announcement before being connected to the TOPS operator (referred to as branding).

The parameter determines whether inward operator calls receive a branding announcement prior to connection to an operator.

Provisioning rules
Setting the parameter to Y(yes) allows a branding announcement to be played prior to call connection to an operator.

Setting the value of this parameter to N (no) does not allow inward operator calls to receive a branding announcement.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
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</tr>
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<tbody>
<tr>
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</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Setting the value of this parameter to N does not allow inward operator calls to receive a branding announcement.

Setting the parameter to Y indicates that every inward operator call receives a branding announcement prior to being connected to an operator.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
TOPS BRAND OFFICE

Parameter name
Traffic Operator Position System Brand Office

Functional description of parameter TOPS_BRAND_OFFICE
This parameter is associated with the TOPS Branding feature where certain TOPS calls receive a recorded announcement before being connected to the TOPS operator (referred to as Branding).

This parameter (in conjunction with table BRANDOPT) determines which types of operator and automated operator calls are to receive a branding announcement prior to being handled by an operator.

If the set of inputs does not include the operator system for which the call is destined, table BRANDOPT indicates which incoming trunk groups receive a branding announcement and for which type of operator calls.

Provisioning rules
Set the office parameter to a value of NONE to allow the branding feature on a trunk group basis by datafill in table BRANDOPT.

Otherwise, datafill a set of types from the following range:
- OPERATOR
- MCCS
- ACTS
- AABS
- ALL
- NONE

If the parameter includes a particular operator system type in its set, all operator calls of that type receive a branding announcement prior to being connected to that operator system.

If this parameter is set to NONE, or does not include a particular operator system type, only calls arriving on trunk groups datafilled in table BRANDOPT and being handled by operator systems included on that trunk group receive a branding announcement.

Range information

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<tbody>
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Activation
Immediate

OFCENG-748 297-1001-455 Standard 22.02 March 1994
Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_CALLS_WAITING_Q_SIZE

Parameter name
Tops Calls Waiting Queue Size

Functional description of parameter TOPS_CALLS_WAITING_Q_SIZE
This parameter is required in a switch equipped with feature package NTX030BA (TOPS ACD Features) or NTX030CC (TOPS Call Processing Features).

This parameter specifies the maximum number of calls that can reside in the call waiting queue waiting for an operator to become idle.

Provisioning rules
Set this parameter to a value equal to the maximum number of calls that can reside in the call waiting queue waiting for an operator to become idle. Note that the actual maximum value for this parameter is limited to the number of TOPS positions that are supported within the office.

Range information

<table>
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<tr>
<th>Minimum</th>
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<tbody>
<tr>
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<td>32767 (theoretically)</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
The actual maximum value for this parameter is limited to the number of TOPS positions that are supported within the office.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
Each call waiting requires 5 words of memory.

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.
### TOPS_EA_INTERLATA_NONOPR_AMA

#### Parameter name
Traffic Operator Position System Equal Access InterLATA Non-operator Automatic Message Accounting

#### Functional description of parameter TOPS_EA_INTERLATA_NONOPR_AMA
This parameter specifies whether Automatic Message Accounting (AMA) records are produced for interLATA calls that are not processed by a TOPS operator.

If AMA records of call code 251, structure code 734, are needed for 1+Centralized AMA (CAMA) interLATA calls, leave the value of this parameter at the default of Y (yes) and define a LATA for each TOPS trunk in table TOPEATRK that carries this traffic. The CAMABILL field in table TOPEACAR must be set to N (no).

When the value of this parameter is left at the default value of Y (yes) and CAMABILL field in table TOPEACAR is set to Y, 1+CAMA interLATA calls produce an 006 call code with an 047XX structure code appendage. If TOPS Interlata Carrier Service (TICS) is present (software package NTX714AA), 047XX is produced when field OPSERV in table TOPECAR is set to SERV.

If the value of this parameter is set to N (no) and field CAMABILL in table TOPEACAR is also set to N (no), no billing records are produced for 1+CAMA interLATA calls.

#### Range information

<table>
<thead>
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<th>Minimum</th>
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</tbody>
</table>

#### Activation
Immediate

#### Dependencies
Not applicable

#### Consequences
Not applicable

#### Verification
Not applicable

#### Memory requirements
This parameter has no memory impact.
TOPS_EA.INTERLATA_NONOPR_AMA

Dump and restore rules

This parameter was introduced in BCS16.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Equal Access Office

Functional description of parameter TOPS_EQUAL_ACCESS_OFFICE
This parameter (in conjunction with field LATA in table TOPEATRK) activates TOPS Equal Access for each TOPS trunk group.

Provisioning rules
If the parameter is set to Y (yes), TOPS equal access features are activated based on the datafill of the LATA field.

For calls on a TOPS trunk group, LATA screening determines (based on the called digits) whether the telco completes the call (intraLATA) or a carrier completes the call (interLATA). If the LATA field of table TOPEATRK is set to NILLATA (the default), domestic calls are considered intraLATA.

Both international and domestic calls use the LATA field to determine whether equal access is active on the TOPS trunk group. If the LATA field is set to NILLATA, domestic and international calls are all handled as operator company-completable. Note that an operator may still transfer these calls to a carrier if desired.

When a DMS-200 TOPS office first uses TOPS EA, the LATA field may be used to turn on TOPS EA on a trunk group basis for testing purposes or for a more gradual transition to equal access handling.

If the parameter is set to N, the switching unit does not execute any TOPS equal access software.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
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</table>

Activation
Cold restart

Dependencies
Before changing the value of this parameter from the default value to Y, the tables defined in Software Package to Data Cross Reference, 297-1001-456 for software package NTX187AA must be datafilled.

If these tables are not datafilled, certain features, (for example, overseas calls) do not function correctly. Set the parameter back to Y and perform a cold restart if any type of restart has been done since the parameter was deactivated.
TOPS_EQUAL_ACCESS_OFFICE

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_EXPANDED_OPRNUM

Parameter name
Traffic Operator Position System Expanded Operator Number

Functional description of parameter TOPS_EXPANDED_OPRNUM
This parameter controls the nil operator identifier (ID) value recorded on Automatic Message Accounting (AMA). It allows the operating company to set the nil operator identification value recorded on AMA to 3101 or 9999.

Provisioning rules
This parameter, when set to N (no), implies that the operating company is not using expanded operator numbers and that the value 3101 is recorded on AMA for the nil operator ID.

This parameter, when set to Y (yes), allows the operating company to use the expanded range of operator numbers provided by feature BR21462. The value 9999 is recorded on AMA for the nil operator ID.

Refer to feature BR21462 – Increase OPR ID range for information relating to the current range of operator numbers.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
This parameter effects the office parameter TOPS_MAX_OPERATOR_NUM. When TOPS_EXPANDED_OPRNUM is set to N, TOPS_MAX_OPERATOR_NUM is limited to the range 0 to 3099 of operator numbers. If an attempt is made to set it above 3099 and TOPS_EXPANDED_OPRNUM is set to N, the following error message is displayed and the update is rejected:

CANNOT INCREASE ABOVE 3099 UNLESS TOPS_EXPANDED_OPRNUM IS SET TO Y.

When TOPS_EXPANDED_OPRNUM is set to Y, TOPS_MAX_OPERATOR_NUM can be set to any value in the expanded range (that is, 0 to 9997). When TOPS_MAX_OPERATOR_NUM is set to a value greater than 3099, TOPS_EXPANDED_OPRNUM cannot be changed to N.

Consequences
Not applicable.
TOPS_EXPANDED_OPRNUM

Verification
   Not applicable

Memory requirements
   Each unit requires 1 word of memory.

Dump and restore rules
   This parameter was introduced in BCS33.

   Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Generate Multiple Automatic Message Accounting Set

Functional description of parameter TOPS_GEN_AMA_SET
This parameter is required for a switching unit with the Traffic Operator Position System (TOPS) feature and allows operators to generate multiple Automatic Message Accounting (AMA) billing records when performing multiple call attempts or multiple operator functions for a customer.

There are situations where the use of the GEN AMA function may result in inaccurate billing information. For example, online rating is only provided for Call Completion services, and not for services such as Busy Line Verify (BLV). Attempts to rate BLVs on coin or hotel calls produce unpredictable results. The AMA record produced may not be able to be processed by downstream billing.

In order to provide an operating company with the ability to avoid these situations, this office parameter is provided to enable or disable the GEN AMA function. It specifies the types of calls (station, coin, hotel, or restricted) for which the operator is able to generate AMA records. Any combination of these call types, or none (the default), may be specified.

Since only situations involving Toll and Assistance (TA) calls present the problems indicated, this parameter applies only to producing AMA for TA type calls. In other words, a TOPS Multiple Purpose position (TOPS-MP) operator handling a TA call and keying SVCS (DA or TA) is able to produce an AMA record based upon the value of this parameter. A Directory Assistance (DA) call at a TOPS-MP position produces a DA AMA record when the operator keys SVCS (DA or TA), and is not affected by the value of this parameter.

A TOPS-IV operator can only handle TA traffic and is always impacted by this office parameter.

This parameter can be used to inhibit the use of this feature in an Operator Centralization (OC) environment. In this case, a host switch that has the GEN AMA feature is able to inhibit use of GEN AMA until all of the remote switches had been upgraded with the package and are able to handle the GEN AMA key function.
TOPS_GEN_AMA_SET

Provisioning rules
If the GEN AMA feature is required, specify the types of calls from the following list for which the operator is able to generate AMA records:
- STATION (station)
- COIN (coin)
- HOTEL (hotel)
- RESTRICTD (restricted)
- ALL (all)

If the GEN AMA feature is not required, leave the value of this parameter at the default of NONE.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NONE</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
An improperly set value for this parameter could either disallow GEN AMA for valid billable calls or allow GEN AMA in situations where on-line rating is not provided and produce AMA with unknown results and consequences for downstream billing.

Verification
Set the value of this parameter to NONE and verify that the GEN AMA key function is inhibited for all call types.

Set the value of parameter successively to STATION, COIN, RESTRICTD and HOTEL and verify that the GEN AMA key function is available for only those types of calls.

Set the value of parameter to ALL and verify that the GEN AMA function is available to all calls. Set the parameter to various combinations of values and verify GEN AMA function is available only to those call types specified.

See operational measurement (OM) group TOPSKFAM for the OMs associated with this parameter.
**Memory requirements**
This parameter has no memory impact.

**Dump and restore rules**
This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_MAX_OPERATOR_NUM

Parameter name
Traffic Operator Position System Maximum Operator Number

Functional description of parameter TOPS_MAX_OPERATOR_NUM
This parameter is required for all switching units that are equipped with TOPS. It specifies the maximum number of operators that can log into a TOPS operator position.

Provisioning rules
Set this parameter to a value equal to the highest operator number that is assigned in the system.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9997</td>
<td>450</td>
</tr>
</tbody>
</table>

Activation
Activation is immediate. Note that store for tables OPRDAT and OPRCMPLX is dynamically allocated during the next update to the respective table.

Dependencies
To datafill an operator number that is greater than the pre-BCS32 range (0 - 3099) in a HOST switch, all of the remotes must be upgraded to BCS32 or greater in field BCSLEVEL of table OCGRP. A new error message is generated if this qualification is not met:

CANNOT INCREASE ABOVE 3099 UNTIL ALL REMOTES ARE UPGRADED TO BCS32 OR GREATER IN TABLE OCGRP.

TOPS_MAX_OPERATOR_NUM cannot be set to a value of less than the maximum in either table OPRDAT or table OPRCMPLX. If an attempt is made to do so, one or both of the following error messages is generated:

CANNOT DECREASE BELOW MAXIMUM OPRNUM IN TABLE OPRDAT.

CANNOT DECREASE BELOW MAXIMUM OPRNUM IN TABLE OPRCMPLX.

Consequences
Without an operator number an operator cannot log into an operator position.

Verification
OPRNUMS in either Table OPRDAT or Table OPRCMPLX must be datafillable up to and including the value of the parameter.
Memory requirements

Each operator number requires 6 words of memory (that is, if the highest operator number is 499, the number of words required is determined by the calculation 500 x 6).

For information on operator numbers, see the TOPS Customer Data Schema 297-2271-451.

Dump and restore rules

Copy the existing value of this parameter when performing dump and restore procedures.
TOPS_MAX_ORIG_RATE_CENTER

Parameter name
Traffic Operator Position System Maximum Number Of Originating Rate Centers

Functional description of parameter TOPS_MAX_ORIG_RATE_CENTER
This parameter specifies the maximum number of originating rate centres required for point-to-point rate step method.

Provisioning rules
Specify the maximum number of originating rate centres required for point-to-point rate step method.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>256</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
All data must be deleted from tables PTP and TPTI and then reinserted after the parameter change. No restart is required.

Dependencies
This parameter along with TOPS_MAX_TERM_RATE_CENTER defines the length of tables PTP and PTPI

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
TOPS_MAX_TERM_RATE_CENTER

Parameter name
Traffic Operator Position System Maximum Number of Terminating Rate Centers

Functional description of parameter TOPS_MAX_TERM_RATE_CENTER
This parameter specifies the maximum number of terminating rate centres required for point-to-point rate step method.

Provisioning rules
Specify the maximum number of terminating rate centres required for point-to-point rate step method.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
All data must be deleted from tables PTP and PTPI and then be reinserted after the parameter change. No restart is required.

Dependencies
The value of this parameter changes if the number of terminating rate centres change.

This parameter, along with TOPS_MAX_ORIG_RATE_CENTER, defines the length of tables PTP and PTPI

The maximum value for TOPS_MAX_ORIG_RATE_CENTER x TOPS_MAX_TERM_RATE_CENTER is 32767.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
The amount of memory required is determined using the following formula:

\[
m = 2 \times (\text{orig} \times \text{term})
\]

where
\[
m \quad \text{is the amount of memory required}
\]
\[
\text{orig} \quad \text{is the value of TOPS_MAX_ORIG_RATE_CENTER}
\]
\[
\text{term} \quad \text{is the value of TOPS_MAX_TERM_RATE_CENTER}
\]
TOPS_MAX_TERM_RATE_CENTER

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Mechanized Force Administration
Database System Period

Functional description of parameter TOPS_MFADS_PERIOD
This parameter allows the Mechanized Force Administration Data System (MFADS) to extract the Traffic Operator Position System (TOPS) Force Management (FM) statistics at intervals of 15 min or 30 min. The 15 min report is added to provide the operating companies with greater resolution of the TOPS FM statistics.

Provisioning rules
To obtain the operational measurements every 15 minutes, the external MFADS mini-computer must be modified to poll every 15 minutes.

Since the updating of statistics with new values may lag slightly behind the 15 min marks (by a few seconds), it is important that polling does not occur exactly at the 15 min marks.

If polling is required every 30 minutes, leave the value of this parameter at the default value of MFADS_30_MIN.

If polling is required every 15 min, set the value of this parameter to MFADS_15_MIN.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MFADS_30_MIN</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
TOPS_MFADS_PERIOD

Dump and restore rules

This parameter was introduced in BCS20.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Functional description of parameter TOPS_NIGHT_ALARM_ON_POS_BUSY
This parameter is required for a switching unit with the International Traffic Operator Position System (ITOPS) or the Traffic Operator Position System (TOPS). It allows the telephone administration to select what office condition should trigger the night alarm.

If the parameter is set to N, the alarm is triggered when there are no occupied positions of the correct transfer type to handle an incoming call to the system. Note that the alarm is sounded when an incoming call does indeed arrive to the system and is queued for an operator.

If the parameter is set to Y, the alarm is sounded when a call is presented to the system, but there are no available operators of the correct transfer type to handle the call.

Provisioning rules
Set the value of this parameter to Y, if the night alarm is to sound when there are no available operators of the correct transfer type to handle an incoming call to the system.

Leave the parameter at the default value of N, if the night alarm is to sound when there are no occupied positions of the correct transfer type to handle an incoming call to the system.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Verify when the night alarm is sounded.

Memory requirements
This parameter has no memory impact.
TOPS_NIGHT_ALARM_ON_POS_BUSY

Dump and restore rules

This parameter was introduced in BCS26.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Number of Centralized Automatic Message Accounting Recording Units

Functional description of parameter TOPS_NUM_CAMA RU
This parameter specifies the quantity of centralized automatic message accounting (CAMA) traffic operator position system (TOPS) recording units required. The value represents the maximum number of CAMA/TOPS recording units available for CAMA and direct distance dialing (DDD) calls on TOPS trunks.

TOPS CAMA recording units are used for call processing on TOPS trunks.

Provisioning rules
The following is the recommended formula for this parameter, for all switching units excluding Bell Canada:

Quantity = 0.25 X (number of TOPS trunk group members) + (% of CAMA calls X number of TOPS trunk group members) + (% of InterLATA calls X number of TOPS trunk group members)

OR

Quantity = 1.1 X (number of TOPS trunk group members + number of RONI trunk group members)

The following is the recommended formula for this parameter, for Bell Canada switching units.

Quantity = 1.2 X (.75 X number of TOPS and OOC trunk group members + number of Inc RONI (TOPS) trunk members + 2 X number of TOPS positions + number of OOC positions)

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
At the time of an extension to the switching unit, the value of this parameter must be recalculated.
TOPS_NUM_CAMA_RU

Consequences

If no CAMA TOPS recording units are available, no call processing occurs on TOPS trunks.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 13 and read the following:

<table>
<thead>
<tr>
<th>EXTSEIZ</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEIZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTHT2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 CAMATOPS_RU</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the Operation Measurements Reference Manual, 297-1001-814 for a description of OM group EXT.

Memory requirements

92 words of memory are required for each recording unit.

Add one word of store to CTRU_FORMAT_AREA. This affects the total data store, based on the values of TOPS_NUM_CAMA_RU and TOPS_NUM_RU.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Number of Operator Centralization Extension Blocks

Functional description of parameter TOPS_NUM_OC_EXT
This parameter specifies the number of TOPS Operator Centralization (OC) blocks that are allocated for the host office. A TOPS OC extension block is required for each call at the host.

Provisioning rules
Determine the value of this parameter by using the following formula:

TOPS_NUM_OC_EXT = CQELEMS + (2 X NUMAGNTS)

Note that CQELEMS and NUMAGNTS are datafilled fields in table QAPLNDEF. See the TOPS Customer Data Schema, 297-2271-451 for a description of table QAPLNDEF.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
Not applicable.

Consequences
If this parameter is underprovisioned, OC calls fail.

If this parameter is overprovisioned, data store is wasted.

Verification
To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 112 and read the following entry:

<table>
<thead>
<tr>
<th>EXTSEI2</th>
<th>EXTOVFL</th>
<th>EXTHI</th>
<th>EXTSEI22</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>TOPS_OC_EXT_BLK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any nonzero value in EXTOVFL indicates underprovisioning.
TOPS_NUM_OC_EXT

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

**Memory requirements**
Each unit requires 23 bytes of memory.

**Dump and restore rules**
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Number of Recording Units

Functional description of parameter TOPS_NUM_RU
This parameter specifies the quantity of Traffic Operator Position System (TOPS) recording units required.

The value represents the maximum number of calls going to TOPS positions. One TOPS recording unit is required throughout the duration of each TOPS handled call.

Provisioning rules
The following formula is recommended for a stand-alone TOPS or a TOPS host operator centralization switching unit, excluding Bell Canada:

\[
\text{Quantity} = \left( \left( \% \text{ of MCCS calls} + \% \text{ of ACTS calls} + \% \text{ of CAMA calls} + \% \text{ of 0+ and 0– calls} \right) \times (\text{number of TOPS trunk group members}) \right) + (\text{TOPS positions} + \text{TOPS waiting Q size})
\]

The following formula is recommended for a TOPS remote operator centralization switching unit, excluding Bell Canada:

\[
\text{Quantity} = \left( \text{number of incoming} + \% \text{ of ACTS calls} + \% \text{ of CAMA calls} + \% \text{ of 0+ and 0– calls} \right) \times (\text{Number of TOPS trunk group members}) + (3 \times \text{number of voice links})
\]

The following formula is recommended for a Bell Canada switching unit:

\[
\text{Quantity} = \left( \text{number of TOPS incoming trunks} \times 0.75 \right) + \left( \text{number of TOPS POSITIONS} \times 2 \right) + \left( \text{number of Voice Links} \times 3 \right)
\]

The value must not exceed the number of TOPS trunk group members.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>100</td>
</tr>
</tbody>
</table>

Activation
Increase – immediate
Decrease – cold restart

Dependencies
At the time of an extension to the switching unit, the value of this parameter must be recalculated.
TOPS_NUM_RU

Consequences

If there are no CAMA TOPS recording units available, there is no call processing on TOPS trunks.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 6 and read the following entry:

\[
\begin{array}{cccc}
\text{EXTSEIZ} & \text{EXTHI2} & \text{EXTOVFL} & \text{EXTHI} & \text{EXTSEIZ2} \\
\text{TOPSRU} & 6 & 100 & 0 & 0 \\
0 & 0 & 0 & 0 \\
\end{array}
\]

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual*, 297-1001-814 for a description of OM group EXT.

Any nonzero value in EXTOVFL indicates underprovisioning.

Memory requirements

Each TOPS recording unit requires 136 words of memory.

Add 1 word to CTRU_FORMAT_AREA. This affects the total data store based on the values of parameters TOPS_NUM_CAMA_RU and TOPS_NUM_RU.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Traffic Operator Position System Number of Study Registers

Functional description of parameter TOPS_NUM_STUDY_REG
Study registers are used during training to check if an operator is handling all call types equally well.

Provisioning rules
The recommended value is ten percent of the number of TOPS positions.

When there are no study registers available the traffic manager cannot assign a study register to an operator.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>900</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
The value of this parameter must increase if the number of TOPS positions increase.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
34 words of memory are required for each register.

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
TOPS_NUM_TRAFFIC_OFFICES

Parameter name
Traffic Operator Position System Number of Traffic Offices

Functional description of parameter TOPS_NUM_TRAFFIC_OFFICES
This parameter is required for a switching unit equipped with the Traffic Operator Position System (TOPS). It specifies the number of traffic offices required for the engineering interval.

All operators on duty constitute one single team for call distribution. TOPS aids the management of a large team by allowing the operators to be formed into smaller administrative groups that are called traffic offices.

For the team numbers assigned to the TOPS positions, see field TEAM in table TOPSPOS.

For the team numbers assigned to the Traffic Administration Data System (TADS) teletype printer (TTY), see field TRAFOFC for the entries with subfield DEVSEL equal to TADS in table TOPSDEV.

If this feature is not provided, leave the value of this parameter at the default of 0.

Provisioning rules
Set the value of this parameter to be equal to the highest team number that is required for the engineering interval. The actual maximum value is limited to the highest team number specified in tables TOPSPOS and TOPSDEV (see Common Customer Data Schema 297-1001-451) and office parameter AOSS_NUM_TRAFFIC_OFFICES.

The force manager cathode ray tube (CRT) display is capable of displaying only 15 teams at one time for TOPS IV and 30 teams for MP TOPS. Changing the value of this parameter impacts the format of the data sent to MFADS, QMFADS, QFADS, and FADS. Data is output for each traffic office provisioned by this office parameter, regardless of whether there are positions assigned to all of the teams.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>0 (feature not active)</td>
</tr>
</tbody>
</table>

Activation
1. Change the value of the parameter, at the MAP level.
2. Remove all positions and devices from service by invoking the commands BSY and INB.
3. Delete all entries from tables TOPSDEV or TOPSPOS or both.
4. Do a cold restart.

OFCENG–776 297-1001-455 Standard 22.02 March 1994
5 Add the entries to tables TOPSDEV or TOPSPOS or both.
6 Do a second cold restart.
7 Return all positions or devices or both to service by invoking the commands BSY and RTS at the TTP level of the MAP.

Dependencies
At extension time, the value of this parameter must increase if the number or the highest traffic office number increases.

When the value of this parameter is changed a check is done to determine if any tuple in table TOPSPOS has a TEAM value greater than the value of this parameter. If table TOPSPOS contains any tuple with the TEAM field value greater than the proposed new parameter value, the change attempt is rejected.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
The amount of memory required is given by the following formula:
\[(615 \times \text{highest team number}) + 615\].

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.

If the value of this parameter must be changed during the dump and restore process, it must be done prior to the restore of any of the TOPS tables to avoid the lengthy parameter activation sequence.

Parameter history
BCS36 dump and restore information added
TOPS_NUMBER_OF_MEMO_PADS

Parameter name
Traffic Operator Position System Number of Memo Pads

Functional description of parameter TOPS_NUMBER_OF_MEMO_PADS
This parameter is required in a switching unit with universal translations (international) and the International Traffic Operator Position System (ITOPS) feature. It specifies the number of memo pads required for the switching unit.

Note that one memo pad is always used by the delay call database. Therefore, one extra memo pad should always be allocated.

A memo pad is a piece of store in which the operator can input 64 characters of information associated with a call. If more than 64 characters are entered, the display wraps around and overwrites the first characters entered.

The MEMO key is used by the operator to enter the 64 characters of text information associated with a call. This information is usually a note to the next operator handling the call concerning additional information needed which is not provided in regular operator keying sequences.

Provisioning rules
The parameter value shall be equal to the maximum number of memo pads that are required at any one point of time + 1.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>900</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
The value of this parameter must increase if the number of TOPS positions increases.

Consequences
If the value of this parameter is overprovisioned, some extra data store is allocated.

If the value of this parameter is underprovisioned, memo blocks are not available for operator use.

Memory requirements
Each unit requires 34 words of memory.
Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_OC_REMOTE_BVC

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS15.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_OC_REMOTE_BVC

Parameter name
Traffic Operator Position System Operator Centralization Remote Billing Validation Center

Functional description of parameter TOPS_OC_REMOTE_BVC
This parameter specifies the host that is used when a billing validation center (BVC) query is sent over operator centralization OC data links.

Provisioning Rules
The provisioning of this parameter depends on the presence or absence of Feature NC0152.

If feature NC0152 is not applied to the switch, the following rules apply:

Remote Switch
If the value of this parameter is set to Y (yes), the BVC query is sent over the OC data links to the host specified in table OCHOST.

If the value of this parameter is set to N (no), the switch is presumed to have a Common Channel Interoffice Signaling (CCIS) connection and the BVC is queried directly.

Host Switch
The switch is presumed to have a CCIS connection and the BVC is queried directly, regardless of the value of this parameter.

If feature NC0152 is present in the switch, the following rules apply:

Remote Switch
If the value of this parameter is set to Y, the BVC query is sent over the OC data links to the host specified in one of the following ways:

- If table OCPARMS has a value for tuple BVC_HOST, that host is used for BVC queries (the operating company must provision links to this BVC host).
- If a tuple exists in table OCHOSTQ (for this call queue type), the host specified in that tuple is used for BVC queries.
- Otherwise, the host specified in table OCHOST is used.

If the value of this parameter is set to N, the switch is presumed to have a CCIS connection and the BVC is queried directly.

Host Switch
The switch is presumed to have a CCIS connection and the BVC is queried directly.
TOPS_OCCUPANCY_CALC_METHOD

Consequences
Not applicable

Verification
Observe output of TOPS FADS/TADS/SADS reports, specifically the AOP, BDH and %OCC fields.

Memory requirements
This parameter value requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS31.

For switches with software loads previous or greater than BCS31, this parameter will be set to REAL_TIME_PEG by default. No dump and restore action is necessary.
**TOPS_OCCUPANCY_CALC_METHOD**

**Parameter name**
Traffic Operator Position System Occupancy Calculation Method

**Functional description of parameter TOPS_OCCUPANCY_CALC_METHOD**
This parameter provides the operating company with a choice of the method for occupancy calculation employed in a particular TOPS configuration when producing average occupied position (AOP), board hour (BDH) and percent occupancy (%OCC) statistics for output in Force Administration Data System (FADS), Traffic Administration Data System (TADS) and System Administration Data System (SADS) reports and summaries.

This parameter is present only in TOPS switches where FADS, TADS, or SADS reports may be produced in TOPS stand-alone and operator centralization host switches.

**Provisioning rules**
Set the value of this parameter to a value of TEN_SECOND_SCAN to obtain scan-based AOP, BDH, and %OCC statistics in the FADS, TADS, or SADS reports.

Set the value of this parameter to REAL_TIME_PEG to obtain real-time peg-based AOP, BDH and %OCC statistics. REAL_TIME_PEG is the default.

If this parameter is changed in the middle of a report output, all AOP, BDH and %OCC values output, subsequent to the change, are calculated according to the new value of the parameter.

The REAL_TIME_PEG mode is the recommended mode. For small configurations, where transfer queues are not in use, TEN_SECOND_SCAN mode may be selected to eliminate the effect of skewing across report period boundaries on AOP and %OCC calculations for small teams.

REAL_TIME_PEG produces statistical reports that best account for operator occupancy in multi-queue TOPS environments.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>REAL_TIME_PEG</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable
TOPS_PASSWORD_ENABLE

Provisioning rules
Set the value of this parameter to Y (yes), to activate the TOPS password feature.

*Note:* This parameter may be set to Y in offices with MPX positions (NTXJ67AA), however the MPX positions do not support the operator password.

If this parameter is set to Y in an office with both TOPS MP and MPX positions, the MP operators are required to login with a password while the MPX operators are not.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
If this parameter is set incorrectly, operators are not allowed to log in.

Verification
Operators may not log in unless KP NAME + TOPS + ST is entered.

Memory requirements
Regardless of the value of this parameter, the number of words required is equal to 4 multiplied by the the value of parameter TOPS_MAX_OPERATOR_NUM in table OFCENG.

Dump and restore rules
This parameter was introduced in BCS26.
Copy the existing value of this parameter when doing a dump and restore.
TOPS_PASSWORD_ENABLE

<table>
<thead>
<tr>
<th>Parameter name</th>
<th>Traffic Operator Position System Password Enable</th>
</tr>
</thead>
</table>

**Functional description of parameter TOPS_PASSWORD_ENABLE**

This parameter is required for a switching unit with the Traffic Operator Position System (TOPS). It specifies whether an operators password system is provided to enhance TOPS security.

For a switching unit without the operators password system any Operator is capable of logging on to a TOPS position using any datafilled operator number as long as that number is not currently in use.

Since any operator can use any datafilled number, tracking operator fraud by the operator number usage is ineffective.

For a switching unit with the operators password system an operator password must be associated with each operator number and only one operator is to know the password for a given number. Therefore, when an operator number appears on an AMA record in a switching unit, there is no mistake as to the identity of the operator who handled the call.

When the value of the parameter is changed to Y, all passwords, operator and administrative, are set to a default of TOPS.

Initially all operators can log on with the system wide default password of TOPS. Once logged on they should change their passwords immediately.

Passwords return to the default value after BCS insertions so operators and administrators must re-enter their passwords.

A valid password (operator or administrative) is four to seven characters in length containing numeric (0 to 9) or alphabetic (a to z) characters only. Any password containing special characters or spaces is not accepted by the system.

Operators may change their own passwords any time that they are already logged in with no calls at the position and in a POS BSY state (this may be immediately after log on, or upon keying the MAKE BSY key).

Effective BCS30, when this parameter is set to Y, SA (Service Assistants) and IC (In-charge) positions must also enter a password.
TOPS_PEG_MODE

operating company’s traffic patterns. When parameter TOPS_PEG_MODE changes, AWTS may require changes in datafill for these tables.

If the current AWT of a queue type is 24 s, and the AWT is reduced to 21 s, table changes will not be required because the change occurs within the original 5-s interval. However, if AWT is reduced to 19 s, table changes must be evaluated again.

Consequences
Not applicable

Verification
The subscriber can verify the setting of this parameter by viewing FADS/TADS/SADS reports. If this parameter is set to IPS, position seizures are displayed under the column heading IPS.

If this parameter is set to PS, the position seizure column heading will indicate PS. The values IPS and PS are the only values.

The operational measurement (OM) for this office parameter is TOPSPSZ. There are no extensions.

Memory requirements
Each unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS31.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history
BCS36  method of activation changed

OFCENG-788  297-1001-455  Standard 22.02  March 1994
Parameter name
Traffic Operator Position System Peg Mode

Functional description of parameter TOPS_PEG_MODE
This parameter controls the extension of enhanced MFADS Position Seizure (PS) measurement to Traffic Operator Position System (TOPS) queue thresholding, TOPS TADS/FADS/SADS reports, and the current MFADS interface.

Provisioning rules
If this parameter is set to IPS, the PS measurements for this feature are used only for enhanced MFADS reports. TOPS features noted here are not impacted by this feature and continue to be based on current IPS measurements.

If this parameter is set to PS, enhanced MFADS PS measurements replace the IPS measurements currently used in queue thresholding, operating company reports, and the MFADS interface.

Note: This parameter is available only when this feature is installed. In OC configurations, this feature is only installed at the host. Remotes do not have access to this parameter.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPS</td>
<td></td>
<td>IPS</td>
</tr>
</tbody>
</table>

Activation
Force Management (FM) measurements reflecting changes in this parameter begin in the 15-min FM period following a parameter change. The MFADS-type reports, however, are not be based on these new measurements until the second 15-min period after a parameter change. The parameter value, which is set when this feature is not activated, is IPS.

Note: The second 15-min period may have up to a 30-min delay.

When this parameter is changed, FM reports, regardless of the time period, reflect a mixture of IPS and Position Seizure (PS) pegging procedures. To avoid ambiguous reports, this parameter should only be changed immediately preceding the start of day (as defined in OFCVAR parameter TOPS_START_OF_DAY).

Dependencies
Changes in this parameter change the AWTS used in queue thresholding. The datafill of queue threshold tables QTIDX and QT0–QT5 is determined by anticipated AWTS, at 5-s intervals. These AWTS are specific to an
TOPS_SDB_CCV_QUERY_BLK

Parameter name
Traffic Operator Position System Service Database Calling Card Validation Query Block

Functional description of parameter TOPS_SDB_CCV_QUERY_BLK
This parameter is required for a Traffic Operator Position System (TOPS) switching unit with Telecom Canada Automated Calling Card Service (ACCS).

Switches with BellCore ACCS use table ACCSERR to perform the function of this parameter.

This parameter determines whether the call is blocked when a Service Database (SDB) query of a Calling Card Validation (CCV) call returns an error.

Provisioning rules
If this parameter is set to the value of Y (yes), a CCV call that has failed is blocked and routed to announcement.

If this parameter is set to the value of N (no), a CCV call that has failed is allowed to go through without validation.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter value requires 1 word of memory.
**TOPS_QMS_MAX_ACTIVE_CALL_QUEUES**

**Parameter name**
Traffic Operator Position System Queue Management System Maximum Number of Active Call Queues

**Functional description of parameter**

**TOPS_QMS_MAX_ACTIVE_CALL_QUEUES**
This parameter specifies the maximum number of queues that can be datafilled in table TQCQINFO. This controls the number of separate queues that can be used in a Queue Management System (QMS) office.

**Provisioning rules**
Specify the maximum number of queues that can be datafilled in table TQCQINFO.

This parameter value can only be increased.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>255</td>
<td>0</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Table TQCQINFO can not have more tuples than the value specified by this parameter.

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
There is no memory impact associated with this parameter.

**Dump and restore rules**
This parameter was introduced in BCS34.
Copy the existing value of this parameter when doing a dump and restore.
**TOPS_STATSPAC_PERIOD**

**Parameter name**
Traffic Operator Position System STATSPAC Period

**Functional description of parameter TOPS_STATSPAC_PERIOD**
This parameter is associated with the STATSPAC feature which provides Operator Force Management statistics by dumping data associated with each operator to a downstream processor (the STATSPAC device).

Every time the DMS receives a two digit polling id from the STATSPAC device, it responds by sending a record of activity for each operator logged on during a previous time period.

This parameter specifies the data accumulation time period.

**Provisioning rules**
Specify whether STATSPAC will use a 15 or a 30 minute data accumulation period.

In offices with a 300 baud STATSPAC device, set the value of this parameter to 30 if more than 140 operators will be logged in over a 15 minute period (or if there are more than 140 TOPS positions in table TOPSPOS).

In offices with a 1200 baud STATSPAC device, set the value of this parameter to 30 if more than 405 operators will be logged in over a 15 minute period (or if there are more than 405 TOPS positions in table TOPSPOS).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>30</td>
<td>15</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
Not applicable

**Memory requirements**
This parameter has no memory impact.

OFCENG-792  297-1001-455  Standard 22.02  March 1994
Dump and restore rules

Prior to BCS34, this parameter was named TOPS_ACCS_CCV_QUERY_BLK. When performing dump and restore from BCS33 or lower to BCS34 or higher, a reformat procedure (TOPS_CCV_QUERY_BLK_RFMT) deletes the office parameter in offices that use BellCore ACCS and renames it in offices that use Telecom Canada ACCS.

Copy the existing value of this parameter when doing dump and restore from software release BCS34 to software release BCS34 or higher.
TOPS_THRESHOLD

Parameter name
Traffic Operator Position System Threshold

Functional description of parameter TOPS_THRESHOLD
The value of this parameter is the percentage of three-way conference trunks dedicated for Traffic Operator Position System (TOPS) operation.

This does not include three-way conference trunks used by AOSS operations or Service Analysis.

Provisioning rules
Calculate the percentage of 3WC circuits required to support TOPS calls over the engineering interval.

Refer to the three-port provisioning rules in the DMS-100 Family Provisioning guide, 297-1001-450 (Conference Circuit Provisioning and Miscellaneous TOPS equipment) before setting the value of this parameter.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
When adding the TOPS feature to an existing switching unit this parameter should be left at the default value of 0 (zero).

With this parameter is set to a value greater than 0, adding the TOPS feature to an existing local/toll switching unit could cause local calls that require a three port conference trunk to be routed to NOSC treatment.

Consequences
The specified percentage of three-port conference trunks is dedicated to TOPS only. The remaining percentage of three port conference trunks are available for all other uses including AOSS operations.

When TOPS_THRESHOLD is set to 100, only TOPS calls have access to the office's three-port conference trunks. No other call processing applications using three-port conference trunks succeed.

If the value of parameter is set too low, a TOPS call that requires a three-port conference trunk is placed in a queue when no three-port conference trunks are available.
Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
TOPS_TRANSFER_TYPES

Parameter name
Traffic Operator Position System Transfer Types

Functional description of parameter TOPS_TRANSFER_TYPES
This parameter is required for a switching unit with the Traffic Operator Position System (TOPS). It specifies the types of transfer required for the switching unit.

TOPS provides for two transfer service classifications referred to as transfer 1 (XFR1) and transfer 2 (XFR2). Calls not requiring transfer capabilities are referred to as non-transfer (NON_XFR) or general (GEN).

TOPS queueing facilities include separate queues for directory assistance (DA). In addition, it provides mechanisms for calls to be classified as requiring DA service and it allows positions and operators to be designated as having DA capability.

The DA queueing feature provides the vehicle for assuring that calls that require directory assistance are only connected to positions and operators that are capable of providing directory services. This involves labeling positions and operators as having DA capability, marking calls as requiring DA services, and the addition of separate queueing facilities to segregate DA calls.

TOPS provides each of these functions to guarantee that calls that require the services of a transfer operator are only connected to operators and positions that provide transfer service. A transfer service is one in which special position facilities or operator talents are required.

This parameter provides a means of enabling the DA service independently of the transfer services. This parameter is implemented as a set with XFR1, XFR2 and DA as possible elements. The DA service and one or both transfer services can be activated by including the service as an element in the set.
TOPS_THRESHOLD

This parameter should not be changed until all of the 3WC circuits are tested and working.

Verification
Not applicable

Dump and restore rules
Copy the existing value of this parameter when doing a dump and restore.
TOPS_TRANSFER_TYPES

See tables TOPS, XFROPSEL, TOPSPOS and OPRDAT for the type(s) assigned to each operator position, GEN, XFR1, XFR2 or DA.

Call transfer or DA can be activated and deactivated from the TADS or FADS TTY.

Consequences
Not applicable

Verification
See OM groups TOPSPSZ, TOPSQS, and TOPSMISC for the operational measurements associated with this parameter.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.

Parameter history
BCS36 activation requirement changed to immediate
Provisioning rules

Assign a value to this parameter as outlined in table 1 below.

<table>
<thead>
<tr>
<th>Value</th>
<th>Transfer types</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td>To activate DA service</td>
</tr>
<tr>
<td>XFR1</td>
<td>To activate Transfer 1 service</td>
</tr>
<tr>
<td>XFR1 DA</td>
<td>To activate both the DA and transfer 1 services</td>
</tr>
<tr>
<td>XFR1 XFR2</td>
<td>To activate both the transfer 1 and transfer 2 services</td>
</tr>
<tr>
<td>ALL</td>
<td>To activate the transfer 1 service, transfer 2 service, and DA</td>
</tr>
<tr>
<td>NONE</td>
<td>Transfer or DA service is not required</td>
</tr>
</tbody>
</table>

Note: The value DA can only be assigned in switching units that have the Directory Assistance software package.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NONE</td>
</tr>
</tbody>
</table>

Activation

Immediate

To deactivate the transfer or DA type, all instances of the type must be removed from tables TOPS, XFROPSEL, OGTMPKEY and OGTSPKEY before changing the value of the parameter.

Dependencies

XFR2 should not be enabled unless XFR1 is also enabled. If XFR2 is enabled and XFR1 is not, by–XFR data will not be output properly to MFADS if the value of parameter TOPS_MFADS_OUTPUT_XFR_NUMBER is set to N. If other than DA, only one transfer type is desired, it should be XFR1.
TOTAL_ROUTE_QUEUED_CALLS

to 20, two of the calls are not recalled to an operator and must be manually retrieved.

This parameter is impacted by the ITOPS Booked Call Database Size Increase feature in BCS30 which increased the maximum number of calls allowed to be stored at one time in the ITOPS Booked Call database from 1280 to 5120. The range of this parameter is increased by this feature and an upper limit is enforced on the parameter range. It can only be set to values less than or equal to parameter DB_MAX_SIZE in table OFCENG.

Consequences

Overprovisioning results in wasted memory.

Underprovisioning results in potential route queued calls not being processed due to a lack of resources. The attempt by the ITOPS operator to store a route queued call fails, and the header STORE flashes in this case.

Verification

Verify that the parameter is set by examining table OFCENG. The value displayed indicates that it is set. If the restart failed to allocate the required number of queue elements, this manifests itself in the form of software errors (SWERRS) that occurred during the restart.

Memory requirements

4 words of memory are required for each call queue element.

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.
TOTAL_ROUTE_QUEUED_CALLS

Parameter name
Total Route Queued Calls

Functional description of parameter TOTAL_ROUTE_QUEUED_CALLS
This parameter is required for a switching unit with the World Systems and International Traffic Operator Position System (ITOPS) features. It determines the number of call queue elements to allocate on restarts. These elements are used to queue themselves to the trunk group. It is required so that a pool of call queue elements can be ready when a route queued call requires them. This saves on real-time processing for route queued calls.

The value of this parameter imposes limits on the number of calls that can be route queued at any given time.

Provisioning rules
The value of this parameter is calculated with the following equation:

\[ rqc = (maxrte \times trkgrp) \]

where
- \( rqc \) is the limit of the number of calls that can be route queued at any given time
- \( maxrte \) is the value of MAX_ROUTE_QUEUED_PER_TRKGRP in table OFCENG
- \( trkgrp \) is the maximum number of trunk groups being queued on

Leave the value of this parameter at the default value of 0 (zero) to deactivate the feature.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>32767</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Cold restart

Dependencies
This parameter is related to the parameter MAX_ROUTE_QUEUED_PER_TRKGRP in table OFCENG.

If this parameter or parameter MAX_ROUTE_QUEUED_PER_TRKGRP in table OFCENG is decreased in such a way that a call can no longer be put in a call queue, the call remains in the database as untimed but not route queued.

For example, if route Z has 22 calls queued on it and the value of parameter MAX_ROUTE_QUEUED_PER_TRKGRP in table OFCENG is decreased...
TQMS_MIS_MPC_BUFFS

Memory requirements
This parameter value unit requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
TOPS Queue Management System Management Information System Multi-Protocol Controller Buffers

Functional description of parameter TQMS_MIS_MPC_BUFFS
This parameter specifies the number of Traffic Operator Position System (TOPS) Queue Management System (QMS) Multi-Protocol Controller (MPC) 8K buffers that are used for the transmission of queue and position event messages to the QMS Management Information System (MIS).

Provisioning rules
Set the value of this parameter to the minimum number of MPC buffers that are required for operation.

The default setting is 2. This value may require an increase depending on the office traffic, service types provided and buffer timeout settings.

It is recommended that the number of buffers be equal to the number of Extended Multi-Protocol Controller (EMPC) links datafilled in table QMSMIS plus one. The maximum number of buffers that can be provisioned is 16. In the case where 16 links are used, set this parameter to a value of 16.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>2</td>
</tr>
</tbody>
</table>

Activation
Immediate

When decreasing the value of this parameter, the actual memory deallocation occurs after a subsequent cold or reload restart.

Dependencies
Not applicable.

Consequences
Underprovisioning of this parameter results in lost event messages and causes inaccurate MIS reports. An EXT1 TQMS_MIS_BUFFS alarm is raised.

Overprovisioning of this parameter results in wasted system store.

Verification
Not applicable.
TRIGDIG_NUM_DGLTR_POOLS

Parameter name

Table TRIGDIG Number of Digilator Pools

Functional description of parameter TRIGDIG_NUM_DGLTR_POOLS

This parameter is required in an office with the Advanced Intelligent Network (AIN) feature. It specifies the number of digilator pools that are allocated for use by table TRIGDIG. Each digilator pool contains 32768 digit blocks that can be used to contain the data of table TRIGDIG. The number of digit blocks actually used by the table depends on the distribution of the digits in the table and on the number of DIGNAMEs in use. A worst-case estimate implies that up to 4000 10-digit codes could be datafilled within one pool.

The number of blocks currently used can be determined by using the BCSMON tool DBLOCKS.

Provisioning rules

Specify the number of digilator pools that are allocated for use by table TRIGDIG.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

The maximum number of datafillable tuples in table TRIGDIG increases as the value of this parameter is increased.

Consequences

Underprovisioning of this parameter value limits the number of tuples that can be added to table TRIGDIG.

Overprovisioning of this parameter value uses unnecessary data store.

Verification

Verify that the additional pools have been allocated by using the BCSMON command DBLOCKS.

Memory requirements

Each pool requires 22000 words of protected data store. Each additional unit allocated uses a digilator pool. There are 80 digilator pools in an office.
Parameter name
Trouble Queue For Electronic Business Sets Line After Misdials

Functional description of parameter TRBQ_EBS_LINE_AFTER_MISDIALS
This parameter provides the operating company with the capability to choose whether electronic business sets (EBS) should be diagnosed in the case of misdials.

Prior to the implementation of this parameter, two or more misdials (that is, an uncompleted number) caused an EBS line to be put in the trouble queue for diagnostics. This makes the set unusable for a short time (minutes).

Provisioning rules
Set this parameter to a value of N (no) to keep EBS lines from being put in the trouble queue for diagnostics after misdials.

Set this parameter to a value of Y (yes) to allow EBS lines to be put in the trouble queue for diagnostics after misdials.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable.

Consequences
Not applicable.

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
TRK_MEMSEL_AUDIT_TIME

Parameter name
Trunk MEM Selector Audit Time

Functional description of parameter TRK_MEMSEL_AUDIT_TIME
This parameter specifies the time at which the audit of the internal MEM selector is invoked.

Provisioning rules
Set the value of this parameter to the hour of the day at which the audit of the internal MEM selector is to begin. The 24-h clock is used with the default of 0 (zero) indicating a starting time of midnight.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The MEM selector is datafilled in field RTESEL in table OFRT and subtable RTEREF of tables HNPACONT, FNPACONT, and FNASTS.

Consequences
Not applicable

Verification
Set the value of this parameter and verify that the audit of the internal MEM selector table is invoked at that time.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
Dump and restore rules

This parameter was introduced in BCS35.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS36 parameter description added to NTP
TYPE_OF_ACCS

Dump and restore rules

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Type of Automatic Calling Card Service

**Functional description of parameter TYPE_OF_ACCS**

This parameter specifies the type of Automatic Calling Card Service (ACCS) that is used in a service switching point (SSP).

**Provisioning rules**

Set the value of this parameter to TCACCS to use the Telecom Canada standard services database (SDB).

Set the value of this parameter to BCACCS to use the North American line information database (LIDB).

Set the value of this parameter to TAACCS_SCPl for Australia Telecom offices with SCPI using the SDB format.

Set the value of this parameter to TAACCS_SCP2 for Telecom Australia offices with SCPII using the LIDB format. This enables the SSP transaction capability application part (TCAP) code to be switched from the Telecom Canada/Telecom Australia SCP queries to the Australian LIDB queries.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAACCS (North America)</td>
<td></td>
<td>TCACCS (North America)</td>
</tr>
<tr>
<td>TAACCS_SCP1 (international)</td>
<td></td>
<td>TCACCS (North America)</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable

**Consequences**

Note that patch FPA15 must be present and turned on (using command PATCHEDIT) in order for this parameter to function. If the patch is not turned on, any change in the value of this parameter is not recognized.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
**TYPE_OF_NETWORK**

**Dump and restore rules**

This parameter was introduced in BCS27.

Copy the existing value of this parameter when doing a dump and restore.
**Parameter name**

Type of Network

**Functional description of parameter TYPE_OF_NETWORK**

This parameter specifies the voice law and data type within the Network module of a switch. It is used to determine the voice and data conversions needed across the NT6X44EA timeswitch in XMS-based Peripheral Modules (XPM). It identifies the voice law and data type on the c-side of the timeswitch.

**Provisioning rules**

The values are as follows:

- **INTERNATNL** indicates an International switch with an A-law companding network.
- **ALAW** indicates an International switch with an A-law network.
- **NORTH_AMERICAN** indicates a North American switch with a Mu-law network.

If other than North American, specify the voice law and data type required for the Network module of the Switch.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NORTH_AMERICAN</td>
</tr>
</tbody>
</table>

**Activation**

Reload restart on the active CC

Note that all XPMs have their static data updated and their NTX6X44EA timeswitches reconfigured.

**Dependencies**

Not applicable

**Consequences**

If the wrong network type is specified, the voice and data conversions set up across the NT6X44EA timeswitch are incorrect.

**Verification**

Not applicable

**Memory requirements**

This parameter has no memory impact.
UK_OP_DELAY

DMS has no way of detecting that this is the cause of a failed call. Complaints from the far end operating company about traffic from the DMS switch or logging the number of unanswered calls on DMS 3J outgoing circuits or customer complaints would reveal this. The value should be verified as calculated above.

Verification

Take a 3J outgoing type 4 trunk datafilled to use cardcode UK3JOG. Under conditions of low traffic record the ABCD signals for a seizure and outpulsing on the 3J.

The time delay from receipt of seizure acknowledgement can be measured. It should approximate the time represented in units of 10 ms and exceed it by a small amount. The delay should never be less than the office parameter indicates.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
United Kingdom Outpulse Delay

Functional description of parameter UK_OP_DELAY
This parameter is applicable to UK based 3J trunks only. It provides a delay before receiving a seizure acknowledgement from the far end before DP outpulsing can start. This is required for trunks using cardcode UK3JOG with a seize start signal.

The parameter value is the delay in units of 10 ms. On expiry, the far end is assumed ready to receive digits so outpulsing can then start.

Provisioning rules
All operating companies receiving outgoing circuits using cardcode UK3JOG must specify a minimum acceptable delay from seizure acknowledgement. Take the maximum of these delays and add 300 ms. Convert to units of 10 ms by dividing by 10.

The default value is also the recommended value. This is the minimum permissible value representing a delay of 300 ms to start outpulsing. This value should be chosen as it minimizes any outpulsing delay. If the far end is designated by its owning operating company as being unable to receive digits within 300 ms of their acknowledging seizure, the parm should be increased to the value required by them.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>80</td>
<td>30</td>
</tr>
</tbody>
</table>

Activation
The parameter needs to be loaded into the trunk data stored on the PMs supporting the trunks that use it. This only happens if the peripheral is busied (BSY) and returned to service (RTS) (that is, do not use warm SWACT as the old data is copied across), or if the trunks are busied and RTSed. It is suggested that only the 3J trunks concerned might be BSYed and RTSed.

Dependencies
Not applicable

Consequences
An excessive value for the parameter will slow down the seizure and the start of outpulsing. This could increase the call setup time by the amount of the excess.

Too small a value could lead to loss of the first digit outpulsed as the receiving operating company might not be ready to receive the first digit.
UNIQUE_BY_SITE_NUMBERING

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Unique By Site Numbering

Functional description of parameter UNIQUE_BY_SITE_NUMBERING
This parameter is required if the switching unit has one or more remote peripherals. It specifies whether line module numbering is unique to a site or to the whole switching unit.

For example, for a switching unit with two remotes, four lines modules in the host and two and three line modules in the remotes the following applies:

If numbering is unique (parameter value set to Y), the line modules in the host would be numbered, 0, 1, 2, and 3, the numbering of the line modules in the remote with 2 line modules would be 0 and 1 and the numbering of the line modules in the remote with 3 line modules would be 0, 1, and 2.

If numbering is not unique (parameter value set to N), the line modules in the host would be numbered, 0, 1, 2, and 3, the numbering of the line modules in the remote with 2 line modules would be 4 and 5 and the numbering of the line modules in the remote with 3 line modules would be 6, 7, and 8.

Provisioning rules
If set to Y (yes), the line module numbering must be unique to a site, regardless of module type.

If set to N (no), the line module numbering must be unique to the whole switching unit.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
UNIVERSAL_AMA_BILLING

Dump and restore rules

This parameter was introduced in BCS33.

Copy the existing value of the parameter when doing a dump and restore.
Parameter name

Universal Automatic Message Accounting Billing

Functional description of parameter UNIVERSAL_AMA_BILLING

This parameter indicates whether the billing structures should utilize open numbering schemes, where possible, in the BellCore format Automatic Message Accounting (AMA) subsystem. It is primarily intended to identify offices that are using open number dialing arrangements where North American billing is inadequate.

Provisioning rules

Set the value of this parameter to N, to allow North American billing structures to be used for all base AMA billing.

Set this parameter to Y, to allow open numbering AMA structures to be used wherever possible.

The value of this parameter can be based on the value of office parameter MARKET_OF_OFFICE. When the value of MARKET_OF_OFFICE is set to either UK CENTREX or AUSTRALIA, the value of UNIVERSAL_AMA_BILLING should be set to Y.

This parameter defaults to N. It should only be set to Y for those offices wishing to receive Open Number BellCore Format AMA billing.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation

Immediate

Dependencies

Not applicable.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter value requires 1 word of memory.
USE_ZEROMPOS_FOR_CAMA

Dump and restore rules

This parameter was introduced in BCS19.

Copy the existing value of this parameter when doing a dump and restore.
USE_ZEROMPOS_FOR_CAMA

Parameter name
Use ZEROMPOS For Centralized Automatic Message Accounting

Functional description of parameter USE_ZEROMPOS_FOR_CAMA
This parameter provides alternate routing on calls requiring operator assistance on local automatic message accounting (LAMA) type calls. These calls include operator assisted identification (ONI) line for toll calls, automatic number identification (ANI) failures and direct dial overseas (DDO) failures. When these types of calls occur, the call is routed to a CAMA or TOPS operator by way of an outgoing trunk. The selection of this trunk is controlled by this parameter.

The toll switching unit performs an ONI check based on NXX validity on the basis of incoming trunks.

This parameter allows routing of these calls on different outgoing trunks based on the calling line’s NXX. This is accomplished by routing a call by the position indicated in the calling line’s entry in the ZEROMPOS field of table LINEATTR.

Provisioning rules
When the value of this parameter is set to N (no), the route is selected from the CAMA entry in the POSITION table.

When the value of this parameter is Y (yes), the route is selected from field ZEROMPOS of the originator’s line attribute in table LINEATTR.

Range information
<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.
USP_ENABLED

Activation
Immediate

Dependencies
This parameter is included in the package NTX045AA – Usage Sensitive Pricing.

This parameter requires the following features to function properly:
• NTX020AA/NTX020AB – Vertical Services
• NTX020AC (includes basic call forwarding for POTS lines.)
• NTX159AA – Bellcore LAMA

This feature creates a new line option CUSD. When CUSD is present, on a line, the subscriber cannot use the Call Forwarding Usage Sensitive Pricing feature. The option CUSD is only available when the CFUSP feature is present.

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS23.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name

Usage Sensitive Pricing Enabled

Functional description of parameter USP_ENABLED

This parameter provides the ability to activate and deactivate Call Forwarding Usage Sensitive Pricing (CFUSP) on a per-switching unit basis.

The CFUSP vertical feature allows any single party Plain Ordinary Telephone Service (POTS) line in a Bellcore (BC) Automatic Message Accounting (AMA) office to activate and use call forwarding without presubscribing or paying a monthly fee for the service. The telephone subscribers can activate call forwarding by dialing the access code 72#, and use the feature whenever desired. They are charged according to usage of the feature.

If the value of the parameter is set to Y (yes), any eligible single party POTS line in a BC format switching unit can dial the access code 72# and receive the call forwarding option for one activation.

If a subscriber already has flat rate call forwarding and dials the access code 72# intending to acquire CFUSP, the call forwarding option is activated but treated as a flat rate option.

The DMS System generates the necessary AMA records to properly bill the subscriber.

Provisioning rules

If the value of the parameter is set to N (no), any eligible single party POTS line in a BC format switching unit that dials the access code 72# is denied the call forwarding option. The call forwarding option is not denied if the POTS line is already equipped with the call forwarding option.

If the value of the parameter is set to N (no), direct datafilling of a CFUSP option through SERVORD or table CFW is also denied. The craftsperson receives the following message:

CALL FORWARDING-USP IS UNAVAILABLE.

If a subscriber tries to use CFUSP when the feature is disabled, that line is sent to treatment. The treatment for denied lines is selected by the operating company. An announcement that indicates that the subscriber is not permitted that type of service could be provided.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>
VAR_DN

Parameter name
Variable Directory Number Format

Functional description of parameter VAR_DN
This parameter determines the format of the directory number (DN) stored in line data and hunt data.

Provisioning rules
If the value of this parameter is set to N (no), the North American format is used and DNs must be 7 digits long (excluding area code).

If this parameter is set to Y (yes), DNs are stored in a format that allows them to be 2 to 7 digits in length. It is recommended that they not be less than the value of parameter NUMBER_OF_DIGITS_PER_DN in table OFCENG.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS18.

Copy the existing value of this parameter when doing a dump and restore.
VALIDATE_CCITT_LUHN_DIGIT

**Parameter name**

Validate CCITT Luhn Digit

**Functional description of parameter VALIDATE_CCITT_LUHN_DIGIT**

This parameter specifies whether the luhn (check) digit is ignored in CCITT calling card validation for the International Traffic Operator Position System (ITOPS). It is for use in a special market segment (China).

**Provisioning rules**

The luhn check digit (LCD) provides local screening of the calling card by a format check. A CCITT calling card number with an invalid LCD is marked as faulty.

Set this parameter to a value of N (no), if the LCD is not required in the CCITT calling card number. Format checking procedures ignore the luhn digit when this parameter is set to N.

If the LCD is required in the CCITT calling card number, set the value to Y (yes).

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Activation**

Immediate

**Dependencies**

Not applicable.

**Consequences**

Not applicable.

**Verification**

Not applicable.

**Memory requirements**

This parameter has no memory impact.

**Dump and restore rules**

This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
VPN_PREFIX_DIGS

Parameter name
Virtual Private Network Prefix Digits

Functional description of parameter VPN_PREFIX_DIGS
This parameter enables the operating company to define a set of digits to be prefixed to ISDN User Part (ISUP) calls terminating in the national network that are identified as Standard Virtual Private Network (SVPN) calls based on the OP bits of the forward call indicators of the initial address message (IAM) being set. These digits are prefixed to the received digits prior to translations.

The use of OP bits of the forward call indicators of ISUP IAM to indicate that a call is a VPN call is not included in CCITT recommendations.

Provisioning rules
This office parameter is capable of holding up to four digits. If no digits are to be prefixed, the office parameter should be left at the default value of $. This indicates that the optional prefix digits are not present.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ (no prefix digits)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
If adding the prefix digits to the dialed digits exceeds the maximum number of digits allowed by the DMS-300, the call is failed.

Verification
Not applicable.

Memory requirements
This parameter value requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS34.

Copy the existing value of this parameter when doing a dump and restore.
Parameter name
Variable Call Detail Recording Office Format

Functional description of parameter VCDR_OFFICE_FORMAT
This parameter specifies the format for all Variable Call Detail Recording (VCDR) on the switch, except for those that are customer group specific.

Provisioning rules
VCDR billing is assigned on a trunk group basis in table TRKGRP. Customer groups are assigned to trunks in this table as well. Customer group options are defined in table CUSTVCDR.

VCDR_OFFICE_FORMAT has two settings: UCS26, and nil.

If this parameter is set to UCS26, Integrated Business Network (IBN) trunk-to-trunk calls are assigned VCDR billing.

If this parameter is set to the default value of nil, only those trunks that are assigned VCDR billing within customer groups that have a format set in table CUSTVCDR are allowed VCDR billing.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>nil</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter requires 1 word of memory.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
**WAKEUP_REREQUEST_DELAY**

**Parameter name**
Wakeup Rerequest Delay

**Functional description of parameter WAKEUP_REREQUEST_DELAY**
This parameter is required for a local (international) switching unit with universal translations. It specifies the length of time, in one minute intervals, before a second wake-up call is attempted if the first is abandoned.

The wake-up call can be a casual feature provided to all subscribers. However, if the office parameter CASUAL_FEATURES_OFF in table OFCOPT is set to a value of Y (yes), wake-up call (WUC) becomes a line option that must be assigned through service orders (SERVORD).

** Provisioning rules**
This parameter allows the subscriber to program a time at which they are to be rung back by a wake-up call announcement. If a wake-up call is not answered, a second attempt is made at a later time (specified by the administration). If the second wake-up call is not answered, a log is generated and no further attempts are made.

If this feature is not required, leave the value at the default of 5.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
One FTR control block and one FTR data block is required for each wake-up call being generated. This feature affects the value of parameters NO_OF_FTR_CONTROL_BLKS and NO_OF_SMALL_FTR_DATA_BLKS in table OFCENG.

Table FEATCHG requires entries for wake-up call charging. Table ACCODE requires entries for wake-up call subscriber control procedures.

Parameter WAKEUP_RINGING_TMO is also required for the wake-up feature.

**Consequences**
Not applicable

**Verification**
Not applicable
VSN_SIMULATOR_ON

Parameter name
Voice Service Node Simulator On

Functional description of parameter VSN_SIMULATOR_ON
This parameter is for Northern Telecom internal use only. It must not be changed by the operating company.

Provisioning rules
Not applicable

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
Not applicable

Consequences
Not applicable.

Verification
To verify that this parameter is set and working, attempt to gain access to the VSNSIM directory at the CI level of the MAP. If access is permitted, the parameter is working.

Memory requirements
This parameter has no memory impact.

Dump and restore rules
This parameter was introduced in BCS32.

Copy the existing value of this parameter when doing a dump and restore.
WAKEUP_RINGING_TMO

Parameter name
Wakeup Ringing Timeout

Functional description of parameter WAKEUP_RINGING_TMO
This parameter is required for a local switching unit (international) with universal translations and specifies the length of time, in 1-s intervals, that ringing is applied to a subscriber’s line during a wake-up call attempt before being abandoned.

If this feature is not required, leave the value at the default.

The wake-up call is a casual feature provided to all subscribers. It allows the subscriber to program a time at which they are to be rung back by a wake-up call announcement. If a wake-up call is not answered, a second attempt is made at a later time (specified by the administration). If the second wake-up call is not answered, a log is generated and no further attempts are made.

Provisioning rules
If other than 60 s, enter the length of time, in 1-s intervals, that ringing is to be applied to a subscriber’s line during a wake-up call attempt before being abandoned.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
One FTR control and one FTR data block is required for each wakeup call being generated. Therefore, this feature affects the value of parameters NO_OF_FTR_CONTROL_BLKS and NO_OF_SMALL_FTR_DATA_BLKS in table OFCENG.

Table FEATCHG requires entries for wake-up call charging. Table CCODE requires entries for wake-up call subscriber control procedures.

Parameter WAKEUP_REREQUEST_DELAY is also required for the wake-up feature.

The value of this parameter should always be less than the value of parameter RNG_TIMEOUT NO_OF_SECS in table OFCENG.

Consequences
Not applicable

OFCENG-828 297-1001-455 Standard 22.02 March 1994
WAKEUP_REREQUEST_DELAY

Dump and restore rules

This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
WUCR_RINGING_TIMEOUT

Parameter name
WUCR_RINGING_TIMEOUT

Functional description of parameter WUCR_RINGING_TIMEOUT
This parameter specifies the length of time that physical ringing is applied to a subscriber’s phone during a Wake-up Call Reminder (WUCR).

Provisioning rules
The value of this parameter can be set between 12 s and 54 s.

The value of this parameter must always be less than the ringing timeout value for the office that is identified by the office parameter RNG_TIMEOUT_NO_OF_SECS. This restriction is enforced when changing the value of WUCR_RINGING_TIMEOUT, but if the value of RNG_TIMEOUT_NO_OF_SECS is subsequently set lower, the ringing behaviour of wake-up calls is unpredictable.

When determining the value of this parameter it should be noted that a line concentrating device (LCD) can only ring a limited number of lines simultaneously. Therefore, keeping the ringing time of a Wake-Up Call to a minimum reduces the possibility of blocked ringing requests at the peripheral.

Range information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 (seconds)</td>
<td>54 (seconds)</td>
<td>30 (seconds)</td>
</tr>
</tbody>
</table>

Activation
Immediate

Dependencies
The value of this parameter must always be lower than the LGC ringing timeout value that is controlled by the office parameter RNG_TIMEOUT_NO_OF_SECS.

Consequences
Overprovisioning of this parameter results in the increased possibility of blocked ringing requests by the line concentrating module.

Verification
To verify that this parameter is operational, schedule a wake-up call and allow the call to go unanswered. Verify that the length of time of the physical ringing is equal to the value of WUCR_RINGING_TIMEOUT.

Memory requirements
6 bits of memory are required to store this parameter.
**Verification**

Not applicable

**Dump and restore rules**

This parameter was introduced in BCS24.

Copy the existing value of this parameter when doing a dump and restore.
**ZERO_MINUS_TO_CARRIER**

**Parameter name**
Zero Minus To Carrier

**Functional description of parameter ZERO_MINUS_TO_CARRIER**
This parameter determines whether 0- dialed calls are routed to the subscriber's chosen primary intraLATA carrier (PIC) or to the local operating company for handling.

This parameter is for use with the LATA equal access system, equal access system and integrated business network applications.

**Provisioning rules**
If the parameter is set to Y (yes), a lookup in table DNLPIC is done to determine if the calling subscriber has chosen a PIC. If an entry is found in table DNLPIC, the call is routed to the IntraLATA carrier for handling. Otherwise, it is routed to the local operating company.

Set the parameter to N (no) if all 0- traffic are to be routed to the operating company.

**Range information**

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activation**
Immediate

**Dependencies**
Not applicable

**Consequences**
Not applicable

**Verification**
This parameter can be verified by the monitoring of 0- call routing. If the parameter is set to N, all 0- calls should route to the local operating company. If the parameter is set to Y, an IntraLATA PIC has been chosen, and that carrier can handle operator calls. 0- calls should route to the IntraLATA carrier for handling.

**Memory requirements**
This parameter value requires 1 word of memory.

**Dump and restore rules**
This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.
Dump and restore rules

This parameter was introduced in BCS33.

Copy the existing value of the parameter when doing a dump and restore.
TOPS_OC_ENVIRONMENT

Parameter name
Traffic Operator Position System Operator Centralization Environment

Functional description of parameter TOPS_OC_ENVIRONMENT
TOPS Call Processing Features This parameter is required for switching units which are configured for operator centralization.

It specifies whether the switching unit is a host or a remote.

Provisioning rules
Set the value of this parameter to REMOTE in remote switching units and to HOST for host and for regular TOPS switching units.

Range Information

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HOST</td>
</tr>
</tbody>
</table>

Activation
Immediate
The value of this parameter should not be changed after the datafill of OC tables.

Dependencies
Not applicable

Consequences
Not applicable

Verification
Not applicable

Memory requirements
This parameter has no memory impact.

Dump and restore rules
Copy the existing value of this parameter when performing dump and restore procedures.