GSM / UMTS
MSC
MAP Commands

GSM18/UMTS04   Standard   14.05   May 2006

NORTEL
Publication history

This section contains a high level listing, in reverse chronological order, of updates and changes made to the GSM and UMTS product documentation.

May 2006

GSM18, 14.05. Standard release. Added clarification that GEM18 includes SDM or CBM, and CEM. Updated Nortel logo on front and back covers.

October 2005


October 2005

GSM18, 14.03. Preliminary 2 release.

March 2005

GSM18, 14.02. Preliminary 1 release.

- GBICTK (changed)
- GBICCCI (changed)
  - DISPCICSTATS (new)
  - DISPCICSTAT (new)
  - HELP (new)
  - QUIT (new)
- QGSMVLR (changed)
- PROGDIR
  - LOGPSTRACE (changed)
  - FINDOM (new)
- SOC (changed)
  - SCINFO (new)
— ASSIGN LIMIT (new)
This document also includes Nortel product branding changes.

November 2004

GSM18, 14.01. This Draft publication contains the software feature changes and updates that pertain to GSM18/UMTS04. Impacted commands are as follows:

• GBICCCI (changed)
  — CICRGECHECK (new)
  — DISPRTDEST (new)
  — DISPMEMSIZE (new)
• SOC (changed)
  — ASSIGN (changed)
• PROGDIR (changed)
  — LOGPSTRACE (new)
  — PARMFIND (new)
• QGSMVLR (changed)
• MGWINFO (changed)
• TRAVER (changed)
• VLRAUDIT (changed)

October 2004

GSM17/UMTS03, 13.10, Standard release 2.

September 2004

GSM17/UMTS03, 13.09, Standard release.

April 2004

GSM17/UMTS03, 13.08, Preliminary. This publication has been updated for the 17.1 maintenance release to contain BICC information, review comments and incorporated CRs.

February 2004

GSM17/UMTS03, 13.07. This is the Standard release of this document.
November 2003

GSM17, 13.06. This Preliminary publication contains information about GBICCCI directory commands and details the DPTINFO tool. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

October 2003

GSM17, 13.05. This Preliminary publication contains information about BICC and BICN commands and details 2 new directories. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

September 2003

GSM17.0, 13.05. This Preliminary publication contains information about BICCCI and GTAS commands. GNAOCTCI is a new CI directory level that enables the operator to query the internal Tariff Change Over (TCO) database. Other software feature changes and updates that pertain to GSM17.0/UMTS03 are also documented.

July 2003

GSM17, 13.04. This Preliminary publication contains information about BICCCI and GTAS commands. A new CI directory level, GNAOCTCI, is introduced that enables the operator to query the internal Tariff Change Over (TCO) database. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

June 2003

GSM17, 13.03. This Preliminary publication contains information about a new sublevel of the MAPCI;MTC;TRKS level: GBICTK, which is used to perform maintenance on CICs. The MSccap command was replaced with the CAPACITY command. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

April 2003

GSM17, 13.01. This Draft publication contains the software feature changes and updates that pertain to GSM17/UMTS03.

April 2003

GSM16/UMTS03, 12.03. This Standard publication contains the software feature changes and updates that pertain to GSM16/UMTS03, and provides new MS services information through the QGSMVLR command.

GSM / UMTS MSC MAP Commands
April 2003

UMTS03, 12.03. This Standard publication contains the software feature changes and updates that pertain to GSM16/UMTS03, and provides new MS services information through the QGSMVLR command.

October 2002

UMTS03, 12.02. This preliminary publication contains the software updates pertaining to UMTS03/GSM16.

July 2002

UMTS03.12.01. This Draft release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands for Release GSM16/UMTS03.

July 2002

GSM15. Revision 11.03. This standard publication documents the changes from DMS-MSC MAP Commands and Procedures revision 11.03.

April 2002

UMTS02.11.02. This Preliminary release includes information on GSM15/UMTS02 MAP changes.

November 2001

UMTS02.11.01. This Draft release includes early information on UMTS02 MAP changes, including:

Modified commands and directories:

- QGSMVLR
- GQUERYINT
- GQUERYLAC

New commands and directories:

- VLRMAP_DIR
- VLRCON_DIR
- VLRCONC1_DIR
- GQUERYLACSAC
- SWACTDIR
- RESTARTSWACT
• NORESTARTSWACT
• MTCSWACT

September 2001

UMTS01.10.04. This Preliminary release added SELECTMMU, REMOVEMMU, and HALTMMU commands.

June 2001

UMTS01.10.03. This Preliminary release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01.

May 2001

UMTS01.10.02. This Preliminary release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01.

April 2001

UMTS01.10.01. This Draft release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01. The UMTS is a natural, next generation migration from GSM.

March 2001

GSM13. Revision 09.03. This preliminary publication updates CALEA SOC information.

February 2001

GSM13. Revision 09.02. This preliminary publication
• adds CAPACITY information to display capacity measurements for the XA-Core GSM MSC
• updates MMU QUARANTINE information

October 2000

GSM12. Revision 08.03. This standard publication documents the changes from DMS-MSC MAP Commands and Procedures revision 08.02.

September 2000

GSM13. Revision 09.01. This draft publication
• updates QGSMVLR information
• updates SELECTMMU and REMOVEMMU command information
July 2000

GSM12. Revision 08.02. This preliminary publication
• updates GNOACTCI information
• updates MMU information and adds MMUSELECT tool

April 2000

GSM12. Revision 08.01. This draft publication
• adds a new directory - GNOACTCI

February 2000

GSM11. Revision 07.02. This preliminary publication
• changes CCS7 Server to C7SERVER
• updates MMU information

October 1999

GSM11. Revision 07.01. This draft publication
• adds CCS7 Server information
• adds MMU information
• updates SOC information

September 1999

GSM10. Revision 06.03. This standard publication
• changes the name of the book to DMS-MSC MAP Commands Reference Manual
• restructures the book so that all directory levels are grouped in a section and all miscellaneous commands are grouped in a section
• changes the description of the command QGSMVLR

Note: For more information on this change, refer to the section entitled, Miscellaneous MAP commands.

• removes the following appendices from the book:
  — Common datafill information
  — GSM datafill scenarios

The information from the two removed appendices is being rewritten. It will be released after year 2000, entitled, DMS-MSC Translations Guide.

February 1999

GSM10. Revision 06.02. This preliminary release is created to document the changes from DMS-MSC* MAP* Commands and Procedures revision 05.02. Unrestricted Digital Information (UDI) appears in this release.
December 1998

GSM09. Revision 05.03. This standard release is created to document the changes from DMS-MSC MAP Commands and Procedures revision 05.02. UDI appears in this release.

September 1998

GSM10 version 06.01. This Draft release is created to document the DMS-MSC MAP Commands and Procedures for Release GSM10.

The additions that appear in this release include CCS7 Server, GSM Call Trace and, PNPROCI.

August 1998

GSM09. Revision 05.02. This Preliminary release is created to document the DMS-MSC MAP Commands and Procedures for Release GSM09.

The additions that appear in this release include, CATASTROPHE, CRDBCI, and GMASCRCI. The modifications in this release include GSMSCP QUERY, IWFTTP_DIR, PROGDIR, QGSMVLR, SOC, and TRAVER.

March 1998

GSM09. Revision 05.01. This Draft release is created to document the GSM* DMS-MSC MAP Commands and Procedures for Release GSM09.

The additions that appear in this release are CATASTROPHE and CRDBCI. The modifications that appear in this release are GSMSCP QUERY, SOC, and TRAVER.

November 1997

GSM08. Revision 04.03. This Standard release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM08.

The title is changed in this release to DMS-MSC Maintenance Administration Position Commands and Procedures Reference Manual.

The additions that appear in this release are SOC and C7TTP. The modifications that appear in this release are TRAVER and GSMSCP QUERY.

August 1997

GSM08. Revision 04.02. This Preliminary release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM08.

The title is changed in this release to DMS-MSC Maintenance Administration Position Commands and Procedures Reference Manual.
The additions that appear in this release are SOC and C7TTP. The modifications that appear in this release are TRAVER and GSMSCP QUERY.

**January 1997**

GSM07. Revision 03.03. This standard release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM07.

The additions that appear in this release are GNWMCODEDIR, GTAS, and IWFTTP. The modification that appears in this release is QGSMVLR.

**October 1996**

GSM07. Revision 03.02. This preliminary release is created for document the GSM DMS-MSC MAP Commands for Release GSM07.

**June 1996**

GSM06. Revision 02.02. This standard release is created for document the GSM DMS-MSC MAP Commands for Release GSM06.

**March 1996**

GSM06. Revision 02.01. This preliminary release is created for document the GSM DMS-MSC MAP Commands for Release GSM06.

The additions appear in this release are GSM_SCP_QUERY, MSCCAPCI, and RENAME_IWFLKSET. The modifications that appear in this release are TRAVER and QGSMVLR.

GSM05. Revision 01.01. This Standard release is created for document the GSM DMS-MSC MAP Commands for Release GSM05. This version of the MAP Commands Reference Manual includes GSM04A standard information and GSM05 standard information.
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<td>3-30</td>
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<td>3-16</td>
<td>GSM_SCP_QUERY displayed information</td>
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<td>REPORT command parameters</td>
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</tr>
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<td>3-18</td>
<td>INUSE command parameters</td>
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</tr>
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<td>3-19</td>
<td>HUNG command parameters</td>
<td>3-37</td>
</tr>
<tr>
<td>3-20</td>
<td>DETAILS command parameters</td>
<td>3-38</td>
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<tr>
<td>3-21</td>
<td>RELEASE command parameters</td>
<td>3-40</td>
</tr>
<tr>
<td>3-22</td>
<td>DETAILS command parameters</td>
<td>3-41</td>
</tr>
<tr>
<td>3-23</td>
<td>AUDIT command parameters</td>
<td>3-43</td>
</tr>
<tr>
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<tr>
<td>3-30</td>
<td>SELECTMMU error messages</td>
<td>3-66</td>
</tr>
<tr>
<td>3-31</td>
<td>REMOVEMMU command parameters</td>
<td>3-70</td>
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</tr>
</tbody>
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About this document

This publication contains Maintenance and Administration Position (MAP) directory levels and commands specific to the GSM/UMTS MSC. (This documentation also applies to the Mobile-services Switching Center, MSC, of legacy GSM networks.) The directory levels and commands are used to access, maintain, and manipulate switch hardware and software.

Note: The UCC MSC switch uses many directory levels and commands. Not all of the directory levels and commands are specific to the MSC. Therefore, not all of the directory levels and commands are covered in this publication. This publication covers only those directory levels and commands that are specific to the UCC MSC or MSC/HLR.

Intended audience for this document

This documentation is a command reference document for the Telco personnel who perform maintenance and service on the DMS-MSC/Call Server.

Document organization

This documentation is divided into the following chapters:

- This section covers the audience for and organization of this document, and provides information on software release applicability, as well as related documentation.
- Chapter 1, “Introduction” provides an overview of the MAP directory levels and commands.
- Chapter 2, “MAP directories” describes the MAP directory levels that are specific to the MSC.
- Chapter 3, “Miscellaneous MAP commands” describes MAP commands (specific to the MSC) that do not belong to the directories discussed in Chapter 2, “MAP directories”.

Hypertext links

Hypertext links in this document are set in blue type. If you are viewing a PDF version of this document, click on the blue text to jump to the associated section, figure, or page.

Trademark indications

The asterisk after a name denotes a trademarked item. The title page and back cover acknowledge all trademarked items.

What precautionary messages mean

Precautionary messages indicate possible risks. The types of precautionary messages used in Nortel documentation include danger, warning, caution, and attention messages.

Danger message

A danger message indicates the possibility of personal injury. Following is an example of a danger message.

![Danger Message Example]

**DANGER**
Risk of electrocution
Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines that are active until the fuses have been removed.

Warning message

A warning message indicates the possibility of equipment damage. Following is an example of a warning message.

![Warning Message Example]

**WARNING**
Damage to the backplane connector pins
Align the card before seating it to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.
Caution message
A caution message indicates the possibility of service interruption or degradation. Following is an example of a caution message.

**CAUTION**
**Possible SS7 node isolation**
Do not attempt to update the LIU7 if one of its links cannot be inhibited. Do not busy the link if it cannot be inhibited. CCS7 node isolation may result.

Attention message
An attention message alerts the reader to a special condition. Following is an example of an attention message.

**ATTENTION**
Office policy may require additional copies of the load.

Software release applicability
Nortel software releases for the Wireless product are developed and identified by the product lines. The GSM product line software is identified by the letters GSM and a 2-digit number, such as GSM18, signifying the current release in the GSM software stream.

This publication is applicable to the DMS-MSC Family offices that have the GSM NSS18/UMTS VCN04 software release. Unless this publication is revised, it also applies to offices that have software releases greater than GSM NSS18/UMTS VCN04.

Customers must be running on NSS16 or NSS17 before they can upgrade to NSS18. Since there is no GSM-R support on the MSC in NSS18, customers on GSM-R NSS17 will not upgrade to NSS18. Customers on NSS16/UMTS03 for the MSC, must upgrade to NSS18/UMTS04.

For more information about the new features contained in the GSM NSS18/UMTS VCN04 software release, refer to the *GSM / UMTS MSC Software Delta*, 411-2231-199, and the *GSM / UMTS HLR100/200 Software Delta*, 411-2831-199.

**GSM18/UMTS04 Product Computing Module Loads**
The NSS18 software load consists of GSM18 (MSC & HLR), GEM18 (SDM or CBM, and CEM), and MG18 (Media Gateway) software.
Before GSM05, software loads were package-based loads. GSM05 was the first DMS-MSC Product Computing Module Load (PCL). PCLs are composed of layers of software, or Delivery Receivable Units (DRUs).

The following PCLs comprise the NSS18 software load:
- DMS CSP20 (BASE21, TL20, SHR20)
- XPM20
- CBM18
- USP10.0
- SN07
- Passport v3.7
- SP21 (North America market)
- SP17.2 (International market)
- Media Gateway (MG) PCR6.1
- GSM18/UMTS04 DRUs

Related documents
Some publications for the DMS family contain information that may relate to the subjects in this publication. For a current listing of the DMS-100 NTPs, refer to NTP DMS-10 and DMS-100 Product Documentation Directory, 297-8991-001.

Cancellation index
With the many changes occurring in product documentation due to the introduction of PCLs, refer to NTP DMS-10 and DMS-100 Cancellation Cross-Reference Directory, 297-8991-002, for a listing of cancelled NTPs and the appropriate replacement NTPs.

Terminology
In this publication, the term UCC applies to the legacy GSM DMS-MSC/CS, unless otherwise noted. Also, the term “XA-Core” generically refers to the processing unit of the switch, whether it is an XA-Core-based processor, or a legacy unit.

Notice of Design Intent and Enhancement
The design intent is reflected in the level of detail in the Nortel Technical Publications (NTP) regarding the following elements:
- Logs
- Parameters
- Data Schema
• Tables
• OMs

Starting at GSM13, enhanced attributes were developed to define and document these GSM elements. However, for those elements introduced prior to GSM13, the user will find a minimalist level of documentation to represent these elements. This level of documentation reflects the original design intent.
Introduction

MAP terminal

The Maintenance and Administration Position (MAP) terminal provides an interface between the MSC and the user. The MAP terminal enables operating company personnel to enter commands that manipulate system information, configuration, and operation.

MAP directories

The MAP terminal has several levels of MAP displays. These display levels are also called directories. The first MAP directory level is the Command Interpreter (CI). The CI level is automatically accessed when a user logs on to a MAP terminal.

MAP directory commands

Each directory level has a set of commands associated with it. For example, the GNWMCODEDIR directory level has a set of commands that enable operating company personnel to manipulate code controls.

Directory commands are listed in a box on the left side of the MAP display at each directory level. Directory commands allow a user to access other command directory levels.

Command parameters

Commands often require one or more parameters. Parameters indicate the limits within which the command performs. The results of commands are altered by the absence or presence of parameters and their values. Use a blank space between parameters for proper operation.

Required parameters

Required parameters are necessary for the command to function properly. The MAPCI prompts the user for required parameters.

Optional parameters

Optional parameters are not required for the command to work. The MAPCI does not prompt for optional parameters unless they are optional as a group, and at least one optional parameter must be entered.
Obtaining command information

The following commands provide information about the commands at the current level:

- HELP
- LIST
- PRINT
- Q

HELP
HELP provides parameter and syntax information about a particular command. The HELP command is listed in the box of commands, if available at that level. To obtain information about the command you just entered, enter:

HELP

LIST
LIST lists all the commands available at the current level. To obtain the list, enter:

LIST

PRINT
PRINT lists all the commands available within a specified directory. To obtain this list, enter the PRINT command followed by a space and the name of the command directory.

PRINT directory

Q
The query command displays information about a command. This information briefly states the task the command performs or indicates whether the command can access another directory. Enter Q followed by a space, and the command name to display information.

Q command
This section describes various MAP directory levels that are specific to the MSC switch. Also, this section describes the commands for each directory level. The various directories are presented in alphabetical order.

For information on the basic MAPCI level (MTC, PM, TRKS, and so on), refer to NTP DMS-100 Family Menu Commands Historical Reference Manual, 297-1001-821, Volumes 1 through 10.
The C7SERVER MAPCI tool provides a way to monitor and maintain a single CCS7 server, or a group of CCS7 servers. The C7SERVER commands can be divided into two groups: commands available from the C7SERVER menu and commands that lead to other directories.

*Note:* Unless noted, the CCS7 server and Mobility Management Unit (MMU) are herein referred to as a C7SERVER.

**C7SERVER commands**

The C7SERVER MAPCI level displays the following information:

- The state of each C7SERVER.
- The peripheral module (PM) resource and the PM resource state of the C7SERVER in the posted set that is currently being displayed in the control position of the C7SERVER MAPCI.
- The size of the posted set.
- The C7SERVER alarms.

**Field descriptions**

*Figure 2-1* shows the C7SERVER MAPCI fields.
The C7SERVER MAPCI fields numbered in Figure 2-1 are described in Table 2-1.

**Table 2-1**

<table>
<thead>
<tr>
<th>Field Number</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1            | CCS Alarm Banner      | This is where the C7SERVER alarm is displayed if the CCS7 Server Alarm is the most severe alarm of the CCS alarms set. The number of unavailable C7SERVERS and the type of alarm are displayed. The alarm can be one of the following types:  
  - SVRC—C7Server Critical Alarm
  - SVRM—C7Server Major Alarm |
<table>
<thead>
<tr>
<th>Field Number</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2            | Individual C7SERVER State fields | Displays the state of the C7SERVERS 1 - 14. Each server's state is represented by a character. Characters and their definitions are:  
• U—unequipped  
• O—offline  
• M—manbusy  
• D—deload  
• S—system busy  
• I—in service |
| 3            | Control Position C7SERVER Number field | This is the C7SERVER number of the server being displayed in the control position.  
Although a C7SERVER may belong in a posted set, there can be only one server displayed in the control position at a time. |
| 4            | ASU (or SVR7) | The resource for the C7SERVER in the control position. |
| 5            | SVR7 State (Resource State) | This is the state of the resource for the C7SERVER in the control position. |
| 6            | Posted Count field | Displays the number of C7SERVER that have been posted. |
| 7            | Command line | Enables C7SERVER commands to be entered. |
Table 2-2 lists the commands available from the C7SERVER MAPCI level.

### Table 2-2
C7SERVER menu commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST</td>
<td>Creates a posted set of servers.</td>
</tr>
<tr>
<td>NEXT</td>
<td>Displays the next server in the posted set on the control line.</td>
</tr>
<tr>
<td>BSY</td>
<td>Manually busies one or all servers in the posted set.</td>
</tr>
<tr>
<td>RTS</td>
<td>Returns to service one or all servers in the posted set.</td>
</tr>
<tr>
<td>OFFL</td>
<td>Places offline one or all servers in the posted set.</td>
</tr>
<tr>
<td>QUERYAPP</td>
<td>Enables users to display detailed information on the MMU.</td>
</tr>
<tr>
<td>(MMU only)</td>
<td></td>
</tr>
<tr>
<td>QSvrFlt</td>
<td>Displays the fault information for the MMU server.</td>
</tr>
<tr>
<td>(MMU Only)</td>
<td></td>
</tr>
</tbody>
</table>

**To access**

To access C7SERVER from the CI environment, enter:

>MAPCI;MTC;CCS;CCS7;C7SERVER

**To return to CI**

To exit C7SERVER and return to the CI level, enter:

>QUIT ALL

**POST command**

The POST command creates a posted set of servers that have previously been datafilled in table C7SERVER. (See NTP GSM / UMTS MSC Office Parameters Reference Manual, 411-2231-455, for information about table C7SERVER as it relates to the CCS7 Server. See NTP GSM / UMTS MSC Customer Data Schema (2 Volumes), 411-2231-451P1 & P2, for information about table C7SERVER as it relates to the MMU.) Servers can be posted selectively by number, by state, or all servers datafilled in table C7SERVER can be posted. Only servers datafilled in Table C7SERVER can be in the posted set, and only servers in the posted set are affected by the MAP commands.

The first server in the posted set is the server with the lowest number. The first server in the posted set displays in the control position of the MAP terminal. Each of the other servers in the posted set can be displayed in the
control position one at a time using the NEXT command as described in the “NEXT command” section.

Exiting and re-entering the C7SERVER MAP level on a particular MAP terminal will refresh the display of the posted set.

*Note:* If the state of a server in a posted set changes, the server remains in the posted set.

**Syntax**

The command syntax for POST is:

```
>POST <option { [<server number(s) {1-14}>],
[<all servers> {ALL}],
[<State {OFFL, MANB, INSV, SYSB, DELD}>]},
#>
```

**Parameters**

Table 2-3 shows the parameters for the POST command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>option</td>
<td>server number(s)</td>
<td>post by server number(s)</td>
</tr>
<tr>
<td></td>
<td>ALL</td>
<td>post all servers</td>
</tr>
<tr>
<td>state</td>
<td>OFFL</td>
<td>post offline servers</td>
</tr>
<tr>
<td></td>
<td>MANB</td>
<td>post ManBusy servers</td>
</tr>
<tr>
<td></td>
<td>INSV</td>
<td>post In Service servers</td>
</tr>
<tr>
<td></td>
<td>SYSB</td>
<td>post SysBusy servers</td>
</tr>
<tr>
<td></td>
<td>DELD</td>
<td>post Deload servers</td>
</tr>
<tr>
<td>server number</td>
<td>{1 to 14}</td>
<td>post up to 14 servers by server number</td>
</tr>
</tbody>
</table>

**Example**

*Figure 2-2* shows a successful response to the following command to post by server number:
post 2

Figure 2-2
POST by server number

Figure 2-3 shows a successful response to the following command to post by server state. Note the size of the posted set indicates a value of 2 because Servers 2 and 5 are currently in the INSV state.

post insv
Figure 2-4 shows a successful response to the following command to post all servers. Note the size of the posted set indicates a value of 3 because there are currently 3 servers in the posted set: Server 2 (INSV), Server 4 (INSV), and Server 6 (OFFL).

post all
Figure 2-4
POST all servers

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>FM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Split</td>
<td>2 CkOS</td>
<td>4PDT</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1</td>
<td>Maj</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SDM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CTServ</th>
<th>CCS7</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Quit</td>
<td>.</td>
</tr>
<tr>
<td>2 Post_</td>
<td>.</td>
</tr>
<tr>
<td>3</td>
<td>1111</td>
</tr>
<tr>
<td>4</td>
<td>1234567 8901234</td>
</tr>
<tr>
<td>5</td>
<td>Server .-.---- -------</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7 Bay_</td>
<td>Svr State Resource FM State</td>
</tr>
<tr>
<td>8 RTS_</td>
<td>1 InSv SVR7 1 InSv</td>
</tr>
<tr>
<td>9 OffL_</td>
<td>Size of Posted Set = 2</td>
</tr>
<tr>
<td>10</td>
<td>post all</td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12 Next</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14 QuerySvr</td>
<td></td>
</tr>
<tr>
<td>15 QueryApp</td>
<td></td>
</tr>
<tr>
<td>16 QueryTrf</td>
<td></td>
</tr>
<tr>
<td>17 QSvrFlt_</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DONITA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
</tr>
<tr>
<td>&gt;</td>
</tr>
</tbody>
</table>
# Messages

Table 2-4 shows the messages provided by the POST command.

## Table 2-4

**POST messages**

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| POST Server <Svr #> Failed. Svr not datafilled in Table C7Server | This warning is issued when a server’s table C7SERVER is not currently datafilled with specified post parameters.  
**User action:** Datafill the server in table C7SERVER first, and then re-enter the POST command, or select an existing datafilled server in Table C7SERVER to post. |
| POST Failed. Posted set is empty | This warning is issued if the POST command is entered without any parameters.  
**User action:** The POST command must be re-entered with valid datafilled servers. |
| Error: Cannot Specify both ALL and server number(s) | This warning is issued if the POST command is entered with server number(s) followed by the ALL parameter.  
**Note:** The standard message, “EITHER incorrect optional parameters OR too many parameters.” is displayed if the POST command is entered with the ALL parameter followed by server number(s).  
**User action:** Repost a specific server number(s) or use the ALL option to post all the servers datafilled in table C7SERVER. |
The NEXT command displays the next server in the posted set on the control line. It scrolls through the servers in ascending order and stops at the last server in the server set. Only servers in the posted set are affected by the NEXT command.

Syntax

The command syntax for NEXT is:

>`NEXT`

Parameters

The NEXT command has no parameters.
Example

Figure 2-5 shows a successful response to the NEXT command. This example assumes that there are two servers in the posted set and that the first server was posted prior to issuing the NEXT command.

next

Figure 2-5
Displaying the next server in the posted set
Messages

Table 2-5 shows the messages provided by the NEXT command.

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEXT Failed. Posted Set is empty.</td>
<td>This warning is issued if the NEXT command is entered when the posted set is empty.</td>
</tr>
<tr>
<td></td>
<td><strong>User action</strong>: The POST command must be entered with valid servers.</td>
</tr>
<tr>
<td>No More Servers in Posted Set.</td>
<td>This warning is issued if the NEXT command is entered but the last server in the posted set is already in the control position.</td>
</tr>
<tr>
<td>Warning: Server &lt;Svr #&gt; is Unequipped</td>
<td>This warning is issued if the NEXT command is entered but the next server in the posted set is no longer datafilled in the C7SERVER table.</td>
</tr>
</tbody>
</table>

BSY command

The BSY command is used to manually busy one or all servers in the posted set. If no parameters are specified, the server in the current control (posted) position will be busied.

**ATTENTION**

If the server is currently in the INSV state prior to using this command, the server’s state will actually transition to the deload state before moving to the ManBusy state.

The reason for this preliminary transition is to allow the traffic on the current server to be gracefully handed off to the other available server(s) or the MSC (if no other servers are available).

*Note:* If the server is in the offline (OFFL) state, the BSY and BSY FORCE commands are essentially identical. That is, no deload state is entered because there was no traffic running on the offline server.

Syntax

The command syntax for BSY is:

>`BSY {<option { [<server number {1-14}]>, [<all servers> {ALL}], FORCE>}}`
Parameters

Table 2-6 shows the parameters for the BSY command.

Table 2-6
BSY parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>{All}</td>
<td>Busy all MGWs in the posted set</td>
</tr>
<tr>
<td>Force</td>
<td>{Force}</td>
<td>Force an MGW currently running calls out of service. This causes all calls to be released.</td>
</tr>
<tr>
<td>Nowait</td>
<td>{Nowait}</td>
<td>Do not wait for a response from MAPCI before returning the prompt.</td>
</tr>
</tbody>
</table>

Example

Figure 2-6 shows a successful response to the following command to BSY by server number. Note the output example indicates Server 1 first enters a Deload (D) state. Once the traffic has deloaded from this Server, the state changes to Manual Busy (ManB).

bsy 1

Figure 2-6
BSY by server number
Figure 2-7 shows a successful response to the following command to BSY all servers (this example assumes there are currently four servers in the posted set).

bsy all

Figure 2-7
BSY all servers

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split</td>
<td>2</td>
<td>CkOS</td>
<td>4PDTC</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Figure 2-7
BSY all servers

Time 10:44 >

Figure 2-8 shows a successful response to the following command to BSY by server using the FORCE option.

bsy 1 force
Figure 2-9 shows a successful response to the BSY ALL FORCE command. This example assumes that there are four servers in the posted set.

```bash
bsy all force
```
### Figure 2-9

**BSY with FORCE option**

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IGD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split</td>
<td>2 CkOS</td>
<td>4PDTC</td>
<td>2 SVRM</td>
<td>...</td>
<td>1 Maj</td>
<td>SDM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C7Server</th>
<th>CCS7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quit</td>
<td>2 SVRM</td>
</tr>
<tr>
<td>Post_</td>
<td>11111</td>
</tr>
<tr>
<td>4</td>
<td>1234567</td>
</tr>
<tr>
<td>5 Server</td>
<td>M4-M---</td>
</tr>
<tr>
<td>6</td>
<td>-------</td>
</tr>
<tr>
<td>7 Bsy_</td>
<td>Svr State Resource PM State</td>
</tr>
<tr>
<td>8 RTS_</td>
<td>1 ManB SVR7 1 InSv</td>
</tr>
<tr>
<td>9 Off_</td>
<td>Size of Posted Set = 1</td>
</tr>
<tr>
<td>10</td>
<td>bsl all force</td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12 Next</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14 QuerySvr</td>
<td></td>
</tr>
<tr>
<td>15 QueryApp</td>
<td></td>
</tr>
<tr>
<td>16 QueryTrf</td>
<td></td>
</tr>
<tr>
<td>17 QSvrFlt_</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

**DONITA**

Time 10:49 >
## Messages

Table 2-7 shows the messages provided by the BSY command.

### Table 2-7
**BSY messages**

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFO: MANB command issued on a Server currently carrying traffic. Server must first enter Deloading state prior to transitioning to ManB state.</td>
<td>This message is displayed if the FORCE option was not specified. This message is necessary so that the user is made aware that the server’s status must first enter the deload state prior to transitioning to the MANB state.</td>
</tr>
<tr>
<td>BSY Server &lt;Svr #&gt; Failed. Svr not datafilled in Table C7Server</td>
<td>This warning is issued when a server that is not datafilled in Table C7SERVER is specified in the BSY parameters. <strong>User action</strong>: Datafill the server in table C7SERVER then re-enter the BSY command, or select an existing datafilled server in table C7SERVER to busy.</td>
</tr>
<tr>
<td>BSY Failed. Posted set is empty</td>
<td>This warning is issued if the BSY command is entered without any valid datafilled servers. This occurs when an attempt is made to busy a server not yet posted. <strong>User action</strong>: re-enter the BSY command with valid servers.</td>
</tr>
</tbody>
</table>
Table 2-7
BSY messages (continued)

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| Cannot Specify both ALL and server number(s) | This warning is issued if the BSY command is entered with server number(s) followed by the ALL parameter.  
**Note**: The standard message, “EITHER incorrect optional parameters OR too many parameters,” is displayed if the BSY command is entered with the ALL parameter followed by server number(s).  
**User action**: Busy the specific server(s) according to the syntax given. |
| Server BSY. Command already done. | This warning is issued if the BSY command is entered on a posted C7SERVER which is already in the Manual BSY or Deload state.  
**User action**: The BSY command must not be performed on a Server that is already in the Manual BSY or Deload state. |
| Time in Quarantine: 00 Hrs 14 Mins 23 Secs 15 calls currently active will be LOST? Continue? Please confirm (“YES”, “Y”, “NO”, OR “N”): | This message displays if the FORCE option is not specified. If the MMU is put to Quarantine, by using the Quarantine CI tool, then the time elapsed in Quarantine mode for this server is displayed. |
| 15 Calls currently active will be LOST. You can isolate MMU using Quarantine CI tool. Continue? Please confirm (“YES”, “Y”, “NO”, “N”): | This message displays if the MMU is not put in Quarantine. |

**RTS command**

The RTS command is used to return to service one or all servers in the posted set. If no parameters are specified, the server in the current control (posted) position will be returned to service.

**Syntax**

The command syntax for RTS is:

```
>RTS {option { [<server number 1-14>], [all servers] [ALL]}}
```
Parameters

Table 2-8 shows the parameters for the RTS command.

Table 2-8
RTS parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>option</td>
<td>no parameter</td>
<td>Return to service the server in the control position of the posted set</td>
</tr>
<tr>
<td>server number</td>
<td></td>
<td>Return to service by server number</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Return to service all servers</td>
</tr>
</tbody>
</table>

Example

Figure 2-10 shows a successful response to the following command to RTS by server number. Note that in Figure 2-10 the CCS7 Server, in this case, Server 4, may be INSV despite the PM’s ISTB state.

`>rts 4`

Figure 2-10
RTS by server number

Figure 2-11 shows a system response to the successful execution of the command to RTS all servers. This example assumes that there are two servers in the posted set.
>rts all

**Figure 2-11**
RTS all servers

![Image of terminal output](image-url)

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CSS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RExSch</td>
<td>.</td>
<td>.</td>
<td>1 FP</td>
<td>1 RSSC</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>SDM</td>
</tr>
</tbody>
</table>

C7Server | CCS7
0 Quit | 1 RSSC
3

11111

4 | 1234567 | 8901234

5 Server . . . . .

6

7 Bay_ | Svr | State | Resource | PM | State |
8 RTS_ | 1 | InSv | SVR7 | 1 | ISTb |
9 OffL_ | Size of Posted Set = 2
10 rts all
11 Server 1: RTS already done.
12 Next Server 2: RTS already done.
13

14 QuerySvr
15 QueryApp
16 QueryTrf
17 QStvrFlt_ 
18

DNSITA

Time 13:03 >
Messages

Table 2-9 shows the messages that are generated by the RTS command.

Table 2-9
RTS messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
<th>User action</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTS Server &lt;Svr #&gt; Failed. Svr not datafilled in Table C7Server</td>
<td>This warning is issued when a server that is not datafilled in table C7SERVER is specified in the RTS parameters.</td>
<td><strong>User action</strong>: Datafill the server in table C7SERVER then re-enter the RTS command, or select an existing datafilled server in table C7SERVER to RTS.</td>
</tr>
<tr>
<td>RTS Failed. Posted set is empty</td>
<td>This warning is issued if the RTS command is entered without any valid datafilled servers. This is possible if an attempt is made to RTS a server which has not yet been posted.</td>
<td><strong>User action</strong>: The RTS command must be re-entered with valid servers.</td>
</tr>
<tr>
<td>RTS Failed. Server is not in ManB state.</td>
<td>This warning is issued if the RTS command is performed on a posted CCS7 Server which is in the state. The CCS7 Server must first be busied using the Bsy command prior to being returned to service using the RTS command.</td>
<td><strong>User action</strong>: BSY the offline server first, and then use the RTS command to return the server to service.</td>
</tr>
</tbody>
</table>
Table 2-10
OFFL parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>option</td>
<td>no parameter</td>
<td>offline the server in the control position of the posted set</td>
</tr>
<tr>
<td>server number</td>
<td></td>
<td>offline by server number</td>
</tr>
</tbody>
</table>

OFFL command

The OFFL command places one or all servers in the posted set offline. If no parameters are given, the server in the current control position is placed offline.

Syntax

The command syntax for OFFL is:

>OFFL {<option { [<server number {1-14}]}, [<all servers> {ALL}]}>

Parameters

Table 2-10 shows the parameters for the OFFL command.
Table 2-10
OFFL parameters (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td></td>
<td>offline all servers</td>
</tr>
</tbody>
</table>

Example
Figure 2-12 shows a successful response to the following command to OFFL by server number:

```plaintext
offl 1
```

Figure 2-13 shows a successful response to the following command to place all servers offline. This example assumes that there are 2 servers in the posted set.

```plaintext
>offl all
```
Figure 2-13
OFFL all servers

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>ICD</th>
<th>Net</th>
<th>FM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DONITA**

Time 13:07 >
Messages

Table 2-11 shows the messages provided by the OFFL command.

Table 2-11
OFFL messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFL Server &lt;Svr #&gt; Failed. Svr not datafilled in Table C7Server</td>
<td>This warning is issued when a server that is not datafilled in table C7SERVER is specified in the OFFL parameters.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Datafill the server in table C7SERVER then re-enter the OFFL command, or select an existing datafilled server in table C7SERVER to place offline.</td>
</tr>
<tr>
<td>OFFL Failed. Posted set is empty</td>
<td>This warning is issued if the OFFL command is entered without any valid datafilled servers. This is possible if an attempt is made to OFFL a server that has not yet been posted.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> The OFFL command must be re-entered with valid servers.</td>
</tr>
<tr>
<td>OFFL Failed. Server is not in ManB state.</td>
<td>This warning is issued if the OFFL command is performed on a posted CCS7 server that is in an in-service state. The CCS7 server must first be busied using the Bsy command prior to being placed offline.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> BSY the INSV server first, and then use the OFFL command to place the server offline.</td>
</tr>
</tbody>
</table>
The QUERYAPP command enables the user to display detailed information on the MMU relating to VLR occupancy, number of active calls on the server, workload on the MMU, alarm status, and hypothetical MMU workload.

**Note:** Hypothetical workload occurs when the busiest MMU, in terms of workload, goes out of service, and this MMU workload is distributed among other MMUs in service.

### Syntax

The command syntax for QUERYAPP is:

```plaintext
>QUERYAPP <option [Server Number, {1-14}> ]>
[<All Servers> {All}>]
```
Parameters

Table 2-12 shows the parameters for the QUERYAPP command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>server number</td>
<td>{1 to 14}</td>
<td>the Server number of the Server being queried - the Server must be in the posted set</td>
</tr>
<tr>
<td>option</td>
<td>server number</td>
<td>query by server number</td>
</tr>
<tr>
<td></td>
<td>ALL</td>
<td>query all servers. All the servers must be in the posted set, else, only posted server will be queried.</td>
</tr>
</tbody>
</table>

Example

Figure 2-14 successful response to the QUERYAPP command This example assumes that server 1 is already in the posted set.

queryapp

Figure 2-14

QUERYAPP display

XAC  MS  ICD  Net  FM  CCS  Trks  Ext  APPL
  RExSch  LMFCOS  1 FP  1 RSCS  ...  SEM +
  M  *C*

C7Server  CCS7
  0 Quit  1 RSCS
  2 Post_
  3
  4  1234567  8901234
  5 Server  0---  -------
  6
  7 Bay_  Swr  State  Resource  FM  State
  8 RTS_  1 OffL  SVR7  1 ISTb
  9 OffL_  Size of Posted Set = 2
  10 QueryApp  1
  11 Actual Pool-Workload Alarm Status: None
  12 Next  Hypothetical Pool-Workload Alarm Status: Crit
  13 Virtual MMU VLR Occupancy: 6451
  14 QuerySvr
  15 QueryApp  MMU  VLROcc  CallCount  Workload  Status  Workload
  16 QueryTrf  1  5429  567  54  none  68
  17 QSVrFlt_
  18

DONITA

Time 13:08 >
Messages

Table 2-13 shows the messages provided by the QUERYAPP command.

Table 2-13
QUERYAPP messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUERYAPP Failed: Posted Set is empty.</td>
<td>There must be a current posted set from which the Server to be queried is selected.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Post the Server to be queried.</td>
</tr>
<tr>
<td>QUERYAPP Failed: Server &lt;Svr #&gt; not Posted</td>
<td>The queried Server must be part of the posted set.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Post the Server to be queried.</td>
</tr>
<tr>
<td>QUERYAPP Server &lt;Svr #&gt; Failed. Svr not datafilled in Table C7Server.</td>
<td>This message occurs if the QUERYAPP command is entered with a server in the posted set but the server in the posted set is no longer datafilled in the C7SERVER table.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> The QUERYAPP command must be re-entered with valid servers.</td>
</tr>
<tr>
<td>QUERYAPP is supported for MMU servers only.</td>
<td>The QUERYAPP command applies only to MMU servers as datafilled in table C7SERVER. The server being queried must be datafilled as an MMU server.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> The QUERYAPP command must be re-entered with valid MMU servers.</td>
</tr>
</tbody>
</table>

QSVRFLT command (MMU only)

This command displays fault information for the MMU server. These faults are the alarm conditions that may exist on the MMU.

Syntax

The command syntax for QSVRFLT is:

>`qsvrflt <option [<server number {1-14}> ]]`
Parameters

Table 2-14 shows the parameters for the QSvrFlt command.

Table 2-14

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>server number</td>
<td>{1 to 14}</td>
<td>the Server number of the Server being queried - the Server must be in the posted set</td>
</tr>
<tr>
<td>option</td>
<td>server number</td>
<td>query by server number</td>
</tr>
</tbody>
</table>

Example

Figure 2-15 shows an example of the QSvFlt display.

```
qsvrflt
```

Figure 2-15

QSvrFlt display

```
XAC  MS  ICD  Net  PM  CCS  Trks  Ext  APPL
RExSch . 1MFcOS .  1  FP  1RSCC       ... .  SDM +
       M  *C*

0 Quit  1 RSCC
2 Post_ 3
4
5
6
7 Sys_ Svr State Resource PM State
8 RTS_ 1 OffL SVR7 1 ISTb
9 OffL_ Size of Posted Set = 2
10 QSVrFlt
11 Server : 1
12 Next Maintenance state: OffL
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSVrFlt_
18
19 2CLNT
20 Time 13:10 >
```
**Messages**

Table 2-15 shows the messages provided by the QSvrFlt command.

### Table 2-15

**QSvrFlt messages**

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSvrFlt Failed: Posted Set is empty.</td>
<td>There must be a current posted set from which the Server to be queried is selected.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Post the Server to be queried.</td>
</tr>
<tr>
<td>QSvrFlt Failed: Server &lt;Svr #&gt; not Posted</td>
<td>The queried Server must be part of the posted set.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Post the Server to be queried.</td>
</tr>
<tr>
<td>QSvrFlt Server &lt;Svr #&gt; Failed. Svr not datafilled in Table C7Server.</td>
<td>This message occurs if the QSvrFlt command is entered with a server in the posted set but the server in the posted set is no longer datafilled in the C7SERVER table.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> The QSvrFlt command must be re-entered with valid servers.</td>
</tr>
<tr>
<td>QSvrFlt is supported for MMU servers only.</td>
<td>The QSvrFlt command applies only to MMU servers as datafilled in table C7SERVER. The server being queried must be datafilled as an MMU server.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> The QSvrFlt command must be re-entered with valid MMU servers.</td>
</tr>
</tbody>
</table>
C7SVRACT

C7SVRACT commands

C7SVRACT commands activate and deactivate the CCS7 Server, and display CCS7 Server mapping and status information.

These commands can only be accessed when the product layer defined SOC option is turned ON. A different message is displayed when the C7SVRACT command is invoked at the CI prompt, depending on the SOC state.

If the SOC option is not active, the message shown in Figure 2-16 is displayed when the C7SVRACT command is invoked.

Figure 2-16
SOC not active

```
C7SVRACT:
WARNING!
This CI is SOC protected.
SOC activation is required to use the commands in this CI.
>
```

If the SOC option is active, the message shown in Figure 2-17 is displayed when the C7SVRACT command is invoked.

Figure 2-17
SOC active

```
C7SVRACT:
Commands issued under the C7SVRACT Command Interpreter tool may affect messages generated by subsystems on this node. Refer to documentation for correct activation sequence.

WARNING ! ! ! WARNING ! ! ! WARNING ! ! ! Improper use of this tool can result in discarded CCS7 messages ! ! !

Type >HELP for a list of commands.
>
```
Table 2-16 lists the C7SVRACT commands.

Table 2-16  
C7SVRACT commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVATE</td>
<td>Activates CCS7 servers.</td>
</tr>
<tr>
<td>DEACTIVATE</td>
<td>Deactivates CCS7 servers.</td>
</tr>
<tr>
<td>STATUS</td>
<td>Displays CCS7 server activation status.</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Displays CCS7 server mapping information.</td>
</tr>
<tr>
<td>HELP</td>
<td>Provides information about C7SVRACT commands.</td>
</tr>
<tr>
<td>QUIT</td>
<td>Leaves C7SVRACT and returns to the CI prompt.</td>
</tr>
</tbody>
</table>

To access
To access C7SVRACT from the CI environment, enter:

> C7SVRACT

To return to CI
To exit C7SVRACT and return to the CI environment, enter:

> QUIT

ACTIVATE command
The ACTIVATE command activates CCS7 Servers on the switch. CCS7 Servers can be activated only if there is datafill in table C7SERVER.

Syntax
The command syntax for ACTIVATE is:

> ACTIVATE

Parameters
The ACTIVATE command has no parameters.

Example
The example in Figure 2-18 shows the response to the ACTIVATE command when the CCS7 server functionality is already active.
Figure 2-18
ACTIVATE command issued while already active

```
C7SVRACT:
>activate
   The CCS7 Server functionality is active.
>
```

Messages

Table 2-17 shows the messages provided by the ACTIVATE command.

Table 2-17
ACTIVATE messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation Failed: CCS7 Servers not datafilled</td>
<td>This response indicates that the CCS7 Server function could not be activated because the C7SERVER table has not been datafilled.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Datafill table C7SERVER.</td>
</tr>
<tr>
<td>The CCS7 Server functionality is active.</td>
<td>This response indicates that the CCS7 Server function has been activated, or was already active.</td>
</tr>
<tr>
<td></td>
<td><strong>System action:</strong> The system downloads the activation state to all inservice PMs.</td>
</tr>
<tr>
<td>Caution: CCS7 Server Activated, but not downloaded to PMs</td>
<td>This response indicates that the CCS7 Server function has been activated, but that the data could not be sent to the PMs. This response</td>
</tr>
<tr>
<td></td>
<td>should not be seen as it indicates a problem on the switch.</td>
</tr>
<tr>
<td></td>
<td><strong>System action:</strong> The system audits the data and detects the mismatch.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Deactivate the CCS7 Server function and attempt to reactivate.</td>
</tr>
</tbody>
</table>
The deactivate command deactivates CCS7 Servers on the switch. CCS7 Servers can only be deactivated if all the servers datafilled in table C7SERVER are in the offline state.

**Syntax**

The command syntax for DEACTIVATE is:

```
>DEACTIVATE
```

**Parameters**

The DEACTIVATE command has no parameters.

**Example**

The example in Figure 2-19 shows the response to the DEACTIVATE command when all servers are offline.

**Figure 2-19**

DEACTIVATE command issued while active

```
C7SVRACT:
>deactivate
The CCS7 Server functionality is not active.
>
```
Messages

Table 2-18 shows the messages provided by the DEACTIVATE command.

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CCS7 Server functionality is not active.</td>
<td>This response indicates that the CCS7 Server functionality has been deactivated, or was already deactivated. <strong>System action:</strong> The system downloads the activation state to all inservice PMs.</td>
</tr>
<tr>
<td>Deactivation Failed: CCS7 Servers must all be offline</td>
<td>This response indicates that the CCS7 Server functionality deactivation failed because at least one CCS7 Server is not in the offline state. <strong>User action:</strong> Offline all CCS7 Servers from the appropriate MAP level.</td>
</tr>
<tr>
<td>Deactivation Failed: CCS7 Servers not datafilled</td>
<td>This response indicates that the CCS7 Server functionality deactivation failed because there were no CCS7 Servers datafilled. This response should not be seen as the CCS7 Server functionality should be deactivated prior to deleting the last tuple from table C7SERVER.</td>
</tr>
<tr>
<td>Deactivation Failed: Internal Activation Problem</td>
<td>This response indicates that the CCS7 Server function deactivation was not successful. This response should not be seen as it indicates a problem on the switch. <strong>User action:</strong> Contact the next level of support.</td>
</tr>
<tr>
<td>Unknown Error The CCS7 Server functionality is active. <strong>OR</strong> Unknown Error The CCS7 Server functionality is not active.</td>
<td>This response indicates that the CCS7 Server function deactivation was not successful. This response should not be seen as it indicates a problem on the switch. <strong>User action:</strong> Contact the next level of support.</td>
</tr>
</tbody>
</table>

---

**STATUS command**

The STATUS command displays the activation status of the CCS7 Server function.
**Syntax**

The command syntax for STATUS is:

>STATUS

**Parameters**

The STATUS command has no parameters.

**Example**

Figure 2-20 shows the response to the STATUS command when the CCS7 server functionality is active.

![Figure 2-20 STATUS command response]

**Messages**

Table 2-19 shows the messages provided by the STATUS command.

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CCS7 Server functionality is active.</td>
<td>This response indicates that the CCS7 Server functionality is active.</td>
</tr>
<tr>
<td>The CCS7 Server functionality is not active.</td>
<td>This response indicates that the CCS7 Server functionality is not active.</td>
</tr>
</tbody>
</table>

**DISPLAY command**

The DISPLAY command displays the CCS7 server mapping information used for message routing.

**Syntax**

The command syntax for DISPLAY is:

>DISPLAY <OPTION> {FULL, SERVER <SVRID> {1 TO 14}, SUBSYSTEM <SSNAME> STRING}
Parameters

Table 2-20 shows the parameters for the DISPLAY command.

Table 2-20
DISPLAY parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>n/a</td>
<td>Displays the full CCS7 Server mapping information.</td>
</tr>
<tr>
<td>SERVER</td>
<td>{ 1 to 14 }</td>
<td>Specifies the server number (from table C7SERVER). When the command is issued with this option, only the data for the specified server is displayed.</td>
</tr>
<tr>
<td>SUBSYSTEM</td>
<td>String</td>
<td>Specifies the subsystem from table C7LOCSSN. When the command is issued with this option, only the data for the specified subsystem is displayed.</td>
</tr>
</tbody>
</table>

Example

Figure 2-21 shows an example of DISPLAY command output with the FULL option specified. This response provides the mapping information related to the CCS7 Server on this switch. This mapping shows the relationship between servers, subsystems, and the CCS7 function being used.

Figure 2-21
DISPLAY FULL example

C7SVRACT:
>display full
Server   Resource    Function     Subsystem
------   ---------   --------     ---------
1        SVR7  100    SCCP        800P    
1        SVR7  100    SCCP        E800TEST    
1        SVR7  100    SCCP        NETRAG    
1        SVR7  100    SCCP        CLASS    
1        SVR7  100    SCCP        CMS    
1        SVR7  100    SCCP        AIN01    
2        SVR7  101    SCCP        800P    
2        SVR7  101    SCCP        E800TEST    
2        SVR7  101    SCCP        NETRA    
2        SVR7  101    SCCP        CLASS    
2        SVR7  101    SCCP        CMS    
>        SVR7  101    SCCP        AIN01    

Figure 2-22 shows an example DISPLAY command output with the SERVER option specified.
**Figure 2-22**
**DISPLAY SERVER example**

```text
C7SVRACT:
>display server 4

<table>
<thead>
<tr>
<th>Server</th>
<th>Resource</th>
<th>Function</th>
<th>Subsystem</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>800P</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>E800TEST</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>NETRAG</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>CLASS</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>CMS</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
<td>AIN01</td>
</tr>
</tbody>
</table>
>
```

**Figure 2-23** shows an example DISPLAY command output with the SUBSYSTEM option specified. This response provides the mapping information related to the CCS7 Server on this switch for a specific subsystem. This mapping displays the servers that are being used by the specified subsystem for the function indicated.

**Figure 2-23**
**DISPLAY SUBSYSTEM example**

```text
C7SVRACT:
>display subsystem ain01

CCS7 Server information for subsystem: AIN01

<table>
<thead>
<tr>
<th>Server</th>
<th>Resource</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SVR7 100</td>
<td>SCCP</td>
</tr>
<tr>
<td>2</td>
<td>SVR7 101</td>
<td>SCCP</td>
</tr>
<tr>
<td>3</td>
<td>SVR7 102</td>
<td>SCCP</td>
</tr>
<tr>
<td>4</td>
<td>SVR7 103</td>
<td>SCCP</td>
</tr>
<tr>
<td>5</td>
<td>SVR7 104</td>
<td>SCCP</td>
</tr>
<tr>
<td>6</td>
<td>SVR7 105</td>
<td>SCCP</td>
</tr>
</tbody>
</table>
>
```
Messages

Table 2-21 shows the messages provided by the DISPLAY command.

Table 2-21
DISPLAY messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Servers datafilled in TABLE C7SERVER.</td>
<td>This response indicates that there are no servers datafilled in table C7SERVER, therefore, there is no data to display.</td>
</tr>
<tr>
<td>No data to display.</td>
<td></td>
</tr>
<tr>
<td>Subsystem &lt;subsystem name&gt; is not datafilled in table C7LOCSSN.</td>
<td>This response indicates that the specified subsystem is not datafilled in table C7LOCSSN.</td>
</tr>
</tbody>
</table>
CAPACITY

This command is invoked from the MTC MAP level to display the system configuration parameters that affect call processing (on the GSM /UMTS MSC).

CAPACITY commands

Table 2-22 shows the CAPACITY menu commands and their descriptions.

Table 2-22
CAPACITY menu commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPACITY</td>
<td>Displays the capacity measurements for the XA-Core GSM MSC.</td>
</tr>
<tr>
<td>PARMS</td>
<td>Displays capacity measurements affecting call processing. Provisioned in the</td>
</tr>
<tr>
<td></td>
<td>CAPACITY, SCHEDMAP, and DETAIL MAP levels.</td>
</tr>
<tr>
<td>SCHEDMAP</td>
<td>Invoked from the CAPACITY MAP level to display the capacity usage of various</td>
</tr>
<tr>
<td></td>
<td>scheduler classes</td>
</tr>
<tr>
<td>DETAIL</td>
<td>Invoked from the CAPACITY MAP level to display information regarding system</td>
</tr>
<tr>
<td></td>
<td>status, traffic, occupancy and grade of service</td>
</tr>
<tr>
<td>STRTLOG</td>
<td>Invoked from CAPACITY MAP to instruct the log system to start generating a</td>
</tr>
<tr>
<td></td>
<td>Capacity MAP information log.</td>
</tr>
<tr>
<td>STOPLOG</td>
<td>Invoked from CAPACITY MAP to instruct the log system to stop generating a</td>
</tr>
<tr>
<td></td>
<td>Capacity MAP information log.</td>
</tr>
</tbody>
</table>

To access
To access CAPACITY from the CI environment, enter

>MAPCI;MTC;CAPACITY;

To return to CI
To exit CAPACITY and return to the CI environment, enter

>QUIT ALL

CAPACITY command

This command is invoked from the MTC MAP level to display the capacity measurements for the UCC MSC.

Syntax
The syntax for the CAPACITY command is:
>CAPACITY

Parameters

None

Example

Figure 2-24 shows an example of the CAPACITY MAP display.

Figure 2-24
CAPACITY MAP display

Field descriptions

Table 2-23 describes the CAPACITY MAP display fields.

Table 2-23
CAPACITY MAP field descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Unit</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATMP/HR</td>
<td>Number</td>
<td>Call attempts per hour.</td>
</tr>
<tr>
<td>CAP</td>
<td>Percentage</td>
<td>Ratio of time currently used by payload to the predicted usage at capacity.</td>
</tr>
<tr>
<td>Field</td>
<td>Unit</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ENGBHCA</td>
<td>Number</td>
<td>Projected engineered call attempts per hour. Limitations:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The accuracy of ENGBHCA prediction is +/- 10%.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• When utilization (CAP field in Capacity MAP level) is below 30%, the accuracy of the ENGBHCA prediction is reduced and unreliable.</td>
</tr>
<tr>
<td>OVRLD</td>
<td>Boolean (On/Off)</td>
<td>Central Overload Control indicator for previous minute.</td>
</tr>
<tr>
<td>PESC</td>
<td>Boolean (YES/NO)</td>
<td>PE state change indicator from previous minute.</td>
</tr>
<tr>
<td>SCHED</td>
<td>Percentage</td>
<td>Scheduling overhead relative to what it should be at capacity.</td>
</tr>
<tr>
<td>FORE</td>
<td>Percentage</td>
<td>Operating system overhead relative to what it should be at capacity.</td>
</tr>
<tr>
<td>MAINT</td>
<td>Percentage</td>
<td>Maintenance class utilization relative to what has been allocated.</td>
</tr>
<tr>
<td>DNC</td>
<td>Percentage</td>
<td>NOSFT class utilization relative to what has been allocated.</td>
</tr>
<tr>
<td>AUXCP</td>
<td>Percentage</td>
<td>AUXCP class utilization relative to the office parm AUXCP_CPU_SHARE.</td>
</tr>
<tr>
<td>OM</td>
<td>Percentage</td>
<td>Utilization of OM classes relative to what has been allocated.</td>
</tr>
<tr>
<td>GTERM</td>
<td>Percentage</td>
<td>GTERM class utilization relative to the office parm GUARANTEED_TERMINAL_CPU_SHARE.</td>
</tr>
<tr>
<td>BKG</td>
<td>Percentage</td>
<td>Utilization of background classes relative to what they have been allocated.</td>
</tr>
<tr>
<td>NETM</td>
<td>Percentage</td>
<td>Utilization of NETMTC class relative to what has been allocated.</td>
</tr>
<tr>
<td>SNIP</td>
<td>Percentage</td>
<td>Utilization of SNIP class relative to what has been allocated.</td>
</tr>
</tbody>
</table>
### Table 2-23
CAPACITY MAP field descriptions (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Unit</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer</td>
<td>hh:mm:ss</td>
<td>Time remaining until the data monitoring system automatically shuts off.</td>
</tr>
<tr>
<td>OAvgDel</td>
<td>ms</td>
<td>Originating Average Delay - weighted average waiting time on CCB origination queue.</td>
</tr>
<tr>
<td>95%OLim</td>
<td>ms</td>
<td>95% Origination Limit - the 95% high water mark for the CCB origination queue.</td>
</tr>
<tr>
<td>PAvgDel</td>
<td>ms</td>
<td>Progress Average Delay - weighted average waiting time on the CCB progress queue.</td>
</tr>
<tr>
<td>95%PLim</td>
<td>ms</td>
<td>95% Progress Limit - the 95% high water mark for the CCB progress queue.</td>
</tr>
<tr>
<td>BAvgDel</td>
<td>ms</td>
<td>Background Average Delay - weighted average waiting time on the background priority queue.</td>
</tr>
<tr>
<td>95%BLim</td>
<td>ms</td>
<td>95% Background Limit - the 95% high water mark for the background priority queue.</td>
</tr>
<tr>
<td>MAvgDel</td>
<td>ms</td>
<td>Maintenance Average Delay - weighted average waiting time on Maintenance ready queue.</td>
</tr>
<tr>
<td>95%MLim</td>
<td>ms</td>
<td>95% Maintenance Limit - the 95% high water mark for the maintenance ready queue.</td>
</tr>
<tr>
<td>OrigDeny</td>
<td>Number</td>
<td>Number of origination attempts denied due to Origination queueing delay threshold exceeded.</td>
</tr>
<tr>
<td>InefDeny</td>
<td>Number</td>
<td>Number of ineffective origination attempts discarded.</td>
</tr>
<tr>
<td>LCMdtsr</td>
<td>Number</td>
<td>The percentage of calls delayed by more than three seconds on LCMs, over the total number of calls processed by LCMs.</td>
</tr>
<tr>
<td>LMdtsr</td>
<td>Number</td>
<td>The percentage ratio of the number of calls delayed by more than three seconds on LMs, over the total number of calls processed by LMs.</td>
</tr>
</tbody>
</table>

---

**PARMS command**

The functionality of the PARMS command remains the same in all MAP Levels. In this feature, the PARMS command is accessible within the
CAPACITY, SCHEDMAP, and DETAIL MAP levels to display capacity measurements that affect call processing.

Syntax

The syntax for the PARMS command is:

>PARMS

Parameters

None.

Example

Figure 2-25 shows an example of a CAPACITY PARMS display.

Figure 2-25
CAPACITY PARMS display

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CC5</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameters

- Guaranteed_terminal_CPU_Share = 2%
- AUX_CPU_Share = 1%
- CC_Endlevel_Warning_Threshold = 100%
- NETM share setting = 0%
- DNC share setting = 3%
- SNIP share setting = 1%
- 1% CPU allocation = 2142 CATM/PR

Note: In the previous display, the "1% CPU Allocation" measurement is no longer valid on XA-Core.
SCHEDMAP command

This command is invoked from CAPACITY MAP level to display capacity usage of scheduler classes.

Syntax

The command syntax for SCHEDMAP is:

> SCHEDMAP

Parameters

No parameters

Example of SCHEDMAP display

Figure 2-26 shows an example of a SCHEDMAP display.

DETAIL command

The DETAIL command is invoked from CAPACITY MAP to display traffic and grade of service measurements.
**Syntax**

The command syntax for DETAIL is:

```plaintext
>DETAIL
```

**Parameters**

None

**DETAIL display example**

Figure 2-27 shows an example of a DETAIL display.

![DETAIL MAP display](image)

**STRTLOG command**

The STRTLOG command is invoked from CAPACITY MAP. It instructs the log system to start generating a Capacity MAP information log.

**Syntax**

The command syntax for STRTLOG is:

```plaintext
>STRTLOG
```
Parameters
Use the following parameters:
• all <number of minutes>
• brief <number of minutes>
• capacity <number of minutes>
• detail <number of minutes>
• schedmap forever

STOPLOG command
The STOPLOG command is invoked from CAPACITY MAP. It instructs the log system to stop generating a Capacity MAP information log.

Syntax
The command syntax for STOPLOG is:

>STOPLOG

Parameters
The parameters for STOPLOG include:
• all
• capacity
• detail
**CCS7 Server alarm commands**

The following commands are used to display alarm information for the CCS7 server or MMU:

- QUERYALM
- DISALM

**Access**

To access the QUERYALM command from the CI environment, enter:

>mapci;mtc;ccs

To access the DISALM command from the CI environment, enter:

>mapci;mtc;ccs;ccs7

**Exit**

To exit and return to the CI prompt, enter:

>QUIT ALL

**QUERYALM command**

The QUERYALM command displays the alarm order for a given MSC system.

**Syntax**

The command syntax for QUERYALM is:

>`QUERYALM <CCS system> STRING`

**Parameters**

Table 2-24 shows the parameter for the QUERYALM command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCS system</td>
<td>STRING</td>
<td>A defined CCS System (for example, CCS7)</td>
</tr>
</tbody>
</table>

**Example**

The example in Figure 2-28 shows CCS7 server alarms in the QUERYALM response.
Figure 2-28
QUERYALM example

The DISALM displays alarm status. For the CCS7 server, this information includes the state of the CCS7 Server and which servers are unavailable.

Syntax
The command syntax for DISALM is:

>DISALM <option [<Alarm string>],

[<All alrms> {ALL} >

Parameters
Table 2-25 shows the parameter for the DISALM command.

Table 2-25
DISALM parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm</td>
<td>STRING</td>
<td>For the CCS7 server, values include:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SVRC—Server critical alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SVRM—Server major alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ALL—All alarms</td>
</tr>
</tbody>
</table>

411-2231-809 Standard 14.05 May 2006
Responses

If the DISALM command is issued with SVRC, SVRM, or ALL specified, and all datafilled servers are available or the CCS7 server is not activated in the office, a message indicating that there is no alarm of this type is displayed.

If the DISALM command is issued with SVRC, SVRM or ALL specified, and the CCS7 server is presently in that alarm state, the heading is displayed along with the information corresponding to the unavailable servers (see the example in Figure 2-29).

The first line indicates the Server alarm type. Note that this alarm is the overall state of routing and does not apply to individual servers. The next line is a header line. Headings include:

- **C7Server**—server number that is assigned in Table C7Server. The servers are displayed in the same order as they appear in table C7SERVER.
- **Resource**—hardware associated with the server.
- **Stat**—state of the resource.

**Figure 2-30** shows the alarm state of the alarm MMU Server and the workload status. The first line indicates the Server alarm type. The next line is a header line. The MMU column contains the server number that is assigned in table C7Server and the peripheral name and node number. The Workload column indicates the workload of the server. The Alarm field displays the severity of the alarm. The servers are displayed in the same order as they appear in table C7Server. This example also displays overloading of the MMU pool and hardware sparing violation alarms.

If this response occurs, check any MMU servers that are currently unavailable and return them to service. In the case of SVR7s, post the SVR7s using the PM level of the MAP and return the SVR7 to service.

*Note*: The response varies depending on the command parameters. All the CCS7 alarms can be displayed or the specific alarm (in this example, the CCS7 Server alarms) can be specified as follows:

- `>DiSalm`
- `>DiSAlm All`
- `>DisAlm SVRC`
- `>DisAlm SVRM`
The SVRC alarm is raised in the following overload conditions on the MMU:
- Workload (CP Occupancy) of the individual MMU server or the MMU server pool is in the range of 91-100.
- Workload of the MMU pool (average workload per MMU) is in the range of 91-100.

The SVRC alarm is not based on any timer. The workload is lowered under the following conditions:
- Workload of the individual MMU server or the MMU server pool is less than or equal to 90.
- Workload of the MMU pool is less than or equal to 90.

The SVRM alarm is raised in the following overload conditions on the MMU:
- Workload (CP Occupancy) of the individual MMU server or the MMU server pool is in the range of 71 - 90.
- Workload of the MMU pool (average workload per MMU) is in the range of 71-90.
- Minimum hardware sparing is violated for MMU servers (only one of the MMUs is InSv).

This alarm is not based on a timer. However, the alarm is lowered under the following conditions:
- Workload of the individual MMU server or the MMU server pool is less than or equal to 70.
- Workload of the MMU pool is less than or equal to 70.
- More than one MMU is InSv.

**Example**
The example in Figure 2-29 shows DISALM output for the CCS7 server SVRM alarm.
The example in Figure 2-30 shows DISALM output for the MMU server.
### Figure 2-30

DISALM output for MMU server

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>FM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APFL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM Flt</td>
<td>RExByp</td>
<td>.</td>
<td>.</td>
<td>1GSMF</td>
<td>10</td>
<td>RS</td>
<td>1</td>
<td>CC</td>
</tr>
<tr>
<td>M</td>
<td><em>C</em></td>
<td><em>C</em></td>
<td><em>C</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CMAP11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 12:09 &gt;</td>
</tr>
</tbody>
</table>
The CICTEST tool is used to enable/disable the CIC Isolation tool and to isolate certain CICs on the A-interface that are reserved for test mobiles during network upgrades. The command in the tool can be used to test the packet fabric.

CICTEST command

Syntax

> cictest
Type HELP to display all available commands
CICTEST:

> help

The CICTEST CI tool is used to turn ON/OFF the CIC Isolation Tool. This tool is used to isolate A-interface CICs from the Voice pool for testing.

Available CICTEST subcommands:

-----------------------------------------------
ON                    : Turns ON the CIC Isolation Tool
OFF                   : Turns OFF the CIC Isolation tool
ADD <routeset><cic>   : Isolates the given CIC
DELETE <routeset><cic>: Deletes the isolated CIC
DISPLAY               : Displays the test resources
HELP                  : display this help
QUIT                  : exits CICTEST
-----------------------------------------------

Exit

To return to the MAPCI, enter:

QUIT ALL

Parameters

Table 2-26 provides the CICTEST ADD subcommand parameter.

Table 2-26
CICTEST ADD subcommand parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;routeset&gt; &lt;cic&gt;</td>
<td>[STRING (0–16383)]</td>
<td>This parm isolates the given CIC from the Voice pool.</td>
</tr>
</tbody>
</table>
Responses for ADD command

The following table provides the responses for the CICTEST ADD command:

Table 2-27
Responses to CICTEST ADD command

<table>
<thead>
<tr>
<th>Command</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>cictest add bssp1cp 3</td>
<td>The given routeset and CIC have been successfully isolated from the Voice pool for test calls.</td>
</tr>
<tr>
<td></td>
<td>The given routeset and CIC are already isolated.</td>
</tr>
<tr>
<td></td>
<td>Given CIC is not IDLE.</td>
</tr>
<tr>
<td></td>
<td>CIC could not be found in the voice pool.</td>
</tr>
<tr>
<td></td>
<td>Either no GSM trunks are datafilled for this PC or no signaling link is available.</td>
</tr>
<tr>
<td></td>
<td>No trunks have been datafilled for this point code.</td>
</tr>
<tr>
<td></td>
<td>No resource available for the given routeset-CIC combination.</td>
</tr>
</tbody>
</table>

Explanation

Setting the parm to ADD isolates the specified routeset and CIC for test calls. Only 4 CICs can be isolated at a time for the testing. This tool only isolates A-interface based CICs. The following message is displayed when the operator attempts to isolate an Iu-interface CIC - “Attempting to isolate Iu Interface CICs. This tool only isolates A-interface CICs.”

Action

When the specified routeset-CIC combination cannot be isolated, the user must retry or datafill another CIC.

Table 2-28 provides the CICTEST DELETE subcommand parameter.

Table 2-28
CITTEST DELETE subcommand parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>[&lt;routeset&gt; &lt;cic&gt;]</td>
<td>[STRING {0–16383}]</td>
<td>This parm returns the given CIC to the Voice pool.</td>
</tr>
</tbody>
</table>

Responses to DELETE command

The following table provides the responses to the CICTEST DELETE command:
Table 2-29
Responses to the CICTEST DELETE command

<table>
<thead>
<tr>
<th>Command</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>delete bssp1cp 3</td>
<td>The given routeset-CIC combination has not been isolated for test calls.</td>
</tr>
<tr>
<td></td>
<td>The given CIC has been returned to the Voice pool for non-test calls.</td>
</tr>
<tr>
<td></td>
<td>Unable to return the CIC to the Voice pool. CIC is not IDLE.</td>
</tr>
<tr>
<td>delete bs2scp 3</td>
<td>Routeset name is invalid!!!</td>
</tr>
</tbody>
</table>

Explanation
Setting the parm to DELETE deletes the specified routeset and CIC from the table. This command returns the CIC to the Voice pool, to be used for non-test calls. When the last set of isolated routeset-CIC combination is deleted, the CIC Isolation tool is turned OFF and the information is passed down to the MMUs. The warning message is displayed “The last set of isolated routeset-CIC combination is deleted. CIC Isolation tool is turned OFF”

Action
Not applicable.

Response to DISPLAY command
Table 2-30 provides the response to the CICTEST DISPLAY command:

Table 2-30
Response to the CICTEST DISPLAY command

<table>
<thead>
<tr>
<th>Command</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>display</td>
<td>The test resources reserved for the CIC Isolation tool are displayed below.</td>
</tr>
</tbody>
</table>

Explanation
Setting the parm to DISPLAY gives a summary of all the test resources reserved for the CIC Isolation tool.

Action
Not applicable.

Responses for ON command
> cictest

Type HELP to display all available commands
CICTEST:

> on

Table 2-31
Responses to the CICTEST ON command

<table>
<thead>
<tr>
<th>Command</th>
<th>Response</th>
</tr>
</thead>
</table>
| ON      | The CIC Isolation Tool is turned ON  
          | CIC Isolation tool is already ON, no change is made.  
          | The CIC Isolation tool is turned ON.  
          | CIC Isolation tool status is not updated in the MMUs.  
          | The CIC Isolation tool is turned ON. |

Explanation
Setting the parm to ON turns ON the CIC Isolation tool. Whenever the CIC Isolation tool is turned ON, the information is passed down to the MMUs.

System Action
N/A

User Action
N/A

Responses for OFF command
> cictest

Type HELP to display all available commands

CICTEST:

> off

Table 2-32
Responses to the CICTEST OFF command

<table>
<thead>
<tr>
<th>Command</th>
<th>Response</th>
</tr>
</thead>
</table>
| OFF     | The CIC Isolation tool is turned OFF  
          | CIC Isolation tool is already OFF, no change is made.  
          | The CIC Isolation tool is turned OFF.  
          | CIC Isolation tool status is not updated in MMUs.  
          | The CIC Isolation tool is turned OFF. |
**Explanation**
Setting the parm to OFF turns OFF the CIC Isolation tool. Whenever the CIC Isolation is turned OFF, the information is passed down to the MMUs.

**System Action**
N/A

**User Action**
N/A
CIMTC

Call Intercept Maintenance (CIMTC) is a tool on the MAP level on the GSM MSC that enables authorized switch users to check the status of the connection and the buffer system.

CIMTC command

**CIMTC**

Accessing CIMTC

To access CIMTC from the CI prompt, the accessing directory is PROGDIR. Enter the following command:

CI> CIMTC

Exiting CIMTC

To exit CIMTC, enter the following command and press return:

CIMTC> QUIT

Commands

The following commands are available to all authorized users:

- ‘Status’ is available to display:
  - the status of the TCP/IP connection to the SuperNode Data Manager (SSDM), and
  - the status and results of the buffering system.
- ‘Buffer’ is available to ensure that all CNR traffic is buffered during scheduled maintenance. It immediately activates CNR buffering. This command should be executed on the MSC prior to starting the GEM upgrade procedure on the SDM. Buffering of CNRs will continue for up to 12 hours, or at least until the ‘Transmit’ command is executed.

**Note:** You can receive the following warning messages:

- The CI background process will be unavailable for 12 hours, but can be manually reactivated (on 20 minute intervals) using the CIMTC TRANSMIT command. This means that no CNRs stored in the CIBuffer system will be transmitted to the SDM ....
- WARNING: The BUFFER command was run less than 12 hours prior WARNING: is issuing this BUFFER command. The CI background WARNING: process and the BUFFER command will not be available WARNING: until the 12 hours has expired.

***WARNING***The office parameter TABLE OFCVAR; POS CI_
***WARNING***CNR_BUFFERING is set to not buffer CNRs
***WARNING***generated from call processing and datafill
***WARNING***changes....

Change the tuple to Y, and the warning does not appear. For example,

**buffer command with tuple set to Y**

- ‘Transmit’ is available to begin transmission of CNRs (again) to the SDM. Once executed, the MSC can delay transmission for up to 20 minutes.
- ‘Test’ is available to test transmission of CNRs to the SDM, and finally the Call Center. This command can be used to verify that all network components are ‘ready’ to flush the buffered CNRs to the SDM.
- ‘Save’ is available to save the currently buffered CNRs to disk. The data saved is encrypted and not readable by common users.
- ‘Load’ is available to load CNRs from disk into the buffer system.
- ‘Compare’ is available to compare two DNs (dialed numbers) using the connected party verification algorithm and datafill in table OFCVAR; post CI_CONNECTED_PARTY_VERIFICATION.
- ‘Help’ provides help on that particular topic.
- ‘Quit’ is available to quit/leave the CIMTC directory.

**Syntax**

The command syntaxes are:

- ‘Status’
- ‘Buffer’
- ‘Transmit’
- ‘Test <imsi_keyid> <gcallint_table_idx>’
- ‘Save <volumename> <filename>’
- ‘Load <volumename> <filename>’
- ‘Compare <DN> <DN>’
- ‘Help’
- ‘Quit’

**Response**

An example of the ‘Status’ command response follows:

```
2000/02/21 09:58   GSM09BK_7SAN_AB05
CIMTC:
>status
```
STORE ALLOCATED: Y MAX_B_IX: 95 MAX_E_IX: 32767
W_B_IX: 0 W_E_IX: 25874 R_B_IX: 0 R_E_IX: 21446 BUFFERS: 6

SDM Call Intercept Connection Status:
Connection Status = [DTA_ESTABLISHED_CONN]
Sending Status = [BUFFERING]

Retry Queue For Queued CNRs (Result = 0 is normal transmission):
Result [0] = [0]
Result [1] = [0]
Result [2] = [0]
Result [3] = [0]

Note 1: The ‘Buffers:’ field indicates how many buffers are stored in the system.

Note 2: The ‘Connection Status =’ field indicates the TCP/IP connection status (an indication of ‘DTA_ESTABLISHED_CONN’ indicates that the connection is established.

Note 3: The ‘Sending Status =’ field indicates the status of the buffer system (buffering/transmission).

Note 4: The ‘Result [x] =’ fields indicate the results of up to the last 20 attempts to send CNRs from the buffer system.
CRDBCI directory

CRDBCI is a MAPCI level that allows you to access and display information about the Call Reference Database Command Interface system.

The CRDBCI MAPCI level has one set of overriding commands and two databases, each with its own set of commands. The two databases are the Call Reference Data Base (CRDB) and the Call Element Data Base (CEDB). CEDB actually is a sub-database of CRDB.

Accessing CRDBCI

To access the CRDBCI MAP level from the CI prompt, type the following command and press return:

```
>crdbci
CRDBCI:
```

After entering the CRDBCI directory, the CRDBCI: directory prompt displays until the tool is exited by typing QUIT and pressing return.

Commands

The following CRDBCI commands enable operating company personnel to perform maintenance to the CEDB and CRDB:

- DISPLAY_ALL
- HELP
- RESET
- RUN_AUDIT
- QUIT

DISPLAY_ALL command

This command displays all call reference and call element information in the CRDB and the CEDB.

Syntax

The command syntax for DISPLAY_ALL is:

```
>display_all
```

Example

Figure 2-31 shows the DISPLAY_ALL command being used to manually verify a call reference exists in the CRDB.
Figure 2-31
Example of the DISPLAY_ALL command

```
CRDBCI:
> display_all
  FPF object:
    ===========
  class: CALL_REFERENCE_DATABASE_CLASS
  address: 065B0240 (CRDB)
  CALL REFERENCE DATABASE (CRDB)
  CRDB tuples: 2 out of 2 tuples in use

  FPF object:
    ===========
  class: CALL_ELEMENT_DATABASE_CLASS
  address: 0198013C (CRDB)
  CALL ELEMENT DATABASE (CEDB)
  CEDB tuples: 2 out of 2 tuples in use

bucket[127]

Call reference: InUse(YES) Audited(NO)
  callid: cptlbind=0123 seqno=001F, low=23 mid=01 high=DF
  point_code:member=1 cluster=103 network=69
> call element: InUse(YES) Audited(NO) Owner(87654321)
```

Error messages
The following error messages may display when the DISPLAY_ALL command is used:

Call Reference Database is not created.
Please datafill the CRDB_MAX_SIZE in table OFCVAR.

Help command
There are two types of help available. The first type of help lists all the commands from the CRDBCI prompt. The syntax to list all the available CRDBCI commands is:

```
CRDBCI:
> help crdbci
```

The second type of help provides assistance in performing a particular CRDBCI command. The syntax for help with a particular CRDBCI command is:

```
CRDBCI:
> help <Command Name>
```
RESET command

This command manually re-initializes all call reference and call element tuples in the CRDB and CEDB.

Syntax

The command syntax for RESET is:

>reset

Example

Figure 2-32 shows the RESET command being used to manually reset the CRBD and CEDB.

Figure 2-32
Example of the RESET command

Error messages

The following error messages may display when the RESET command is used:

Call Reference Database is not created.
Please datafill the CRDB_MAX_SIZE in table OFCVAR.

Call Element Database is not created.
Please datafill the CEDB_MAX_SIZE in table OFCVAR.

RUN_AUDIT command

This command manually runs the audit procedures through the CRDB and the CEDB. When the CRDB and the CEDB are created, the audit process occurs automatically every three hours. However, when a manual audit is initiated, this procedure runs in addition to the automatic procedure.

Syntax

The command syntax for RUN_AUDIT is:

>run_audit

Example

Figure 2-33 shows the RUN_AUDIT command being used to manually run the audit procedure through the CRDB and CEDB.
Figure 2-33
Example of the RUN_AUDIT command

```
CRDBCI:
> run_audit
>
```

Error messages
The following error messages may display when the RUN_AUDIT command is used:

- Call Reference is not found in CRDB.
- Call Reference Database is not created.
  Please datafill the CRDB_MAX_SIZE in table OFCVAR
- Call Element Database is not created.
  Please datafill the CEDB_MAX_SIZE in table OFCVAR

QUIT command
This command quits the CRDBCI directory and returns to the CI prompt.

Syntax
The command syntax for QUIT is:

```
CRDBCI:
>quit
```

CRDB commands
The CRDB commands enable operating company personnel to display and manipulate data and tuples in the Call Reference DataBase. The CRDB commands include:

- **DELETE_CR**—removes a tuple from the CRDB.
- **DISP_CR_CHAIN**—which displays a chain of call element tuples.
- **DISP_CR_STORE**—which displays all call elements in CRDB.
- **DISP_CR_TUPLE**—which displays a call reference tuple.
- **INSERT_CR**—which inserts a tuple into the CRDB.
- **RETRIEVE_CR**—which retrieves a tuple from the CRDB.

Syntax
The syntax for all CRDB commands is:

```
<CRDB Command Name>
PARAM: <Call Identification> <Point Code>
```
Parameters

Two parameters are acceptable input for all CRDB commands. Table 2-33 describes these parameters.

Table 2-33
CRDB command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Call Identification&gt;</td>
<td>000000 to FFFFFFFF</td>
<td>Identifies the call.</td>
</tr>
<tr>
<td>&lt;Point Code&gt;</td>
<td>00000000 to FFFFFFFF</td>
<td>Indicates the point code.</td>
</tr>
</tbody>
</table>

Example

Figure 2-34 shows a CRDB command being used to manually verify that a call reference exists in the CRDB.

Figure 2-34
Example of a CRDB command

```
CRDBCI:
>retrieve_cr 01AD47 0123FE67
>
```

Error messages

Table 2-34 lists CRDB commands and their possible error messages.

Table 2-34
CRDB commands and error messages

<table>
<thead>
<tr>
<th>Error message</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Reference database is full - No Insert.</td>
<td>INSERT_CR</td>
</tr>
<tr>
<td>Call Reference is not found in CRDB.</td>
<td>X</td>
</tr>
</tbody>
</table>
CEDB commands

The CEDB commands enable operating company personnel to display and manipulate data and tuples in the call element database. The CEDB commands include:

- DELETE_CE, which removes a tuple from the CEDB.
- DISP_CE_CHAIN, which displays a chain of call element tuples.
- DISP_CE_STORE, which displays all call elements in the CEDB.
- DISP_CE_TUPLE, which displays a call element tuple.
- INSERT_CE, which inserts a tuple in the CEDB.
- RETRIEVE_CE, which retrieves a tuple from the CEDB.

Syntax

The syntax for all CEDB commands is:

\[<CEDB \text{ Command Name}>\]
parm: \(<\text{Call Identification}> \ <\text{Point Code}> \ <\text{Call Element}>\)
Parameters
Three parameters are acceptable input for all CEDB commands. Table 2-35 lists and defines these parameters.

Table 2-35
CEDB command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Call Identification&gt;</td>
<td>000000 to FFFFFFF</td>
<td>Identifies the call.</td>
</tr>
<tr>
<td>&lt;Point Code&gt;</td>
<td>000000000 to FFFFFFFF</td>
<td>Indicates the point code.</td>
</tr>
<tr>
<td>&lt;Call Element&gt;</td>
<td>000000000 to FFFFFFFF</td>
<td>Indicates the FPF_RTS pointer.</td>
</tr>
</tbody>
</table>

Example
Figure 2-35 shows a CEDB command being used to manually insert a call element into the CRDB.

Figure 2-35
Example of a CEDB command

```
CRDBC1:
>insert_ce 33AD47 0123FE68 87654321
>
```

Error messages
Table 2-36 lists CEDB commands and their possible error messages.

Table 2-36
CEDB commands and error messages

<table>
<thead>
<tr>
<th>Error message</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Element database is full - No Insert.</td>
<td>X</td>
</tr>
<tr>
<td>Call Element is not found in CEDB</td>
<td>X X X X</td>
</tr>
<tr>
<td>Call Reference is not found in CRDB.</td>
<td>X X X X</td>
</tr>
</tbody>
</table>

—sheet 1 of 2—
Table 2-36  
CEDB commands and error messages (continued)

<table>
<thead>
<tr>
<th>Error message</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Reference Database is not created. Please datafill the CRDB_MAX_SIZE in table OFCVAR.</td>
<td>INSERT_CE  RETRIEVE_CE  DELETE_CE  DISP_CE_TUPLE  DISP_CE_CHAIN  DISP_CE_STORE</td>
</tr>
<tr>
<td>Call Element Database is not created. Please datafill the CEDB_MAX_SIZE in table OFCVAR.</td>
<td>INSERT_CE  RETRIEVE_CE  DELETE_CE  DISP_CE_TUPLE  DISP_CE_CHAIN  DISP_CE_STORE</td>
</tr>
</tbody>
</table>

—sheet 2 of 2—
The GBICCCI directory is an existing Succession Command Interface (CI) tool that is based upon the ISUPCI tool. The GBICCCI tool is a collection of BICC signaling/DPT trunk debug tools or commands. These commands are packaged in both resident (available in general customer release loads) and non-resident loads (available only to TAS and internal labs).

GBICCCI commands

The GBICCCI directory commands include:

- CICRGECHECK
- DISPMEMSIZE
- DISPSTAT
- DISPRTDEST
- DISPMTC
- DISPTIDINFO
- DISPTRKGRP
- DISPCICRNG
- DISPCICSTATES
- DISPCICSTAT
- HELP
- QUIT

Commands

Table 2-37 lists the GBICCCI level commands.

Table 2-37
GBICCCI menu commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CICRGECHECK</td>
<td>Displays conflicting CIC ranges/trunks with given CIC range, if any.</td>
</tr>
</tbody>
</table>

—end—
To access

To access GBICCCI from the CI environment, enter:

>MAPCI;MTC;GBICCCI

To return to CI

To exit GBICCCI and return to the CI level, enter:

>QUIT ALL

CICRGECHECK command

The CICRGECHECK command displays conflicting CICranges/trunks with given CIC range, if any.

Syntax

CICRGECHECK ROUTESET FIRST_CIC_LAST_CIC

---end---

Table 2-37
GBICCCI menu commands (continued)

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPMEMSIZE</td>
<td>Displays the total amount of memory used for storing GBCIC tuple data and</td>
</tr>
<tr>
<td></td>
<td>the associated CIC maintenance loads.</td>
</tr>
<tr>
<td>DISPSTAT</td>
<td>Displays information for several or only one BICC routesets.</td>
</tr>
<tr>
<td>DISPRTDST</td>
<td>Displays routeset and destination status for all or only one BICC routeset.</td>
</tr>
<tr>
<td>DISPMTC</td>
<td>Displays the CIC maintenance state.</td>
</tr>
<tr>
<td>DISPIDINFO</td>
<td>Displays CIC and LTID information.</td>
</tr>
<tr>
<td>DISPTRKGRP</td>
<td>Displays the Trunk Group for the routeset and CIC.</td>
</tr>
<tr>
<td>DISPCICRNG</td>
<td>Displays the CIC ranges for one or all routesets.</td>
</tr>
<tr>
<td>DISPCICSTATS</td>
<td>Displays the CIC states for a BICC Trunk Group.</td>
</tr>
<tr>
<td>DISPCICSTAT</td>
<td>Displays the CIC state stats for a routeset.</td>
</tr>
<tr>
<td>HELP</td>
<td>Displays the help.</td>
</tr>
<tr>
<td>QUIT</td>
<td>Quits to the CI level.</td>
</tr>
</tbody>
</table>
## Parameters

The parameters for the **CICRGECHECK** command is described in **Table 2-38**.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROUTESET</td>
<td>String</td>
<td>Routeset from table C7RTESET</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mandatory parameter</td>
</tr>
<tr>
<td>FIRST_CIC</td>
<td>Unsigned Double INT</td>
<td>First CIC value within the range to be checked.</td>
</tr>
<tr>
<td></td>
<td>= &gt; {0 to 4,294,967,295}</td>
<td>Mandatory parameter</td>
</tr>
<tr>
<td>LAST_CIC</td>
<td>Unsigned Double INT</td>
<td>Last CIC value within the range to be checked.</td>
</tr>
<tr>
<td></td>
<td>= &gt; {0 to 4,294,967,295}</td>
<td>Mandatory parameter</td>
</tr>
</tbody>
</table>
Responses

1. The proposed range is invalid: FIRST_CIC > LAST_CIC

> CICRGECHECK P7LINKP 6 5
  ** ERROR:   first cic > last cic **
  ** Please enter valid cic values. **

2. The proposed range is invalid: Illegal CIC values:

> CICRGECHECK P7LINKP f f
Wrong type: <FIRST CIC> {0 TO 4294967295}
Enter: <FIRST CIC> <LAST CIC>

3. None of the CICs in the proposed range are used elsewhere:

> CICRGECHECK mgwisup 30000 34000

GBCIC  trk FIRST_CIC  LAST_CIC
---------- ---------   ---------
ALL GBCIC CICS ARE AVAILABLE

C7TRKMEM trk CIC
----------  ------
ALL C7TRKMEM CICS ARE AVAILABLE
DONE

4. Some CICs in the proposed range are used by other trunks:

CICRGECHECK RTESET1 10 900

GBCIC  trk FIRST_CIC  LAST_CIC
---------- ---------   ---------
ANSIOUT  10  23
BSS1AP   50  70
BSS2AP   75  75
BICCTK1  100 200

C7TRKMEM trk CIC
----------  ------
BICCTK2   1
BICCTK2   2
BICCTK2   3
BICCTK2   4
BICCTK2   5
BICCTK2   6
DONE

Explanation

The command CICRGECHECK verifies that its last two arguments verify the relation FIRST_CIC < LAST_CIC. If not, a message displays to that effect. Similarly, a check is made on the routeset to ensure that it exists. If not, an invalid routeset message is relayed to the user.

When given a valid routeset and a valid pair of CIC values, the command scans tables GBCIC and C7TRKMEM in their entirety and produces one display line per conflicting CIC sequence.
The information displayed is defined as follows:

- **TRUNK** - CLLI name of a conflicting trunk
- **TYPE** - Trunk type: \{BICC, ISUP\}. If the type is BICC, the trunk can be found in table GBCIC, otherwise it is defined in C7TRKMEM.
- **CICS** - Conflicting CIC sequence within TRUNK: CIC1 TO CIC2, where 
  
  CIC1, CIC2 ≤ 4,294,967,295

**System action**

None

**User action**

None
Examples
The following is an output example of the CICRGECHECK command.

1. The proposed routeset is invalid:
   Duplicate precisely the format viewed by the user at the MAP.

   >CICRGECHECK INVRSET 40 50
   ** INVALID ROUTESET **

2. The proposed range is invalid: RST_CIC > LAST_CIC:

   >CICRGECHECK RTESET1 70 50
   ** ERROR: first cic > last cic **
   ** Please enter valid cic values. **

3. The proposed range is invalid: Illegal CIC values:

   >CICRGECHECK P7LINKP ff
   Wrong type: <FIRST CIC> {0 TO 4294967295}
   Enter: <FIRST CIC> <LAST CIC>

4. None of the CICs in the proposed range are used elsewhere:

   >CICRGECHECK mgwisup 30000 34000
   GBCIC trk FIRST CIC LAST CIC
   ----------- -----------
   DONE ALL CICS ARE AVAILABLE.

   >CICRGECHECK P7LINKP 9000 9009
   C7TRKMEM trk CIC
   ------------------------
   DONE ALL CICS ARE AVAILABLE

   >CICRGECHECK map 4 49
   DONE
   ALL CICS ARE AVAILABLE

5. Some CICs in the proposed range are used by other trunks:

   >CICRGECHECK RTESET1 10 900
   GBCIC trk FIRST CIC LAST CIC
   ANSIOUT 10 23
   BSSP1AP 50 70
   BSSP2AP 75 75
   BICCTK1 100 200
### DISPMEMSIZE command

Displays the total amount of memory used for storing GBCIC tuple data and the associated CIC maintenance information.

**Parameters**
- None

**Responses**
- `>DISPMEMSIZE
  N Byte`
- `>DISPMEMSIZE
  N KByte`
- `>DISPMEMSIZE
  N MByte`

The command DISPMEMSIZE examines all the GBCIC related data structures and computes the total amount of memory consumed by these structures. The result is displayed in bytes, Kbyte, or Mbytes.

**Note:** 1 Kbyte = 2\(^{10}\) bytes = 1024 bytes, 1 Mbyte = 1024 Kbytes

Below is an example of DISPMEMSIZE output.

`>DISPMEMSIZE
  1011 Kbyte`

`>DISPMEMSIZE
  21 Mbyte`

### DISPSTAT command

Enter the DISPSTAT command with a BICC routeset name to display the information corresponding to that particular routeset. If no such BICC routeset exists, then an error message displays.

The information displayed is defined as follows:
- **BICC ROUTESET NAME**—String
- **SIGNAL STATUS**—Signaling Available Status: \{AVAIL, UNAVAIL\}
- INIT STATUS—Initialization Status: \{UNINIT, INIT, INITNG\}
- CONGEST—Congestion level: \{0 to 3\}
- CHANGE REQUEST—Outstanding Change Request: \{Y, N\}
- LAST CIC PROCESSED—Last CIC processed on this routeset: 0 to 4,294,967,295

Note: A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset.

Entering the DISPSTAT command without a BICC routeset name displays information for all the BICC routesets. In the event that no BICC routesets exist, only the headers are displayed.

Parameters
The parameter for the DISPSTAT command is described in Table 2-39.

Table 2-39
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICC Routeset Name</td>
<td>String</td>
<td>Name of the BICC routeset for which information is to be displayed. A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset. Optional parameter.</td>
</tr>
</tbody>
</table>

Example
The following output example shows a successful response to the DISPSTAT command using the BICC routeset name parameter:

```
>DISPSTAT
  BICC ROUTESET NAME  SIGNAL  INIT  CONGEST  CHANGE  LAST CIC PROCESSED
BICCRTST1  AVAIL  INIT  0  N  11257
BICCRTST2  AVAIL  INIT  0  N  455
```

DISPRTDST command
Enter the DISPRTDST command without a BICC routeset name to display information for all the BICC routesets. In the event that no BICC routesets exist, then only the headers are displayed.
Enter the DISPRTDEST command with a BICC routeset name displays the information corresponding to that particular routeset. If no such BICC routeset exists, then an error message displays.

The information displayed is defined as follows:

- **BICC ROUTESET NAME**—String
- **RTESET SIGNAL**—Signaling Available Status for the Routeset: {AVAIL, UNAVAIL}
- **RTESET CONG**—Congestion level for the Routeset: {0 to 3}
- **DEST SIGNAL**—Signaling Available Status for the Destination: {AVAIL, UNAVAIL}
- **DEST CONG**—Congestion level for the Destination: {0 to 3}
- **CHANGE REQUEST**—Outstanding Change Request: {Y, N}

*Note:* A routeset must have at least one corresponding trunk group datafilled in table GBCIC for it to be considered a BICC routeset.

**Syntax**

```
DISPRTDEST <BICC Routeset Name>
```

**Parameters**

The parameter for the DISPRTDEST command is described in **Table 2-40**.

**Table 2-40**

**DISPRTDEST parameter**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICC Routeset Name</td>
<td>String</td>
<td>Name of the BICC routeset for which information is to be displayed. A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset. Optional parameter.</td>
</tr>
</tbody>
</table>

**Example**

The following example shows the DISPRTDEST command output.

```
>DISPRTDEST
BICC ROUTESET NAME RTESET SIGNAL RTESET CONG DEST SIGNAL DEST CONG CHANGE REQUEST
BICCRTST1 AVAIL 0 AVAIL 0 N
BICCRTST2 AVAIL 0 AVAIL 0 N
```
**DISPMTC command**

This command displays the Near End (NE) and Far End (FE) CIC maintenance states for a given trunk group and CIC.

The response for this command provides the Near End (NE) and Far End (FE) maintenance states for the CIC.

If the trunk CLLI is invalid, the trunk CLLI is not associated with routeset (not datafilled in table ISUPDEST) or the trunk group and/or CIC is invalid (not datafilled in table GBCIC), an error message will be displayed (see examples below).

The possible NE and FE CIC maintenance states outputs include:

- **CIC NE MTC STATE**: { IDLE, OFFLINE, BLK_P_ACK, BLK, UBLK_P_ACK, CPB_P_BLK, UNEQ_P_ACK }
- **CIC FE MTC STATE**: { IDLE, UNEQ, BLK }

**Syntax**

\[ \text{DISPMTC} \ <\text{Trunk Group}> \ <\text{4 Byte CIC}> \]

**Parameters**

The parameters for the DISPMTC command are described in Table 2-41.

**Table 2-41**

**DISPMTC parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk Group</td>
<td>String</td>
<td>BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>trunk group that is datafilled with a CIC range in table GBCIC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mandatory parameter.</td>
</tr>
<tr>
<td>4 Byte CIC</td>
<td>Unsigned Double INT =&gt; {0</td>
<td>CIC value within the trunk group.</td>
</tr>
<tr>
<td></td>
<td>4,294,967,295}</td>
<td>Mandatory parameter.</td>
</tr>
</tbody>
</table>

**Example**

The following examples show the DISPMTC command output.

```
>DISPMTC BICCTK5 100
CIC NE MTC STATE: IDLE
CIC FE MTC STATE: IDLE

If the trunk CLLI is invalid:
```

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>DISPMTC NONAME 100  
   ** INVALID TRUNK GROUP **

If the trunk CLLI is not datafilled against a routeset in table ISUPDEST:

>DISPMTC NONISUP 100  
   ** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **

If the trunk group and corresponding CIC are invalid (not datafilled in table GBCIC):

>DISPMTC SOMETRK 20054  
   ** INVALID BICC TRUNK GROUP OR CIC **

**DISPTIDINFO command**

This command displays the trunk state, DPT trunk group, CIC, DPT TID state, DPT call released and DPT TID released values for a given trunk group and CIC.

The response for this command provides the CIC state, LTID node number, LTID terminal number and LTID state.

If the trunk CLLI is invalid, the trunk CLLI does not have an associated routeset (not datafilled in table ISUPDEST), the trunk group or CIC is invalid (not datafilled in table GBCIC), the scratch area for the LTID cannot be obtained or there is no LTID associated with the CIC, an error message will be displayed (see examples below).

The possible values for each of the displayed fields include:

- **CIC State:** {INB, MB, LO, RMB, NEQ, INI, IDL, OFFL}
- **LTID Node Num:** {0 to 4095}
- **LTID Terminal Num:** {0 to 4095}
- **LTID State:** {NULL, LINKED, UNDEFINED}

**Syntax**

DISPTIDINFO <Trunk Group> <4 Byte CIC>
Parameters

The parameters for the DISPTIDINFO command are described in Table 2-42.

Table 2-42
DISPTIDINFO parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk Group</td>
<td>String</td>
<td>BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a trunk group that is datafilled with a CIC range in table GBCIC. Mandatory parameter.</td>
</tr>
<tr>
<td>4 Byte CIC</td>
<td>Unsigned Double INT =&gt; {0 to 4,294,967,295}</td>
<td>CIC value within the trunk group. Mandatory parameter.</td>
</tr>
</tbody>
</table>

Example

The following examples show the DISPMTC command output.

>DISPTIDINFO BICCTK5 100
  CIC State: IDL
  LTID Node Num: 12
  LTID Terminal Num: 5
  LTID State: LINKED

If the trunk CLLI is invalid:

>DISPTIDINFO BICCTK5 100
  ** INVALID TRUNK GROUP **

If the trunk CLLI does not have an associated routeset (not datafilled in table ISUPDEST):

>DISPTIDINFO NONISUP 100
  ** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **

If the BICC trunk group or CIC is invalid (not datafilled in table GBCIC):

>DISPTIDINFO SOMETRK 20054
  ** INVALID BICC TRUNK GROUP OR CIC **

If the system cannot obtain LTID scratch data:

>DISPTIDINFO BICCTK5 154
  ** COULD NOT ACCESS SCRATCH DATA FOR LTID STATE **

If no LTID is associated with the CIC (CIC not involved in a call):
DISPTRKGRP command

This command displays the trunk group that corresponds to a particular routeset and CIC.

If the routeset is invalid (that is, if the routeset and CIC do not have a corresponding entry in table GBCIC or the trunk CLLI returned from the GBCIC database is invalid), an error message is displayed (see the following examples).

The trunk group returned is the string value that corresponds to the CLLI. For example, Trunk Group: string.

Syntax

DISPTRKGRP <BICC Routeset Name> <4 Byte CIC>

Parameters

The parameters for the DISPTRKGRP command are described in Table 2-43.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICC Routeset Name</td>
<td>String</td>
<td>BICC routeset from table C7RTESET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range data filled in table GBCIC. Mandatory parameter.</td>
</tr>
<tr>
<td>4 Byte CIC</td>
<td>Unsigned Double INT =&gt; {0 to 4,294,967,295}</td>
<td>CIC value within the trunk group. Mandatory parameter.</td>
</tr>
</tbody>
</table>

Example

The following examples show the DISPTRKGRP command output.

>DISPTRKGRP BICCRTST1 100
TRUNK GROUP: BICCTK1

If the routeset is invalid (does not exist in table C7RTESET):

>DISPTRKGRP BOGUSRTST 100
** INVALID BICC ROUTESET **

If the routeset and CIC do not have a corresponding entry in table GBCIC:
If the trunk group CLLI stored in table GBCIC is corrupt or invalid:

>DISPTRKGRP BICCRTST5 20576
** INVALID BICC ROUTESET OR CIC **

>DISPTRKGRP BICCRTST2 2076
** BAD CLLI NAME STORED IN GBCIC **

DISPCICRNG command

This command displays the trunk group(s) and CIC range(s) corresponding to particular routeset in table GBCIC. If no routeset is provided, then the command will display all the trunk group(s) and CIC range(s) that are provisioned in table GBCIC.

The response for this command provides the BICC trunk group(s) and CIC range(s) corresponding to the specified BICC routeset. If no routeset is provided, then the command will display all the trunk group(s) and CIC range(s) that are provisioned in table GBCIC and their corresponding routesets.

If the routeset is invalid (that is, the routeset does not exist in table C7RTESET or does not have any corresponding trunk group and CIC range datafilled in table GBCIC), an error message will be displayed (see the following examples).

The possible values for each of the displayed fields are shown in the following example include:

- BICC Routeset Name: string
- Trunk Group: string
- First CIC: {0 to 4,294,967,295}
- Last CIC: {0 to 4,294,967,295}

**Syntax**

DISPCICRNG <BICC Routeset Name>
Parameters

The parameter for the DISPCICRNG command is described in Table 2-44.

Table 2-44
DISPCICRNG parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICC Routeset Name</td>
<td>String</td>
<td>BICC routeset from table C7RTESET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range datafilled in table GBCIC. Optional parameter.</td>
</tr>
</tbody>
</table>

DISPCICSTATES command

Displays each of the the CICs within a specified BICC Trunk Group along with their corresponding CIC state.

Syntax

DISPCICSTATES <BICC Routeset Name>

Parameters

The parameters for the DISPCICSTATES command are described in Table 2-45.

Table 2-45
DISPCICSTATES parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk Group</td>
<td>String</td>
<td>BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a trunk group that is datafilled with a CIC range in table GBCIC. Mandatory parameter.</td>
</tr>
</tbody>
</table>

Responses

Below are responses for the DISPCICSTATES command.

```
>DISPCICSTATES BICCTK1
BICC
TRUNK GROUP  CIC  CIC STATE  LTID(NN TN)
BICCTK1      100  IDLE        
BICCTK1      101  IDLE        
BICCTK1      102  IDLE        
BICCTK1      103  CP_BUSY 45 12 
BICCTK1      104  CP_BUSY 120 15 
BICCTK1      105  CP_BUSY 67  5 
BICCTK1      106  IDLE        
BICCTK1      107  IDLE        
BICCTK1      108  IDLE        
```
Explanation
The response for this command provides a restatement of the trunk group along with each CIC and the associated CIC state. The command allows one to see the state of each individual CIC within a defined BICC trunk group. If the CIC is involved in a call (i.e. CIC State = CP_BUSY), then the associated LTID (node number and terminal number) is provided as well.

If there are errors in the trunk group provided, obtaining the CIC or associated routeset, then an appropriate error message will be displayed. Please refer to the examples section below.

The possible values for each of the displayed fields is provided below:

<table>
<thead>
<tr>
<th>Field</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk Group:</td>
<td>string</td>
</tr>
<tr>
<td>CIC:</td>
<td>{0 to 4,294,967,295}</td>
</tr>
<tr>
<td>CIC State:</td>
<td>{OFFLINE, MANBUSY, LOCKOUT, REMOTE_BUSY, NOT_EQUIPPED, IDLE, CP_BUSY, CP_BUSY_DELOAD}</td>
</tr>
<tr>
<td>LTID (NN TN):</td>
<td>{{0 to 4095} {0 to 4095}}</td>
</tr>
</tbody>
</table>

System action
None

User action
None

Example
Below is an example of the DISPCICSTATES command.

```
>DISPCICSTATES BICCTK1
  BICCTK1 100 IDLE
  BICCTK1 101 IDLE
  BICCTK1 102 IDLE
```
Provided the trunk group does not exist:
Duplicate precisely the format viewed by the user at the MAP.

>DISPCICSTATS BOGUSTRK  
** INVALID TRUNK GROUP **

If the first CIC for the trunk group cannot be obtained:
Duplicate precisely the format viewed by the user at the MAP.

>DISPCICSTATS BICCTK12  
** COULD NOT OBTAIN FIRST CIC FOR TRUNK GROUP **

If a corresponding routeset for the trunk group cannot be obtained:
Duplicate precisely the format viewed by the user at the MAP.

>DISPCICSTATS BICCTK12  
** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **

**DISPCICSTAT command**
Displays each BICC trunk group for a given routeset along with the total number of CICs within each trunk group and a numerical breakdown of these CICs by CIC state. This command provides a good summary of CIC states for each BICC trunk group for a given routeset.

**Syntax**

DISPCICSTAT <BICC Routeset Name>
Parameters

The parameters for the DISPCICSTAT command are described in Table 2-46.

Table 2-46
DISPCICSTAT parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICC Routeset Name</td>
<td>String</td>
<td>BICC routeset from table C7RTSET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range datafilled in table GBCIC. Mandatory parameter.</td>
</tr>
</tbody>
</table>

Responses

Below are responses for the DISPCICSTAT command.

```
>DISPCICSTAT BICCRSTST2

<table>
<thead>
<tr>
<th>TRUNK GROUP</th>
<th>TOTAL BUSY</th>
<th>MAN BUSY</th>
<th>LOCK BUSY</th>
<th>REM BUSY</th>
<th>CP BUSY</th>
<th>CPBSY</th>
<th>DLD</th>
<th>EQUIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICCTK5</td>
<td>400</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>175</td>
<td>225</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BICCTK6</td>
<td>350</td>
<td>105</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>245</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BICCTK7</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

Explanation

The response for this command provides each BICC trunk group for a given routeset along with the total number of CICs within each trunk group and a numerical breakdown of these CICs by CIC state. This command provides a good summary of CIC states for each BICC trunk group for a given routeset.

If the routeset is invalid, for example, the routeset does not exist in table C7RTSET or does not have any corresponding trunk group and cic range is datafilled in table GBCIC, an error message will be displayed.

The definitions of the values under the column headers are as follows. The TRUNK GROUP column contains each of the trunk groups that correspond to the routeset and have CIC ranges defined in table GBCIC. The total CICs column displays the total number of CICs defined for each of the trunk groups in table GBCIC. Each of the remaining columns indicate the number of CICs for each trunk group that are in the corresponding CIC state.

System action

None

User action

None
Example

Below is an example of the DISPCICSTAT command.

```
>DISPCICSTAT BICCRTST2

<table>
<thead>
<tr>
<th>TRUNK GROUP</th>
<th>TOTAL</th>
<th>MAN</th>
<th>LOCK</th>
<th>REM</th>
<th>CP</th>
<th>CPBSY</th>
<th>NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>BICCTK5</td>
<td>400</td>
<td>0</td>
<td>0</td>
<td>175</td>
<td>225</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BICCTK6</td>
<td>350</td>
<td>105</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>245</td>
<td>0</td>
</tr>
<tr>
<td>BICCTK7</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

If the routeset is invalid (does not exist in table C7RTESET or does not have any corresponding trunk group and cic range data filled in table GBCIC):
Duplicate precisely the format viewed by the user at the MAP.

```
>DISPCICSTAT BOGUSRTST
** INVALID BICC ROUTESET **
```

Help command

The HELP command displays all the possible commands that may be executed from within the GBICCCI tool along with a brief description of each of them.

Syntax

HELP

Parameters

None

Responses

Below are responses for the HELP command.

```
BICC MTCE TEST COMMANDS -- SUBCOMMANDS ARE :

DISPSTAT -- DISPLAY THE STATUS OF ONE/ALL ROUTESET(S)
DISPRTRDEST -- DISPLAY ROUTESET AND DEST STATUS OF ONE/ALL ROUTESET(S)
DISPMTMC -- DISPLAY CIC MAINTENANCE STATE
DISPCTIDINFO -- DISPLAY CIC AND LTID INFO
DISPRTRGRP -- DISPLAY TRKGRP FOR ROUTESET AND CIC
DISPCICRNG -- DISPLAY CIC RANGES OF ONE/ALL ROUTESET(S)
DISPCICSTATES -- DISPLAY CIC STATES FOR A BICC TRUNK GROUP
DISPCICSTAT -- DISPLAY CIC STATE STATS FOR A ROUTESET
QUIT -- EXIT FROM THIS CI INCREMENT
HELP -- TO DISPLAY ALL AVAILABLE COMMANDS
```

System action

None

User Action

None

Quit command

The QUIT command exits the GBICCCI tool.
Syntax
>QUIT

Parameters
None

Responses
None

System Action
None

User Action
None

Example
QUIT
GBICTK

The GBICTK commands performs maintenance of CICs at the MAPCI;MTC;TRKS level. The new CI level is very functionally similar to the existing TTP level.

GBICTK commands

The GBICTK directory commands include:

• POST
• BSY
• RTS
• FRLS
• PREV
• NEXT
• Qrysig
• Routeset
• OP
• TRKQRY
• QUIT

POST command

The POST command posts a GSM BICC CIC at the GBICTK level.

Syntax

POST-- POST a BICC trunk CIC
Parms: <SET TYPE> {G <CLLI> STRING
   [CIC> {1 TO 4294967295}],
   A <STATE> {INB,
      MB,
      RMB,
      LO,
      CPB,
      CPD,
      IDL}]}
Parameters

Table 2-47 lists the parameters, values, and definitions for the POST command.

Table 2-47
POST command

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET TYPE</td>
<td>G/A</td>
<td>The set type of G indicates posting by CLLI; the set type of A indicates posting by CIC state.</td>
</tr>
<tr>
<td>CLLI</td>
<td>CLLI as datafilled in table GBCIC</td>
<td>Posts the first CIC in the given CLLI. This determines from which CLLI CICs will be posted.</td>
</tr>
<tr>
<td>CIC</td>
<td>1 TO 4294967295</td>
<td>This is the CIC as datafilled in table GBCIC. This is an optional parameter which determines a specific CIC in a CLLI to post.</td>
</tr>
<tr>
<td>STATE</td>
<td>INB, MB, RMB, LO, CPB, CPD, IDL</td>
<td>Posts the first CIC in the given state, starting at the first BICC routeset datafilled in C7RTESTE, CIC 0.</td>
</tr>
</tbody>
</table>

Responses

Response 1 (Success)
OK, CIC <CIC Number> POSTED.

Explanation
The POST command displays the first CIC of a posted set.

If the POST command is by CLLI, the posted set is the CICs datafilled against that CLLI in table GBCIC. The posted CIC (CIC displayed at the GBICTK level) is the first CIC in the range datafilled in table GBCIC.

If the POST command is by CLLI/CIC, the posted set is still the CICs datafilled against the CLLI in table GBCIC. The posted CIC (CIC displayed at the GBICTK level) is the CIC specified in the POST command.

If the POST command is by state, the posted set is all CICs datafilled on the MSC in the state specified in the POST command. The posted CIC (CIC displayed at the GBICTK level) is the first CIC (starting at the first BICC routeset datafilled in C7RETSET, CIC 0) in the state specified in the POST command.
**System action**
None

**User action**
None

**Examples**
Posting by CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1

Figure 2-36
Post by CLLI (response 1)

```
GBICTK
  0 Quit
  2 Post_  CIC   CKT TYPE  COM LANG   STATE
  3   1     2W  BICC  CLLI1     IDL
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
10
11 PREV
12 NEXT
13 GBICTK:
14 OK, CIC 1 POSTED
15
16 QrySig
17 RouteSet
18 MAPUSER
```

Posting by CLLI/CIC (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1 2
Figure 2-37  
Post by CLLI/CIC (response 1)

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post_ CIC CKT TYPE COM LANG STATE</td>
<td></td>
</tr>
<tr>
<td>3 2 2W BICC CLLI1 IDL</td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13 GBICTK:</td>
<td></td>
</tr>
<tr>
<td>14 OK, CIC 2 POSTED</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18 MAPUSER</td>
<td></td>
</tr>
</tbody>
</table>

Posting by State:

>Post a IDL
Response 2
INVALID CLLI NAME, NO SHORT CLLI NAME
INVALID SHORT CLLI NAME

Explanation
The CLLI in the POST command is not datafilled in table CLLI.

System action
None

User action
Provision the CLLI if it should be part of GSM BICC datafill. If the user mistyped the CLLI, retype the POST command with the correct CLLI.

Examples
Posting by undatafilled CLLI, CLLI1:
>Post g CLLI1
Figure 2-39
Post by CLLI (response 2)

GBICTK
0 Quit
2 Post_ CIC CKT TYPE COM LANG STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13 GBICTK:
14 INVALID CLLI NAME, NO SHORT CLLI NAME
15
16 QrySig
17 RouteSet
18
MAPUSER

Response 3
CLLI NOT DATAFILLED IN TABLE TRKGRP

Explanation
The CLLI in the POST command is not datafilled in table TRKGRP.

System action
None

User action
Provision the BICC CLLI if this CLLI is to be used for BICC. If the user mistyped the CLLI, retype the POST command with the correct CLLI.

Examples
Posting by undatafilled CLLI in table TRKGRP, CLLI1:
>Post g CLLI1
**Figure 2-40**
Post by CLLI (response 3)

<table>
<thead>
<tr>
<th>GBICTK:</th>
<th>CLLI NOT DATAFILLED IN TABLE TRKGRP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Quit</td>
<td></td>
</tr>
<tr>
<td>2 Post</td>
<td>CIC</td>
</tr>
<tr>
<td>3</td>
<td>CKT TYPE</td>
</tr>
<tr>
<td>4</td>
<td>COM LANG</td>
</tr>
<tr>
<td>5 BSY_</td>
<td>STATE</td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td>CLLI NOT DATAFILLED IN TABLE TRKGRP</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>MAPUSER</td>
</tr>
</tbody>
</table>

**Response 4**

NO CIC, SET IS EMPTY

**Explanation**

There are no CICs available in the posted set.

If the POST command is by state, then there are no CICs in the specified state. If the POST command is by CLLI, then there are no CICs datafill in table GBCIC for the specified CLLI. If the POST command is by CLLI/CIC, then the specified CIC is not provisioned in table GBCIC for the specified CLLI.

**System action**

None

**User action**

Provision the BICC CLLI if this CLLI is to be used for BICC. If the user mistyped the CLLI/CIC/STATE, retype the POST command with the correct CLLI.
**Examples**
Posting by undatafilled CLLI in table GBCIC, CLLI1:
>`Post g CLLI1`

**Figure 2-41**
Post by CLLI (response 4)

```
GBICTK
  0 Quit
  2 Post_  CIC  CKT TYPE  COM LANG  STATE
  3
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
 10
 11 PREV
 12 NEXT
 13   GBICTK:
 14   NO CIC, SET IS EMPTY
 15
 16 QrySig
 17 RouteSet
 18
MAPUSER
```

**Response 5**
TIMEOUT OCCURRED.

**Explanation**
The post command timed out.

**System action**
None

**User action**
Try the POST command again. If the POST command times out again, create a new login session, enter the GBICTK level again, and re-try the command.

**Examples**
Normal post command
>`Post g CLLI1`
Figure 2-42
Post by CLLI (response 5)

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Quit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Post_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 GBICTK:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 TIMEOUT OCCURRED.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAPUSER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Response 6**
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

**Explanation**
An internal error has occurred.

**System action**
None

**User action**
Try the POST command again. If the message appears again, create a new login session, enter the GBICTK level again, and re-try the command.

**Examples**
Normal post command
>Post g CLLI1
The NEXT command displays the next CIC in the posted set.

**Syntax**

```
NEXT--POST THE NEXT BICC CIC
```

**Parameters**

None

**Responses**

**Response 1 (Success)**

```
OK, CIC <CIC Number> POSTED
```

**Explanation**

The NEXT command displays the next CIC of a posted set.

If the original POST command was by CLLI, the displayed CIC is the next CIC (with respect to the current posted CIC) datafilled in table GBCIC. If the NEXT command is issued on the last CIC datafilled in GBCIC, the display is cleared, and no CIC is posted.
If the original POST command was by state, the displayed CIC is the next CIC (with respect to the current posted CIC) datafilled in the MSC with the same state as the original posted CIC. If the NEXT command is issued on the last CIC datafilled on the MSC in same state as the original posted CIC (moving in increasing order of routesets datafilled in C7RTESET and increasing CIC number per routeset), the display is cleared, and no CIC is posted.

**System action**
None

**User action**
None

**Examples**
Posting by CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1
>Next

Figure 2-44
Post by CLLI, Followed by Next

<table>
<thead>
<tr>
<th>GBICTK</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Quit</td>
</tr>
<tr>
<td>2 Post CIC CKT TYPE COM LANG STATE</td>
</tr>
<tr>
<td>3  2  2W BICC CLLI1 IDL</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5 BSY_</td>
</tr>
<tr>
<td>6 RTS_</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8 FRLS_</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11 PREV</td>
</tr>
<tr>
<td>12 NEXT</td>
</tr>
<tr>
<td>13 GBICTK:</td>
</tr>
<tr>
<td>14 OK, CIC 2 POSTED</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>16 QrySig</td>
</tr>
<tr>
<td>17 RouteSet</td>
</tr>
<tr>
<td>18 MAPUSER</td>
</tr>
</tbody>
</table>
Posting by CLLI/CIC (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1 2
>Next

Figure 2-45
Post by CLLI/CIC, Followed by Next

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
<th>2 Post CIC CKT TYPE COM LANG STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>3 2W BICC CLLI1 IDL</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 BSY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 RTS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 FRLS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>GBICTK: OK, CIC 3 POSTED</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>MAPUSER</td>
</tr>
</tbody>
</table>

Posting by State:
>Post a IDL
>Next
Figure 2-46
Post by State, Followed by Next

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post_</td>
<td>CIC         CKT TYPE COM LANG STATE</td>
</tr>
<tr>
<td>3</td>
<td>2           2W BICC CLLI1 IDL</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td>OK, CIC 2 POSTED</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

MAPUSER

Response 2
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the NEXT command can be issued.

System action
None

User action
Post a BICC CIC before issuing the NEXT command.

Examples
Use the NEXT command with no CIC posted
>Next
Figure 2-47
Use the NEXT command with no CIC posted

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
<th>2 Post_ CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>5 BSY_</td>
<td>6 RTS_</td>
<td>7</td>
<td>8 FRLS_</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11 PREV</td>
<td>12 NEXT</td>
<td>13 GBICTK:</td>
<td>14 FAILED, NO CIC POSTED</td>
</tr>
<tr>
<td>15</td>
<td>16 QrySig</td>
<td>17 RouteSet</td>
<td>18 MAPUSER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Response 3**
FAILED, CIC IS UNEQUIPPED

**Explanation**
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the NEXT command can be issued.

**System action**
None

**User action**
Post a datafilled BICC CIC before issuing the NEXT command.

**Examples**
Use the NEXT command on a posted CIC that has been deleted from table GBCIC:
> Next
Response 4
NO CIC, SET IS EMPTY

Explanation:
The next CIC is not datafilled. The end of the posted set has been reached.

System action
None

User action
None. If the user wants to get to a previous CIC in the previous posted set, the user must use the POST command.

Examples
Use the NEXT command on the last CIC of a posted set:
>Post g CLLI1 10
>Next
Figure 2-49
NEXT command on the last CIC of a posted set

Response 5
TIMEOUT OCCURRED.

Explanation
The next command timed out.

System action
None

User action
Try the NEXT command again. If the NEXT command times out again, try reposting the current displayed CIC.

Examples
Normal next command
>Post g CLLI1
>Next
Figure 2-50
Timeout on Normal NEXT command

```
GBICTK
0  Quit
2  Post_  CIC   CKT TYPE  COM LANG  STATE
3   2   2W  BICC  CLLI1  IDL
4
5  BSY_
6  RTS_
7
8  FRLS_
9
10
11  PREV
12  NEXT
13  GBICTK:
14  TIMEOUT OCCURRED.
15
16  QrySig
17  RouteSet
18
19  MAPUSER
```

**Response 6**
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

**Explanation**
An internal error has occurred.

**System action**
None

**User action**
Try the NEXT command again. If the NEXT command times out again, try reposting the current displayed CIC.

**Examples**
Normal next command
>Post g CLLI1
>Next
Figure 2-51
Internal Error on Normal Next Command

```plaintext
GBICTK
0 Quit
2 Post_ CIC CKT TYPE COM LANG STATE
3 2 2W BICC CLLI1 IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10 11 PREV
12 NEXT
13 GBICTK:
14 ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18 MAPUSER
```

**PREV command**

The PREV command displays the previous CIC in the posted set.

**Syntax**

```
PREV--POST THE PREVIOUS BICC CIC
```

**Parameters**

None

**Responses**

**Response 1 (Success)**

```
OK, CIC <CIC Number> POSTED
```

**Explanation**

The PREV command displays the previous CIC of a posted set.

If the original POST command was by CLLI, the displayed CIC is the previous CIC (with respect to the current posted CIC) datafilled in table GBCIC. If the PREV command is issued on the first CIC datafilled in GBCIC, the display is cleared, and no CIC is posted.
If the original POST command was by state, the displayed CIC is the previous CIC (with respect to the current posted CIC) datafilled in the MSC with the same state as the original posted CIC. If the PREV command is issued on the first CIC datafilled on the MSC in same state as the original posted CIC (moving in decreasing order of routesets datafilled in C7RTESET and decreasing CIC number per routeset), the display is cleared, and no CIC is posted.

**System action**

None

**User action**

None

**Examples**

Posting by CLLI (with CICs 1-10 datafilled in GBCIC):

>Post g CLLI1 2

>Prev

---

**Figure 2-52**

**Post by CLLI, Followed by Prev**

```
GBICTK
  0 Quit
  2 Post_ CIC     CKT TYPE  COM LANG    STATE
  3       1       2W  BICC  CLLI1       IDL
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
 10
 11 PREV
 12 NEXT
 13   GBICTK:       
 14   OK, CIC 1 POSTED
 15
 16 QrySig
 17 RouteSet
 18
 MAPUSER
```
Posting by State:
>Post a IDL
>Next
>Prev

**Response 2**
FAILED, NO CIC POSTED

**Explanation**
A CIC must be posted before the PREV command can be issued.

**System action**
None

**User action**
Post a BICC CIC before issuing the PREV command.

**Examples**
Use the PREV command with no CIC posted
>Prev
Use the PREV command with no CIC posted

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
<th>2 Post_</th>
<th>CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td>6 RTS_</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td>9</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td>12 NEXT</td>
<td></td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 GBICTK:</td>
<td></td>
<td>FAILED, NO CIC POSTED</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
<td></td>
<td>17 RouteSet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 MAPUSER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Response 3**

FAILED, CIC IS UNEQUIPPED

**Explanation**
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the PREV command can be issued.

**System action**
None

**User action**
Post a datafilled BICC CIC before issuing the PREV command.

**Examples**
Use the PREV command on a posted CIC that has been deleted from table GBCIC:

> Prev
Figure 2-55
PREV command on a posted CIC that has been deleted

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post_</td>
<td>CIC</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td>FAILED, CIC IS UNEQUIPPED</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
<tr>
<td>MAPUSER</td>
<td></td>
</tr>
</tbody>
</table>

**Response 4**
NO CIC, SET IS EMPTY

**Explanation**
The previous CIC is not datafilled. The start of the posted set has been passed.

**System action**
None

**User action**
None. If the user wants to get to a CIC in the somewhere else in the posted set, the user must use the POST command.

**Examples**
Use the PREV command on the first CIC of a posted set:
> Post g CLLI1
> Prev
### Response 5
**TIMEOUT OCCURRED.**

### Explanation
The PREV command timed out.

### System action
None

### User action
Try the PREV command again. If the PREV command times out again, try reposting the current displayed CIC.

### Examples
Normal next command

```plaintext
>Post g CLLI1 2
>Prev
```
Response 6
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

Explanation
An internal error has occurred.

System action
None

User action
Try the PREV command again. If the PREV command times out again, try reposting the current displayed CIC.

Examples
Normal next command
>Post g CLLI1 2
>Prev
Figure 2-58
Internal Error on Normal PREV Command

BSY command
The BSY command transitions the CIC to a MB/CPD state.

Syntax

BSY-- BUSY the posted BICC CIC
Parms: [<BSY_PARMS> {INB {<INB_PARMS> {ALL,
                RNG <END_CIC:) {1 TO 4294967295}}},
             ALL,
             RNG <END_CIC:) {1 TO 4294967295}}]
Parameters

Table 2-48 lists the parameters, values, and definitions for the BSY command.

Table 2-48
BSY command

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSY_PARMS</td>
<td>INB, ALL, RNG</td>
<td>The INB parm places one CIC in the INB state. The ALL parm places all CICs in the posted set in the MB/CPD state. The RNG parm places all CICs from the posted CIC to the specified end CIC in the MB/CPD state.</td>
</tr>
<tr>
<td>INB_PARMS</td>
<td>ALL, RNG</td>
<td>The ALL parms places all CICs in the posted set in the MB/CPD state. The RNG parm places all CICs from the posted CIC to the specified end CIC in the INB state.</td>
</tr>
</tbody>
</table>

Responses

Response 1 (Success)
OK

Explanation

The BSY command places a posted CIC in the MB/CPD state. If the CIC was CPB, the BSY command places the CIC in a CPD state. If the CIC was not CPD, the BSY command places the CIC in a MB state. The BSY command also results in blocking being asserted at the far end.

The BSY INB command places a posted CIC in the INB state. The CIC state has to be MB before issuing this command; otherwise, the state change will fail at the non-MB CIC.

The BSY ALL/BSY RNG places a group of CICs in the MB/CPD state. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

The BSY INB ALL/BSY INB RNG places a group of CICs in the INB state. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

System action
None
User action
None

Examples
BSYing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1
>BSY

Figure 2-59
Post by CLLI, Followed by BSY

BSY INBing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1
>BSY INB
Response 2
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the BSY command can be issued.

System action
None

User action
Post a BICC CIC before issuing the BSY command.

Examples
Use the BSY command with no CIC posted
>BSy
**Response 3**
FAILED, CIC IS UNEQUIPPED

**Explanation**
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the BSY command can be issued.

**System action**
None

**User action**
Post a datafilled BICC CIC before issuing the BSY command.

**Examples**
Use the BSY command on a posted CIC that has been deleted from table GBCIC:

```
>By
```

---

**Figure 2-61**
Use the BSY command with no CIC posted
Response 4
FAILED, END_CIC IN RNG < POSTED CIC

Explanation
When using the RNG parameter, the specified CIC is less than the posted CIC.

System action
None

User action
When using the RNG parameter in the BSY command, ensure the specified CIC is greater than the posted CIC.

Examples
Use an invalid BSY RNG command on the first CIC of a posted set:
>Post g CLLI1 2
>BSY RNG 1
Figure 2-63
Invalid BSY RNG command on the first CIC of a posted set

GBICTK
  0 Quit
  2 Post_ CIC CKT TYPE COM LANG STATE
  3    2 2W BICC CLLI1 IDL
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
  10
  11 PREV
  12 NEXT
  13   GBICTK:
  14 FAILED, END_CIC IN RNG < POSTED CIC
  15
  16 QrySig
  17 RouteSet
  18
  MAPUSER

Response 5
FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
PROCESSING STOPED AT CLLI: CIC:

Explanation
An internal resourced reservation error occurred.

System action
None

User action
There is currently a high volume of outgoing MTCE messaging on the MSC.
Wait for outgoing MTCE message traffic to recede and issue the command
again, starting at the CIC where the error occurred.

Examples
Use the BSY command during high MTCE traffic:
>Post g CLLI1
>BSY
Response 6
FAILED, INVALID STATE FOR COMMAND ISSUED
PROCESSING STOPED AT CLLI: CIC:

Explanation
A BSY INB was performed on a CIC that was not in the MB state.

System action
None

User action
To continue with the rest of the CICs. Post the CIC in the invalid state and change it to INB. If the CIC is in CPD, you will either have to wait for the current call to come down or FRLS the CIC to MB. Once the CIC is MB, continue with the INB operation on the rest of the CICs starting at the posted CIC.

Examples
Use the BSY INB on an invalid state CIC:
>Post g CLLI1
>BSY INB (on a CIC that is not MB)
**Response 7**
TIMEOUT OCCURRED.

**Explanation**
The BSY command timed out.

**System action**
None

**User action**
Try the BSY command again. If the BSY command times out again, try the BSY command on a smaller set of CICs. It could be that the system is under heavy load.

Otherwise, if the BSY command times out again, try reposting the current displayed CIC.

**Examples**
BSY ALL command
>Post g CLLI1 2
>BSY ALL
Figure 2-66
Timeout on BSY ALL command

Response 8
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

Explanation
An internal error has occurred.

System action
None

User action
Try the BSY command again. If the BSY command times out again, try reposting the current displayed CIC.

Examples
Normal BSY command
>Post g CLL11 2
>BSY
**Figure 2-67**

Internal Error on Normal BSY Command

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
<th>2 Post</th>
<th>CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>2W</td>
<td>BICC</td>
<td>CLL11</td>
<td>IDL</td>
<td></td>
</tr>
</tbody>
</table>

**Response 9**

FAILED, INVALID STATE FOR COMMAND ISSUED PROCESSING STOPPED AT CLL1: CIC:

**Explanation**

A BSY is performed on a CIC that was in the INB state.

**System action**

None

**User action**

User command RTS INB.

**Examples**

Use the BSY on an INB CIC.

>`Post g CLL11`  
>`BSY (on a CIC that is INB)`
Figure 2-68
BSY on an INB State CIC

GBICTK
  0 Quit
  2 Post_ CIC       CKT TYPE COM LANG       STATE
  3          1  2W  BICC  CLLI1           IDL
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
 10
 11 PREV
 12 NEXT
 13       GBICTK:
 14       FAILED, INVALID STATE FOR COMMAND ISSUED
 15       PROCESSING STOPPED AT CLLI: CLLI1 CIC: 1
 16 QrySig
 17 RouteSet
 18
  MAPUSER

**RTS command**

The RTS command changes a posted CIC’s state from MB/CPD to any state but INB. The RTS INB command transitions the CIC out of the INB state.

**Syntax**

```
[<RTS_PARM> {INB, [<INB_PARMS>{ALL,
RNG <END_CIC:>{1 TO 4294967295}]},

ALL,
RNG <END_CIC:{1 TO 4294967295}]}
```
Parameters

Table 2-49 lists the parameters, values, and definitions for the RTS command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTS_PARM</td>
<td>INB, ALL, RNG</td>
<td>The INB parm transitions the posted CIC out of the INB state.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The ALL parm places all CICs in the posted set from MB/CPD to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>any state but INB.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The RNG parm places all CICs from the posted CIC to the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>specified end CIC from MB/CPD to any state but INB.</td>
</tr>
<tr>
<td>INB_PARMS</td>
<td>ALL, RNG</td>
<td>The ALL parm transitions all CICs in the posted set out of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the INB state.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The RNG parm transitions all CICs from the posted CIC to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the specified end CIC out of the INB state.</td>
</tr>
</tbody>
</table>

—end—

Responses

Response 1 (Success)
OK

Explanation

The RTS command changes a posted CIC’s state from MB/CPD to any state but INB. If the CIC was CPD, the RTS command places the CIC in a CPB state. If the CIC was not CPD, the RTS command places the CIC in any state other than CPD, CPB, or INB (depending on current conditions at the NE/FE). The RTS command also results in unblocking being asserted at the far end.

The RTS ALL/RTS RNG places a group of CICs’ state from MB/CPD to any state but INB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

System action
None

User action
None
Examples
RTSing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1
>RTS

Figure 2-69
Post by CLLI, Followed by RTS

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post</td>
<td>CIC</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>2W</td>
</tr>
<tr>
<td>5</td>
<td>BICC</td>
</tr>
<tr>
<td>6</td>
<td>CLLI1</td>
</tr>
<tr>
<td>7</td>
<td>LO</td>
</tr>
<tr>
<td>8</td>
<td>BSY</td>
</tr>
<tr>
<td>9</td>
<td>RTS</td>
</tr>
<tr>
<td>10</td>
<td>FRLS</td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td>OK</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18 MAPUSER</td>
<td></td>
</tr>
</tbody>
</table>

Response 2
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the RTS command can be issued.

System action
None

User action
Post a BICC CIC before issuing the RTS command.

Examples
Use the RTS command with no CIC posted
>RTS
Use the RTS command with no CIC posted

Response 3
FAILED, CIC IS UNEQUIPPED

Explanation
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the RTS command can be issued.

System action
None

User action
Post a datafilled BICC CIC before issuing the RTS command.

Examples
Use the RTS command on a posted CIC that has been deleted from table GBCIC:
> Rts
Response 4
FAILED, END_CIC IN RNG < POSTED CIC

Explanation
When using the RNG parameter, the specified CIC is less than the posted CIC.

System action
None

User action
When using the RNG parameter in the RTS command, ensure the specified CIC is greater than the posted CIC.

Examples
Use an invalid RTS RNG command on the first CIC of a posted set:
>Post g CLLI1 2
>RTS RNG 1
Invalid RTS RNG command on the first CIC of a posted set

Response 5
FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
PROCESSING STOPED AT CLLI: CIC:

Explanation
An internal resourced reservation error occurred.

System action
None

User action
There is currently a high volume of outgoing MTCE messaging on the MSC. Wait for outgoing MTCE message traffic to recede and issue the command again, starting at the CIC where the error occurred.

Examples
Use the RTS command during high MTCE traffic:
>Post g CLLI1
>Rts
Response 6
FAILED, INVALID STATE FOR COMMAND ISSUED
PROCESSING STOPED AT CLLI: CIC:

Explanation
A RTS was performed on a CIC that was in the INB state.

System action
None

User action
To continue with the rest of the CICs. Post the CIC in the invalid state and change it to MB. Once the CIC is MB, continue with the RTS operation on the rest of the CICs starting at the posted CIC.

Examples
Use the RTS on an invalid state CIC:
>Post g CLLI1
>RTS (on a CIC that is INB)
Figure 2-74
RTS on an Invalid State CIC

GBICTK
0 Quit
2 Post_  CIC   CKT TYPE  COM LANG  STATE
3  1  2W  BICC  CLLI1  INB

4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13     GBICTK:
14     FAILED, INVALID STATE FOR COMMAND ISSUED
15     PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER

Response 7
TIMEOUT OCCURRED.

Explanation
The RTS command timed out.

System action
None

User action
Try the RTS command again. If the RTS command times out again, try the
RTS command on a smaller set of CICs. It could be that the system is under
heavy load.

Otherwise, if the RTS command times out again, try reposting the current
displayed CIC.

Examples
RTS ALL command
>Post g CLLI1 2
>RTS ALL
Figure 2-75
Timeout on RTS ALL command

Response 8
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

Explanation
An internal error has occurred.

System action
None

User action
Try the RTS command again. If the RTS command times out again, try reposting the current displayed CIC.

Examples
Normal RTS command
>Post g CLL11 2
>RTS
The FRLS command works in the same manner as the BSY command (in that it is responsible for transitioning the CIC state to MB/CPD).

The FRLS command changes a posted CIC’s state to MB. If the CIC was CPD/CPB, the FRLS command immediately releases the call and changes the CIC state to MB. The FRLS command can also result in blocking the far end.

The FRLS ALL/FRLS RNG places a group of CICs’ state to MB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

**Syntax**

```
[<PARM> {ALL,
RNG <END_CIC:> {1 TO 4294967295}}]
```
Parameters

Table 2-50 lists the parameters, values, and definitions for the FRLS command.

Table 2-50
FRLS command

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARM</td>
<td>ALL, RNG</td>
<td>The ALL parm places all CICs in the posted set from MB/CPD to any state but INB. The RNG parm places all CICs from the posted CIC to the specified end CIC from MB/CPD to any state but INB.</td>
</tr>
</tbody>
</table>

Responses

Response 1 (Success)
OK

Explanation

The FRLS command changes a posted CIC’s state to MB If the CIC was CPD/CPB, the FRLS command immediately releases the call and changes the CIC state to MB. The FRLS command can also result in blocking being asserted at the far end.

The FRLS ALL/FRLS RNG places a group of CICs’ state to MB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

System action
None

User action
None

Examples

FRLS a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):
>Post g CLLI1
>FRLS
Figure 2-77
Post by CLLI, Followed by FRLS

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
<th>2 Post_</th>
<th>CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>2W</td>
<td>BICC</td>
<td>CLLI1</td>
<td></td>
<td>MB</td>
</tr>
</tbody>
</table>

Response 2
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the FRLS command can be issued.

System action
None

User action
Post a BICC CIC before issuing the FRLS command.

Example
Use the FRLS command with no CIC posted
> Frls
Figure 2-78
Use the FRLS command with no CIC posted

Response 3
FAILED, CIC IS UNEQUIPPED

Explanation
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the FRLS command can be issued.

System action
None

User action
Post a datafilled BICC CIC before issuing the FRLS command.

Examples
Use the FRLS command on a posted CIC that has been deleted from table GBCIC:
>Frls
**Figure 2-79**
FRLS command on a posted CIC that has been deleted

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post</td>
<td>CIC</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2W</td>
</tr>
<tr>
<td>5</td>
<td>BICC</td>
</tr>
<tr>
<td>6</td>
<td>CLLI1</td>
</tr>
<tr>
<td>7</td>
<td>NEQ</td>
</tr>
<tr>
<td>8</td>
<td>FAILED, CIC IS UNEQUIPPED</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>PREV</td>
</tr>
<tr>
<td>12</td>
<td>NEXT</td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>QrySig</td>
</tr>
<tr>
<td>17</td>
<td>RouteSet</td>
</tr>
<tr>
<td>18</td>
<td>MAPUSER</td>
</tr>
</tbody>
</table>

**Response 4**
FAILED, END_CIC IN RNG < POSTED CIC

**Explanation**
When using the RNG parameter, the specified CIC is less than the posted CIC.

**System action**
None

**User action**
When using the RNG parameter in the FRLS command, ensure the specified CIC is greater than the posted CIC.

**Examples**
Use an invalid FRLS RNG command on the first CIC of a posted set:
>Post g CLLI1 2
>FRLS RNG 1
Figure 2-80
Invalid FRLS RNG command on the first CIC of a posted set

```
GBICTK
  0 Quit
  2 Post_ CIC CKT TYPE COM LANG STATE
  3 2 2W BICC CLL11 IDL
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
10
11 PREV
12 NEXT
13   GBICTK:
14   FAILED, END_CIC IN RNG < POSTED CIC
15
16 QrySig
17 RouteSet
18
MAPUSER
```

Response 5
FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
PROCESSING STOPED AT CLL1: CIC:

Explanation
An internal resourced reservation error occurred.

System action
None

User action
There is currently a high volume of outgoing MTCE messaging on the MSC. Wait for outgoing MTCE message traffic to recede and issue the command again, starting at the CIC where the error occurred.

Examples
Use the FRLS command during high MTCE traffic:
>Post g CLL11
>Frls
**Figure 2-81**
FRLS Command During High MTCE Traffic

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post_</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2W</td>
</tr>
<tr>
<td></td>
<td>BICC</td>
</tr>
<tr>
<td></td>
<td>CLLI1</td>
</tr>
<tr>
<td></td>
<td>IDL</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
</tbody>
</table>

**Response 6**
TIMEOUT OCCURRED.

**Explanation**
The FRLS command timed out.

**System action**
None

**User action**
Try the FRLS command again. If the FRLS command times out again, try the FRLS command on a smaller set of CICs. It could be that the system is under heavy load.

Otherwise, if the FRLS command times out again, try reposting the current displayed CIC.

**Examples**
FRLS ALL command
>Post g CLLI1 2
>FRLS ALL
Figure 2-82
Timeout on FRLS ALL command

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post_ CIC</td>
<td>CKT TYPE</td>
</tr>
<tr>
<td>3 2</td>
<td>2W BICC</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5 BSY_</td>
<td></td>
</tr>
<tr>
<td>6 RTS_</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 FRLS_</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td></td>
</tr>
<tr>
<td>13 GBICTK:</td>
<td></td>
</tr>
<tr>
<td>14 TIMEOUT OCCURRED.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
</tr>
<tr>
<td>18 MAPUSER</td>
<td></td>
</tr>
</tbody>
</table>

Response 7
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.
COULD NOT GET GBICTK MAP OWNER

Explanation
An internal error has occurred.

System action
None

User action
Try the FRLS command again. If the FRLS command times out again, try reposting the current displayed CIC.

Examples
Normal FRLS command
>Post g CLLI1 2
>Frls
**Figure 2-83**

**Internal Error on Normal FRLS Command**

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>0 Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Post</td>
<td>CIC</td>
</tr>
<tr>
<td>3</td>
<td>CKT TYPE</td>
</tr>
<tr>
<td>2W</td>
<td>COM LANG</td>
</tr>
<tr>
<td>BICC</td>
<td>STATE</td>
</tr>
<tr>
<td>CLLI1</td>
<td>IDL</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BSY</td>
</tr>
<tr>
<td>6</td>
<td>RTS</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>FRLS</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>PREV</td>
</tr>
<tr>
<td>12</td>
<td>NEXT</td>
</tr>
<tr>
<td>13</td>
<td>GBICTK:</td>
</tr>
<tr>
<td>14</td>
<td>ABORTED: PROBLEM SENDING MESSAGE TO SERVER</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>QrySig</td>
</tr>
<tr>
<td>17</td>
<td>RouteSet</td>
</tr>
<tr>
<td>18</td>
<td>MAPUSER</td>
</tr>
</tbody>
</table>

**QRYSIG command**

The QRYSIG command returns signaling availability for a posted CIC.

**Syntax**

```
<QRYSIG>
```

**Parameters**

None

**Responses**

**Response 1 (Success)**

- SIGNALLING AVAILABLE
- SIGNALLING NOT AVAILABLE

**Explanation**

The QRYSIG command returns signaling availability for a posted CIC.

The QRYSIG command is especially helpful when the CIC state is LO. The CIC state can be LO due to a number of reasons:
• The CIC is not equipped at the FE.
• The CIC is pending an ACK and is in a transient state. This is true for RSC, GRS, REL, and CGU messages pending ACK.
• The routeset is unavailable.
• External routing is not available.

**System action**
None

**User action**
None

**Examples**
QRYSIG on a CIC from a posted CLLI indicating signalling availability:
>Post g CLLI1
>QRYSIG

---

QRYSIG Indicating Signalling is Available

```
GBICTK
  0 Quit
2 Post_ CIC CKT TYPE COM LANG STATE
3  2  2W BICC CLLI1 IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13   GBICTK:
14   Signalling Available
15
16 QrySig
17 RouteSet
18
MAPUSER
```

QRYSIG on a CIC from a posted CLLI indicating signalling unavailability:
>Post g CLLI1
>QRYSIG
Figure 2-85
QRYSIG Indicating Signalling is Not Available

```plaintext
GBICTK
  0 Quit
  2 Post_  CIC  CKT TYPE  COM LANG  STATE
  1
  2
  3  2  2W  BICC  CLLI11  LO
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
  10
  11 PREV
  12 NEXT
  13  GBICTK:
  14  Signalling NOT Available
  15
  16 QrySig
  17 RouteSet
  18
MAPUSER
```

**Response 2 (Additional Success Responses)**
The following problems exist for this CIC:

- Routeset is BLOCKED
- No External Routers are INSV
- Reset not sent yet
- No ack-for-reset received yet
- Circuit is awaiting CGUA message
- Circuit is UNEQUIPPED at the REMOTE office
- Mismatch with MTP routeset data
- Mismatch with MTP External Routing state

**Explanation**
Table 2-51 provides an explanation for response.
Table 2-51
QRYSIG Explanation

<table>
<thead>
<tr>
<th>Text</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Routeset is BLOCKED</td>
<td>The routeset on which this routeset resides is not INSV.</td>
</tr>
<tr>
<td>- No External Routers are INSV</td>
<td>The external routers for which the MSC use to route MTP traffic are out of service.</td>
</tr>
<tr>
<td>- Reset not sent yet</td>
<td>Over cold+ restarts, CIC states suffer a memory mutilation, and GRS messages must be sent when BICC routesets first come into service. This is an indication that a GRS message has not yet been sent for the CIC.</td>
</tr>
<tr>
<td>- No ack-for-reset received yet</td>
<td>This is an indication that the CIC is pending either a GRA or RLC.</td>
</tr>
<tr>
<td>- Circuit is awaiting CGUA message</td>
<td>This is an indication that the CIC is pending a CGUA message.</td>
</tr>
<tr>
<td>- Circuit is UNEQUIPPED at the REMOTE office</td>
<td>This is an indication that the CIC is UNEQ at the far end.</td>
</tr>
<tr>
<td>- Mismatch with MTP routeset data</td>
<td>The BICC application's routeset state data mismatches with that of MTP. The MSC audits the BICC application's routeset state data against that of MTP. The audit corrects state information every 10 minutes. The next audit cycle will clear up this state mismatch.</td>
</tr>
<tr>
<td>- Mismatch with MTP External Routing state</td>
<td>The BICC application's external routing data mismatches with that of MTP. The MSC audits the BICC application's external routing data against that of MTP. The audit corrects state information every 10 minutes. The next audit cycle will clear up this state mismatch.</td>
</tr>
</tbody>
</table>

**System action**
None

**User action**
Table 2-52 provides a list of user actions.
Table 2-52
User actions

<table>
<thead>
<tr>
<th>Text</th>
<th>Customer Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Routeset is BLOCKED</td>
<td>Bring the routeset back into service.</td>
</tr>
<tr>
<td>- No External Routers are INSV</td>
<td>Bring at least one external router into service.</td>
</tr>
<tr>
<td>- Reset not sent yet</td>
<td>Either:&lt;br&gt;1) Wait for a GRS message to be sent&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>after a cold+ restart.&lt;br&gt;2) Invoke manual&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>intervention on this&lt;br&gt;CIC by bringing it into&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>INB, then bring it back into service.</td>
</tr>
<tr>
<td>- No ack-for-reset received yet</td>
<td>Either:&lt;br&gt;1) Wait for the far end to respond with&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>a RLC/GRA.&lt;br&gt;2) Invoke manual intervention on this&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>CIC by bringing it into INB, then bring it&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>back into service.</td>
</tr>
<tr>
<td>- Circuit is awaiting CGUA message</td>
<td>None. The CIC will not come into service&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>as long as the far end does not respond&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>to a CGUA.</td>
</tr>
<tr>
<td>- Circuit is UNEQUIPPED at the REMOTE</td>
<td>Equip the CIC at the far end. Then, bring&lt;br&gt;</td>
</tr>
<tr>
<td>office</td>
<td>this CIC into service.</td>
</tr>
<tr>
<td>- Mismatch with MTP routeset data</td>
<td>None.</td>
</tr>
<tr>
<td>- Mismatch with MTP External Routing state</td>
<td>None.</td>
</tr>
</tbody>
</table>

Response 3
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the QRYSIG command can be issued.

System action
None

User action
Post a BICC CIC before issuing the QRYSIG command.
Examples
Use the QRYSIG command with no CIC posted
>QRYSIG

Figure 2-86
Use the QRYSIG command with no CIC posted

<table>
<thead>
<tr>
<th>GBICTK</th>
<th>CIC</th>
<th>CKT TYPE</th>
<th>COM LANG</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Quit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Post</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BSY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>RTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>FRLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>PREV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>NEXT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>QrySig</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>RouteSet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAPUSER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response 4
FAILED, CIC IS UNEQUIPPED

Explanation
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the QRYSIG command can be issued.

System action
None

User action
Post a datafilled BICC CIC before issuing the QRYSIG command.
### Examples

Use the QRYSIG command on a posted CIC that has been deleted from table GBCIC:

```
>Qrysig
```

![Figure 2-87](image)

**QRYSIG command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_ CIC CKT TYPE COM LANG STATE
3 2 2W BICC CLL11 NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13 GBICTK:
14 FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18 MAPUSER
```

#### Response 5

COULD NOT GET GBICTK MAP OWNER

#### Explanation

An internal error has occurred.

#### System action

None

#### User action

Try the QRYSIG command again. If the QRYSIG command fails again, try reposting the current displayed CIC.
Examples
Normal QRYSIG command
>Post g CLLI1 2
>QRYSIG

Figure 2-88
Internal Error on Normal QRYSIG Command

```
GBICTK
  0 Quit
  2 Post_ CIC CKT TYPE COM LANG STATE
  3  2 2W BICC CLLI1 LO
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
 10
 11 PREV
 12 NEXT
 13 GBICTK:
 14 COULD NOT GET GBICTK MAP OWNER
 15
 16 QrySig
 17 RouteSet
 18
MAPUSER
```

ROUTESET command
The ROUTESET command returns the routeset that corresponds to the posted CIC.

Syntax
ROUTESET: <ROUTESET Name>

Parameters
None

Responses
Response 1 (Success)
ROUTESET: <ROUTESET NAME>
Explanation
The ROUTESET command returns the routeset associated with the posted CIC.

System action
None

User action
None

Examples
ROUTESET on a CIC from a posted CLLI:
>Post g CLLI1
>Routeset

Figure 2-89
Successful ROUTEST command

Response 2
FAILED, NO CIC POSTED

Explanation
A CIC must be posted before the ROUTESET command can be issued.
System action
None

User action
Post a BICC CIC before issuing the ROUTESET command.

Examples
Use the ROUTSET command with no CIC posted
> Routeset

Response 3
FAILED, CIC IS UNEQUIPPED

Explanation
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the ROUTSET command can be issued.

System action
None
**User action**
Post a datafilled BICC CIC before issuing the ROUTSET command.

**Examples**
Use the ROUTSET command on a posted CIC that has been deleted from table GBCIC:

```
> Routeset
```

**Figure 2-91**
**ROUTESET command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_ CIC CKT TYPE COM LANG STATE
3  2  2W BICC CLLI1 NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13 GBICTK:
14 FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18 MAPUSER
```

**Response 4**
COULD NOT GET GBICTK MAP OWNER

**Explanation**
An internal error has occurred.

**System action**
None

**User action**
Try the ROUTESET command again. If the ROUTESET command fails again, try reposting the current displayed CIC.
Examples
Normal ROUTSET command
>Post g CLLI1 2
>ROUTESET

Figure 2-92
Internal Error on Normal ROUTESET Command

Response 5
ERROR RETRIEVING ROUTESET NAME

Explanation
An serious internal error has occurred.

System action
None

User action
There is a serious problem with the switch. Contact Nortel Personnel.

Examples
Normal ROUTSET command
>Post g CLLI1 2
>ROUTESET
Figure 2-93
Serious Internal Error on Normal ROUTESET Command

```
GBICTK
  0 Quit
  2 Post_  CIC  CKT TYPE  COM LANG  STATE
  3   1  2W  BICC  CLLI1  LO
  4
  5 BSY_
  6 RTS_
  7
  8 FRLS_
  9
 10
 11 PREV
 12 NEXT
 13    GBICTK:
 14    ERROR RETRIEVING ROUTESET NAME
 15
 16 QrySig
 17 RouteSet
 18
MAPUSER
```

**OP command**

The OP command generates an IAM containing the provided digits using the posted CLLI/CIC. A valid BICC CLLI/CIC must be posted.

**Syntax**

```
OP-- Generate an IAM with provided digits
Parms: <1 to 18 DIGITS
```

**Parameters**

Table 2-53 lists the parameters, values, and definitions for the OP command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIGITS</td>
<td>1 to 18 dialed digits</td>
<td>These digits are used for building the IAM.</td>
</tr>
</tbody>
</table>

---
Responses

**Response Success**
Outpulsing Ok.

**Explanation**
The IAM was successfully built, sent, and a replying ACM or ANM was received.

**System action**
None

**User action**
None

**Examples**

> Post g ANSIBICCP
> OP 7347220346

---

**Figure 2-94**
OP Success (ACM or ANM)

```plaintext
XAC  MS  IOD  Net  PM  CCS  Trks  Ext  APPL
ETHR 01SBPT AMA B .1SysB 1 RS 71CC. 1Crit .
M   *C*  M   *C*   *C*   *C*   *C*
GBICTK
0 Quit  CIC  CKT  TYPE  COM  LANG  STATE
2 Post_ 1 2W BICC ANSIBICCP IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  OP 7347220346
12 NEXT  Outpulsing in progress
13  Outpulsing Ok.
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >
```

---

**Response Success**
Outpulsing Ok.
Explanation
The IAM was successfully built, sent, a CFN message was received, followed by a replying ACM or ANM.

The CFN message just tandemed through, thus is consumed and does not affect the result of the OP command.

System action
None

User action
None

Examples
>Post g ANSIBICCP
>OP 7347220346

Response Unsuccessful
Outpulsing TBL, invalid reply.
Explanation
The IAM was built and dispatched, received LPA, expecting either ACM or ANM message. OP command failed.

LPA message is not supported by ANSI BICC, thus OP command is unsuccessful.

System action
None

User action
None

Examples
">Post g ANSIBICCP
>OP 9726903317

Figure 2-96
OP failure

Response Unsuccessful (timeout)
Outpulsing TBL, NO response from distant office.
Explanation
The IAM was successfully built and dispatched, but no message was received in reply.

System action
None

User action
Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

Examples
>Post g ANSIBICCP
>OP 7346244422

Response Unsuccessful
Outpulsing TBL, NO response from distant office.

Explanation
The IAM was built and dispatched, received FAC message, waiting for replying ACM or ANM.
The FAC message is consumed, it does not affect the success/failure of the OP command. In this scenario, no ACM or ANM message received within the timeout period, thus OP command is unsuccessful.

**System action**
None

**User action**
Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

**Examples**

```
> Post g ANSIBICCP
>
OP 9726903317
```

**Figure 2-98**
OP failure (no response)

```
XAC MS IOD Net PM CCS Trks Ext APPL
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC 1Crit .
M *C* M *C* *C* *C* *C*
GBICTK
0 Quit CIC CKT TYPE COM LANG STATE
2 Post_ I 2W BICC ANSIBICCP IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV OP 9726903317
12 NEXT Outpulsing in progress.
13 Outpulsing TBL, no response from distant office
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18 MAPUSER
Time 17:52 >
```

**Response Unsuccessful.**
Outpulsing TBL, timeout occurred.

**Explanation**
The IAM was not dispatched.
For some reason the IAM message was not built and not dispatched. Possible reasons: MGWs are congested, H.248 errors.

The OP command failed, “Outpulsing TBL, timeout occurred” is displayed after 60 secs.

**System action**
None

**User action**
Use QrySig to verify signaling links are up.

**Examples**
>Post g ANSIBICCP
>OP 9726903317

Figure 2-99
OP failure (IAM not dispatched)
Additional error responses:
Additional error responses for the OP command when the posted circuit is not IDL:

- When the corresponding RTESET is not INSV: "Outpulsing failed - Routeset unavailable"
- When the posted circuit is INB: "Outpulsing failed - Circuit is offline"
- When the posted circuit is undergoing or has not undergone reset: “Outpulsing failed - CIC turn_up is not completed”.
- When the posted circuit is already involved in a call: “Outpulsing failed-CIC is involved in an active call”.
- When the posted circuit is unequipped: “Outpulsing failed-Circuit is UNEQUIPPED at the REMOTE office”.

*Note:* Issuing the OP command for a posted circuit that is MB will release the MB state, and execute the OP command.

**TRKQRY command**

The TRKQRY command acts on the posted CLLI/CIC and causes the display of local or remote CIC state, or to check for state mismatch between the two and, optionally, take action to make them compatible.

**Syntax**

```
TRKQRy--Display local or remote state of trunk or check for state mismatch.
```

**Parameters**

Figure 2-100 shows parameters for the TRKQRY command.

![Figure 2-100](image)

**Parameter** | **Value** | **Description**
---|---|---
TRKQRY | LOCAL, REMOTE | Displays local or remote state of trunk.

---

**Responses**

**Response 1**

**TRKQRY LOCAL**

**Explanation**

The local view of the CIC state is displayed.

**System action**

None
**User action**
None

**Examples**
TRKQRY on a CIC from a posted CLLI:
>Post g CLLI1
>TRKQRY LOCAL

**Response 2**
TRKQRY REMOTE

**Explanation**
The remote view of the CIC state is displayed.

**System action**
None

**User action**
None
Examples
TRKQRY on a CIC from a posted CLLI:
>Post g CLLI1
>TRKQRY REMOTE

Figure 2-102
TRKQRY REMOTE Command

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHR</td>
<td>01SBPT</td>
<td>AMA B</td>
<td>1SysB</td>
<td>1 RS</td>
<td>71CC</td>
<td>1Crit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

M *C* M *C* *C* *C*

GBICTK
0 Quit  CIC  CKT TYPE COM LANG STATE
2 Post_ 1 2W BICC ANSIBICCP IDL

Response 3 (Both, Compatible States)
TRKQRY

Explanation
The local and remote views of the CIC state are displayed.

System action
None

User action
None

Examples
TRKQRY on a CIC from a posted CLLI:
>Post g CLLI1
>TRKQRY
In this example, the local and remote states are compatible and no action is necessary.

**Response 4 (Both, Incompatible States)**

TRKQRY

**Explanation**
The local and remote views of the CIC state are displayed.

**System action**
None

**User action**
None

**Examples**
TRKQRY on a CIC from a posted CLLI:
>`>Post g CLLI1`
>`>TRKQRY`
Figure 2-104
TRKQRY Command, Both (implied) - Mismatch

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHR</td>
<td>01SBPT</td>
<td>AMA</td>
<td>B</td>
<td>1SysB</td>
<td>1</td>
<td>RS</td>
<td>71CC.</td>
<td>1Crit</td>
</tr>
<tr>
<td>M</td>
<td><em>C</em></td>
<td>M</td>
<td><em>C</em></td>
<td><em>C</em></td>
<td><em>C</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBICTK</td>
<td>0</td>
<td>Quit</td>
<td>CIC</td>
<td>CKT TYPE</td>
<td>COM LANG</td>
<td>STATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Post_</td>
<td>1</td>
<td>2W</td>
<td>BICC</td>
<td>ANSIBICC</td>
<td>IDL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response 5 (Timeout)
TRKQRY REMOTE or TRKQRY

Explanation
Either the remote or the local and remote views of the CIC state are displayed (depending on which of the above two commands are entered).

System action
None

User action
Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

Examples
TRKQRY on a CIC from a posted CLLI:
>Post g CLLI1
>TRKQRY
Figure 2-105
TRKQRY Command, CQM Timeout

<table>
<thead>
<tr>
<th>XAC</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHR</td>
<td>01SBPT</td>
<td>AMA B</td>
<td>1SysB</td>
<td>1 RS</td>
<td>1CC</td>
<td>1Crit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td><em>C</em></td>
<td>M</td>
<td><em>C</em></td>
<td><em>C</em></td>
<td><em>C</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBICTK</td>
<td>0</td>
<td>Quit</td>
<td>CIC</td>
<td>CKT TYPE</td>
<td>COM LANG</td>
<td>STATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Post</td>
<td>1</td>
<td>2W BICC</td>
<td>ANSIBICC</td>
<td>IDL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 BSY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 RTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 FRLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 PREV</td>
<td>trkqry remote</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 NEXT</td>
<td>LTTimeout Error -- No response received for CQM message.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 OP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 TrkQry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 QrySig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 RouteSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAPUSER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>17:52</td>
<td>&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GMASCRCI

GMASCRCI directory

GMASCRCI is a MAPCI level directory. The GMASCRCI commands maintain table MAP (Mobile Application Part) for the MSC.

Accessing GMASCRCI

To access the GMASCRCI MAP level, type the following command at the CI prompt and press return:

>gmascrci
GMASCRCI:>

Commands

The following commands are available at the GMASCRCI command level:

- DELETE
- COUNT
- QUIT
- VIEW

DELETE command

DELETE is a non-menu, resident command. This command deletes the specified network node IDs from the dynamic table. When this command is used, the delete count is incremented and the dynamic table entry count is decremented.

Syntax

The command syntax for DELETE is:

>DELETE <networknodeid>

Parameters

Table 2-54 lists and describes the optional parameter that can be used with the DELETE command.

Table 2-54
DELETE parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>networknodeid</td>
<td>string</td>
<td>This value is converted to BCD to identify the network node id in the MAP Screen table.</td>
</tr>
</tbody>
</table>
COUNT command

COUNT displays the current number of tuples in the dynamic table.

Syntax

The command syntax for COUNT is:

>COUNT

QUIT command

QUIT exits the GMASCRCI directory.

Syntax

The command syntax for QUIT is:

>QUIT

VIEW command

VIEW is a non-menu, resident command that shows the network node IDs, the entry date for the entire dynamic table, and the dynamic table entry count.

The network node ID can be entered as an optional parameter. If a network node ID is specified, the following information is printed:

• the node’s ID
• all dialogues for the particular node
• application contexts for the particular node
• version numbers for the particular node
• entry date

Syntax

The syntax for the VIEW command is

>VIEW <networknodeid>

Parameters

Table 2-55 lists and describes the optional parameter that can be used with the VIEW command.

Table 2-55
VIEW parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>networknodeid</td>
<td>string</td>
<td>This value is converted to BCD to identify the network node id in table MAP Screen.</td>
</tr>
</tbody>
</table>


GNWMCODEDIR

GNWMCODEDIR directory

GNWMCODEDIR is a MAP level directory that provides code controls that
• affect the progress of calls or
• count the number of calls

Code controls can affect call progress either directly or indirectly by
interacting with another control. Code controls that affect call progress are
protective controls.

Code controls count calls based on one or more digits of the destination code
and the entry point into Universal Translations. The entry point is specified in
terms of the translation system (XLASYS) and the translation name
(XLANAME).

In all cases, code control is applied to a range of destination codes. The range
of codes are relative to a specific translations name within a particular
translation system. The start and end of the range can be the same.

Accessing GNWMCODEDIR

To access the GNWMCODEDIR directory from the CI prompt, enter the
following command at the CI prompt and press return:

    CI:
    >MAPCI;NWM;CODECTRL

After entering the GNWMCODEDIR directory, the GNWMCODEDIR
prompt displays. This prompt displays until the tool is exited by entering
QUIT ALL.

Commands

GNWMCODEDIR provides the following code control commands:
• APPLY
• CODECTRL
• LIST
• PAGE
• REMOVE
• QUIT
**APPLY command**

APPLY command activates a specified control for the XLASYS, XLANAME, and digit range.

**Syntax**

The command syntax for the APPLY command is:

```
APPLY <CTRL> {CBK <BLOCKTYPE> {PCT <XLASYS> {AC, PX, CT, FA, OFC, DN, AM}
<XLANAME> STRING
<FROM-CODE> STRING
<TO-CODE> STRING
<LEVEL> {1 TO 100},

GAP<XLASYS> {AC, PX, CT, FA, OFC, DN, AM}
<XLANAME> STRING
<From-Code> STRING
<To-Code> STRING
<GAP> STRING}

<ANN>{NCA, EA1, EA2},

PRP<XLASYS> {AC, PX, CT, FA, OFC, DN, AM}
<XLANAME> STRING
<From-Code> STRING
<To-Code> STRING,

HTRF <XLASYS> {AC, PX, CT, FA, OFC, DN, AM}
```
Example

Figure 2-106 is an example of the APPLY command.

**Figure 2-106**
Example of the APPLY command

\[
\text{CI}>\text{APPLY CBK GAP AC NORMAL } '0181567' '0181840' 100.0 \text{ NCA}
\]

**Parameters**

Table 2-56 lists and defines the parameters applicable to the APPLY command.

### Table 2-56
APPLY command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRL</td>
<td>CBK, PRP, HTRF</td>
<td>Specifies the control type being applied.</td>
</tr>
<tr>
<td>BLOCKTYPE</td>
<td>PCT, GAP</td>
<td>Specifies the control blocking type when CTRL is CBK.</td>
</tr>
<tr>
<td>XLASYS</td>
<td>AC, PX, CT, FA, OFC, DN, AM</td>
<td>Specifies the translation system from which the control is to be applied.</td>
</tr>
<tr>
<td>XLANAME</td>
<td></td>
<td>Specifies the translation name for the specified XLASYS from which the control is to be applied.</td>
</tr>
<tr>
<td>From-Code</td>
<td>18 digits</td>
<td>Specifies the start of the code range to which the control is being applied.</td>
</tr>
<tr>
<td>To-Code</td>
<td>18 digits</td>
<td>Specifies the end of the code range to which the control is being applied.</td>
</tr>
<tr>
<td>LEVEL</td>
<td>1 - 100</td>
<td>Specifies the percentage blocking level for CBK control or PCT.</td>
</tr>
<tr>
<td>GAP</td>
<td>0.0 - 600.0</td>
<td>Specifies the gapping period (in seconds) for a CBK control of GAP. Specified as a string of digits with a single decimal place.</td>
</tr>
</tbody>
</table>

**CODECTRL command**

CODECTRL accesses the code control (CodeCtrl) menu level of the MAP. The CodeCtrl menu level displays information for the code controls that are currently active.
Syntax

The command syntax for CODECTRL is:

>CODECTRL

Example

Figure 2-107 is an example of the output of the CODECTRL command.

Figure 2-107
Example of CODECTRL command

| CI>CodeCtrl  |
| CBk PRPHTRF |
| 0 0 0       |

LIST command

The LIST command lists code controls that are currently applied. If the XLANAME is omitted, all controls of the specified type for the given XLASYS are listed. If the XLANAME is specified and the ALL code is specified, all controls of the specified type for the given XLASYS and XLANAME are listed. If the code is specified, any control of the specified type applied to that XLASYS/XLANAME and code is listed.

Syntax

The command syntax for LIST is:

LIST<CTRL> {CBK <BLOCKTYPE> {PCT, GAP}, PRP, HTRF} <XLASYS>{AC, PX, CT, FA, OFC, DN, AM} [<XLANAME> STRING] [<CODE|ALL> STRING]
Parameters

Table 2-57 lists and describes the parameters that apply to the LIST command.

Table 2-57
LIST command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRL</td>
<td>CBK, PRP, HTRF</td>
<td>Specifies the control type being listed.</td>
</tr>
<tr>
<td>BLOCKTYPE</td>
<td>PCT, GAP</td>
<td>Specifies the control blocking type when CTRL is CBK.</td>
</tr>
<tr>
<td>XLASYS</td>
<td>AC, PX, CT, FA, OFC, DN, AM</td>
<td>Specifies the translation system from which the control is to be listed.</td>
</tr>
<tr>
<td>XLANAME</td>
<td></td>
<td>Specifies the translation name for the specified XLASYS from which the control is to be listed.</td>
</tr>
<tr>
<td>CODEALL</td>
<td>18 digits</td>
<td>Specifies that the control should be listed for all codes for XLASYS and XLANAME.</td>
</tr>
</tbody>
</table>

Example

Figure 2-108 is an example of the LIST command.

Figure 2-108
Example of the LIST command

```plaintext
CI>LIST
XLAFromToLevelAnn
Count Pass
AC NORMALXX999999999999999999 999999999999999999 50 NC
A
12345 12345
>
```

PAGE command

When more than one page of code control data is generated by the LIST command, PAGE displays the next page of code control data.

Syntax

The command syntax for PAGE is:

```
>PAGE
```

REMOVE command

The REMOVE command removes a code control of the specified type from the given XLASYS, XLANAME, and digit range. If no XLANAME is
specified, all controls of the given type is removed from all digit ranges. If ALL digits are specified, all controls of the specified type is removed from the given XLASYS/XLANAME.

**Syntax**

The command syntax for REMOVE is:

```
REMOVE<CTRL> {CBK <BLOCKTYPE> {PCT, GAP}, PRP, HTRF}
<XLASYS> {AC, PX, CT, FA, OFC, DN, AM}
<XLANAME> STRING
<From-Code|ALL> STRING
[<To-Code> STRING]
```

**Example**

Figure 2-109 shows an example of the output of the REMOVE command.

```
CI> REMOVE CBK PCT AC NORMAL '0181567' '0181567'
```

**Parameters**

Table 2-58 lists and defines the parameters that apply to the REMOVE command:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRL</td>
<td>CBK, PRP, HTRF</td>
<td>Specifies the control type being removed.</td>
</tr>
<tr>
<td>BLOCKTYPE</td>
<td>PCT, GAP</td>
<td>Specifies the control blocking type when CTRL is CBK.</td>
</tr>
<tr>
<td>XLASYS</td>
<td>AC, PX, CT, FA, OFC, DN, AM</td>
<td>Specifies the translation system from which the control is to be removed.</td>
</tr>
</tbody>
</table>
QUIT command

QUIT exits the GNWMCODEDIR MAP level and returns the user to the CI MAP level.

Syntax

The command syntax for QUIT is:

```
GNWMCODEDIR:
>quit
```
Operating company personnel can trace or record an individual’s mobile subscriber activity in the Public Land Mobile Network (PLMN). The traced information is used to determine network problems and track subscriber activity in the PLMN.

Subscribers are traced based on their international mobile subscriber identity (IMSI) or international mobile equipment identity (IMEI). Trace records are produced at both the MSC and the base station subsystem (BSS).

GSMCLTRC is a MAPCI level that enables operating company personnel to display or delete an IMSI or IMEI that is currently provisioned for Call Trace.

Accessing GSMCLTRC
To access GSMCLTRC from the CI prompt, enter the following command and press return:

CI:>GSMCLTRC

Exiting GSMCLTRC
To exit GSMCLTRC and return to the CI level, enter

GSMCLTRC:>QUIT

Commands
The following commands are available from the GSMCLTRC directory:

- COUNT
- DELETE
- DISPLAY
- DISPLAY ALL
- HELP
- QUIT

COUNT command
COUNT examines all entries in the subscriber table that are activated for call trace and outputs a total count. This information is useful if personnel is considering using the “DISPLAY ALL” command because COUNT enumerates the number of entries that would be displayed.

Syntax
The command syntax for COUNT is:
>Count

**System response**

The system responds with the following information when the COUNT command is used:

nnn subscribers provisioned for Call Trace

**DELETE command**

Based on an IMSI or IMEI, DELETE removes the trace data for the target subscriber. The tuple (representing the subscriber) is removed from the internal table, terminating call trace for that subscriber. If a call trace is in progress when the tuple is deleted, the trace continues until the completion of the current call.

**Syntax**

The command syntax for DELETE is:

```
> Delete IMSI <imsi>
- or -
> Delete IMEI <imei>
```

**Parameters**

The DELETE command requires either one of two parameters. Enter either the IMSI or the IMEI of the call trace subscriber. The IMSI or IMEI is a sequence of up to 15 digits identifying the traced subscriber or equipment.

**System response**

When DELETE is used, the system provides the following response:

```
IMSI  OMC Id  Trace Reference  Trace Type
15 digits 20 alphanumerics 30 alphanumerics {Invoking Event, MSC/BSS Record Type, Priority}
```

Delete this tuple? (y or n):

**Error messages**

An error message displays if an invalid IMSI or IMEI is input. If the IMSI or IMEI is not activated for call trace, the following message is output:

Subscriber not activated for Call Trace

**User action**

Input ‘y’ or ‘n’ to confirm or terminate action.
DISPLAY command

This command displays the following information for a call trace subscriber that is activated:

- the mobile identity (IMSI or IMEI)
- the operations and maintenance center (OMC) ID
- the trace reference
- the trace type

Syntax

The command syntax for DISPLAY is:

>Display IMSI <imsi>

-or-

>Display IMEI <imei>

Parameters

The DISPLAY command requires either one of two parameters. Enter either the IMSI or the IMEI of the call trace subscriber. The IMSI or IMEI is a sequence of up to 15 digits that identifies the traced subscriber or equipment.

System response

When DISPLAY is used, the system provides the following response:

<table>
<thead>
<tr>
<th>IMSI</th>
<th>OMC Id</th>
<th>Trace Reference</th>
<th>Trace Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 digits</td>
<td>20 alphanumerics</td>
<td>30 alphanumerics</td>
<td>{Invoking Event, MSC/BSS Record Type, Priority}</td>
</tr>
</tbody>
</table>

Error messages

An error message displays if an invalid IMSI or IMEI is input. If the IMSI or IMEI is not activated to be traced, the following message is output:

Subscriber not activated for Call Trace

DISPLAY ALL command

The DISPLAY ALL command displays the trace data for all subscribers who have activated call trace. The trace data displayed for each subscriber is:

- the mobile identity (IMSI or IMEI)
- the OMC Id
- the trace reference
- the trace type
The information is displayed in groups of 50 entries. After each subset of entries, the user is queried to continue or quit.

**Syntax**

The command syntax for DISPLAY ALL is:

> Display ALL

**System response**

When DISPLAY ALL is used, the system provides the following response:

IMSI  OMC Id  Trace Reference  Trace Type
15 digits  20 alphanumerics  30 alphanumerics
{Invoking Event, MSC/BSS Record Type, Priority}

NN subscribers are activated for Call Trace. Continue Display All? (y or n):

**User action**

Input ‘y’ or ‘n’ to confirm or terminate action.

**HELP command**

HELP displays the list of GSMCLTRC commands.

**Syntax**

The command syntax for HELP is:

> help GSMCLTRC

**QUIT command**

QUIT exits the GSMCLTRC tool.
IWFTTP commands

IWFTTP is a MAP level that enables operating company personnel to test and maintain IWF trunks. The TTP level of the MAP is checked on an individual trunk member so diagnostics can be run. Additional functions for IWF trunk types are provided at the IWFTTP sublevel.

Accessing IWFTTP

To access the IWFTTP level is accessed from the CI prompt, enter the following command at the CI prompt and press return:

>MAPCI;MTC;TRKS;TTP;Level IWFTTP
- or -
>MAPCI;MTC;TRKS;TTP;IWFTTP

After entering the IWFTTP level, the IWFTTP level prompt displays. This prompt is displayed until the tool is exited.

Exiting IWFTTP

To exit IWFTTP and return to the TTP level, enter the following command and press return:

QUIT

To exit IWFTTP and return to the CI prompt, enter the following command and press return:

QUIT ALL

Example

Figure 2-110 shows the IWFTTP MAP display. The IWFTTP commands are contained in the box on the left side of the display.
This section discusses the following commands:

- **ACTIVATE**
- **FNCTTEST**
- **HELP**
- **INFO**
- **LINKTEST**
- **RELEASE**
- **SETUP**

**ACTIVATE command**

The ACTIVATE command sends an IWF-Activate-Request message to the IWF connected to the IWF trunk member in the control position. This command is disabled if the posted IWF truck type is a UIT.

**Syntax**

The syntax for the ACTIVATE command is:

```
Activate [Options]... [r <RCR> {Half,Full}]}
```
Parameters

Table 2-59 lists and defines the parameters applicable to the ACTIVATE command:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCR</td>
<td>Half, Full</td>
<td>The radio channel requirement sent to IWF. Default = FULL.</td>
</tr>
</tbody>
</table>

Example

Figure 2-111 shows an example of the ACTIVATE command.

Figure 2-111
Example of the ACTIVATE command

```
> ACTIVATE
>
```

Error message

The following error message displays if the IWF trunk type is UIT. The requested command is not executed.

ERROR: The command does not support this IWF trunk type.
Posted trunk is an UIT.

FNCTTEST command

FNCTTEST runs a functional test on MIT trunk group member(s). The IWF element in the command position is connected through the network to the IWF element supplied with the command. Each IWF is issued an IWF-Setup-Request message, an IWF-Activate-Request message, and an IWF-Release-Request message. If the IWF responds affirmatively to each command, the test passes. Otherwise, the test fails. A response that indicates the reason for failure is sent to operating company personnel.

Note 1: While this test is in progress, both IWF elements are set to the ‘SEIZED’ state so they cannot be selected for call processing.

Note 2: The FNCTTEST command is disabled if the posted trunk type is a Universal IWF Trunk (UIT). UIT trunks are used to connect to the GPP IWF.

Syntax

The syntax for the FNCTTEST command is:
The FNCTTEST command is used to test the trunk group data that is filled in the table IWFMEM. The command takes the following form:

```
FnctTest <MIT> STRING <TRUNK NUM> {0 TO 255}
```

**Parameters**

Table 2-60 lists and describes parameters applicable to the FNCTTEST command.

**Table 2-60
FNCTTEST command parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIT</td>
<td>Valid MIT CLLI name</td>
<td>Specifies the trunk group data filled in table IWFMEM.</td>
</tr>
<tr>
<td>TRUNK NUM</td>
<td>Any valid MIT member</td>
<td>Specifies the member of the MIT trunk group data filled in table IWFMEM.</td>
</tr>
</tbody>
</table>

**Example**

Figure 2-112 shows an example of the FNCTTEST command.

```
> Fncttest T1MIT 2
>
```

**Error messages**

The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

```
ERROR: The command does not support this IWF trunk type.
Posted trunk is an UIT.
```

**HELP command**

The HELP command provides information regarding the IWFTTP level commands.

**Syntax**

The syntax for the HELP command is:

```
>HELP
```

**INFO command**

The INFO command displays information on the IWF trunk member in the control position.
Syntax

The is no syntax for the INFO command.

Parameters

There are no parameters for the INFO command.

Example

Figure 2-113 shows an example of the INFO command.

LINKTEST command

The LINKTEST command tests the Ethernet signaling channel of the IWF host for the IWF trunk member in the control position. If a valid signaling channel name from table IWFLKSET is provided, the specified signaling channel is tested instead of the signaling channel associated with the trunk member in the control position. This command sends a PING to the remote node. The PING checks the node’s serviceability.

Syntax

The syntax for the LINKTEST command is:

```
Linktest[<Options>...]
{I <IWF Link> STRING
p <Number of packets:Valid values 1 to 10> {1 TO 10},
d <Display Statistics: Valid values ON or OFF> {ON, OFF}}]
```

Parameters

Table 2-61 lists and defines the parameters applicable to the LINKTEST command. All the parameters in the following table are optional parameters.

Table 2-61

<table>
<thead>
<tr>
<th>LINKTEST command parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>IWFLINK</td>
</tr>
</tbody>
</table>
Example

Figure 2-114 is an example of the LINKTEST command.

**Figure 2-114**
Example of the LINKTEST command

```
> Linktest 1 ifwlink
>
```

**RELEASE command**

RELEASE sends a IWF-Release-Request message to the IWF trunk member in the control position. The command is disabled if the posted trunk type is a UIT.

**Syntax**

The syntax for the RELEASE command is:

```
Release[<Options>...{d <Flush Direction> {Immed_Rel, To_MS,To_Net}}]
```

**Parameters**

Table 2-62 lists and defines the parameters applicable to the RELEASE command.

**Table 2-62**
RELEASE command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER OF PACKETS</td>
<td>1 - 10</td>
<td>Defines the number of packets that need to be sent while running the link test.</td>
</tr>
<tr>
<td>DISPLAY STATISTICS</td>
<td>ON, OFF</td>
<td>Defines whether statistics on the test should display.</td>
</tr>
<tr>
<td>FLUSH DIRECTION</td>
<td>Immed_rel, To_MS, To_Net</td>
<td>Specifies the direction in which the IWF buffer should be flushed. Default = Immed_rel</td>
</tr>
</tbody>
</table>

Example

Figure 2-115 shows an example of the RELEASE command.
Figure 2-115
Example of the RELEASE command

> Released Immed_Rel
>

Error messages
The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

ERROR: The command does not support this IWF trunk type. Posted trunk is a UIT.

SETUP command
The SETUP command sends an IWF-Setup-Request message to the IWF trunk member in the control position. This command gives the flexibility to specify certain barrier channel (BC) parameters in the setup message. The BC parameters are optional. If BC parameters are not specified, a default BC is sent to the IWF host.

Note: The SETUP command is disabled if the posted trunk type is a Universal IWF Trunk (UIT).

Syntax
The syntax for the SETUP command is:

Setup [{d<DEFAULT> {31KHZ, FAX, UDI}
    r <RCR> {HALF, FULL}
    i <ITC> {31KHZ, FAX, UDI}
    ra <RATE ADAPTATION> {NONE, V110, X31}
    s <SYNC> {SYNC, ASYNC}
    u <USER RATE> {300, 1200, 2400, 4800, 9600, 12_75}
    in <INTERMEDIATE> {NONE, 8KBPS, 16KBPS}
    ce <CONNECTION ELEMENT> {TRANS, NONTRANS}
    m <MODEM TYPE> {NONE, V21, V22, V22bis, V23, V26, V32, UNDEF, AUTO}}]
Parameters

Table 2-63 lists and defines the parameters applicable to the SETUP command.

Table 2-63
SETUP command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default</td>
<td>31KHZ, FAX, UDI</td>
<td>This optional parameter sends predefined BCs in the Setup messages.</td>
</tr>
<tr>
<td>RCR</td>
<td>Half, Full</td>
<td>This optional parameter is the radio channel requirement (RCR) part of the third octet of the BC information.</td>
</tr>
<tr>
<td>ITC</td>
<td>31KHZ, FAX, UDI</td>
<td>This optional parameter is the information transfer capability part of the third octet of the BC information.</td>
</tr>
<tr>
<td>RATE</td>
<td>None, V110, X31</td>
<td>This optional parameter is the rate adaptation part of the fifth octet of the BC information.</td>
</tr>
<tr>
<td>SYNC</td>
<td>SYNC, ASYNC</td>
<td>This optional parameter is the synchronous/asynchronous bit of the sixth octet of the BC information.</td>
</tr>
<tr>
<td>BAUD</td>
<td>300, 1200, 2400, 4800, 9600, 12_75</td>
<td>This optional parameter is the user rate part of the 6a octet of the BC information.</td>
</tr>
<tr>
<td>INTER</td>
<td>None, 8KBPS, 16KBPS</td>
<td>This optional parameter is the intermediate rate part of the 6b octet of the BC information.</td>
</tr>
<tr>
<td>CE</td>
<td>Trans, Non_Trans</td>
<td>This optional parameter is the connection element (CE) part of the 6c octet of the BC information.</td>
</tr>
<tr>
<td>MODEM</td>
<td>None, Y21, Y22, Y22bis, Y23, V26ter, V32, Undef, Auto</td>
<td>This optional parameter is the modem type part of the 6c octet of the BC information.</td>
</tr>
</tbody>
</table>

Example

Figure 2-116 is an example of the SETUP command.

Figure 2-116
SETUP command

> SETUP d fax u 1200
>
Error message

The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

ERROR: The command does not support this IWF trunk type. Posted trunk is a UIT.

IWFTTP error messages

Table 2-64 lists and describes the error messages produced by the IWFTTP command level.

Table 2-64
IWFTTP error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Ckt posted</td>
<td>No circuit is at the control position. Post a valid MIT at the control position or specify an IP address.</td>
</tr>
<tr>
<td>Link Test failed.</td>
<td>The IWF host for the IWF trunk in the control position failed to perform the link test.</td>
</tr>
<tr>
<td>Link Test Partially failed.</td>
<td>The number of packets sent do not equal the number of packets received. Also, the number of packets received is not equal to zero.</td>
</tr>
<tr>
<td>Error: Unable to invoke new process. Exiting...</td>
<td>The resources on the MSC are not available.</td>
</tr>
<tr>
<td>- OR -</td>
<td></td>
</tr>
<tr>
<td>Error: Unable to allocate table for packet data field. Exiting...</td>
<td></td>
</tr>
<tr>
<td>- OR -</td>
<td></td>
</tr>
<tr>
<td>Error: Mailbox resources not available.</td>
<td></td>
</tr>
<tr>
<td>Exiting...</td>
<td></td>
</tr>
<tr>
<td>Error: Cannot pin point the error. Exiting any way......</td>
<td>Unknown error caused the link test to fail.</td>
</tr>
<tr>
<td>ERROR: Test cannot be performed without posting a MIT at control position.</td>
<td>No MIT is posted at the control position.</td>
</tr>
</tbody>
</table>
Table 2-64
IWFTTP error messages (continued)

<table>
<thead>
<tr>
<th>Error</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR: CLLI is not datafilled in table CLLI.</td>
<td>The specified CLLI name does not exist.</td>
</tr>
<tr>
<td>ERRROR: Specified MIT is not datafilled.</td>
<td>The MIT specified is not datafilled in table IWFMEM.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;DEFAULT&gt; {31KHZ, FAX, UDI}</td>
<td>The default BC specified is not one of the allowed options.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;RCR&gt; {HALF,FULL}</td>
<td>The wrong RCR value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;ITC&gt; {31KHZ, UDI, FAX}</td>
<td>The wrong ITC value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;RATE ADAPTION&gt; {NONE, V110, X31}</td>
<td>The wrong RATE value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;SYNC&gt; {SYNC, ASYNC}</td>
<td>The wrong SYNC value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;USER RATE&gt; {300, 1200, 2400, 4800, 9600, 12_75}</td>
<td>The wrong USER_RATE value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;INTERMEDIATE&gt; {NONE, 8KBPS, 16KBPS}</td>
<td>The wrong INTER value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;CONNECTION ELEMENT&gt; {TRANS, NONTRANS}</td>
<td>The wrong connection element value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;MODEM TYPE&gt; {NONE, V21,V22, V22bis,V23, V26ter, V32, UNDEF, AUTO}</td>
<td>The wrong MODEM value was entered.</td>
</tr>
<tr>
<td>Invalid symbol: &lt;Flush Direction&gt; {Immed_Rel,To_MS, To_Net}</td>
<td>The flush direction field should indicate only one of the options shown.</td>
</tr>
</tbody>
</table>

---sheet 2 of 2---
MGWDIR commands

The Media GateWay (MGWDIR) directory is used to create a new MGW map level under PM. It is also used to access the MGW manual maintenance commands. You can access the MAPCI MGW level from the MAPCI PM level.

Accessing

Enter the following command syntax to access the MGWDIR.

>MAPCI;mtc;pm;post mgw

Example

Figure 2-117 shows an example of an MGWDIR display.

![MGWDIR display](image)

Figure 2-117
MGWDIR display

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Ins</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>Quit</td>
<td>PM</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>MGW</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ListSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>USERID</td>
<td>Time</td>
<td>17:03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Commands

Table 2-65 lists the commands supported by the MGW, along with their descriptions.
Table 2-65  
MAPCI MGW commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSY</td>
<td>Busy the posted MGW. Bsy Force is supported.</td>
</tr>
<tr>
<td>RTS</td>
<td>Return a Manb MGW to service.</td>
</tr>
<tr>
<td>OFFL</td>
<td>Offline the posted MGW.</td>
</tr>
<tr>
<td>QUERYPM</td>
<td>Returns information about the posted MGW. This information includes the H.248 version used to communicate with the MGW, the IP Address of the MGW and whether the MGW is registered.</td>
</tr>
<tr>
<td>DISP</td>
<td>Display MGWs by state.</td>
</tr>
<tr>
<td>LISTSET</td>
<td>List the currently posted set.</td>
</tr>
<tr>
<td>QUIT</td>
<td>Quit the MGW MAPCI level.</td>
</tr>
<tr>
<td>POST</td>
<td>Post displays information about the selected MGW. Matches the “post” command for any other PM.</td>
</tr>
<tr>
<td>NEXT</td>
<td>Display the next entry in the posted set. Matched the “next” command for any other PM.</td>
</tr>
</tbody>
</table>

**BSY command**

**Description**  
This command attempts to transition the posted MGW to a MANB state.

**Syntax**

```
>help bsy
Bsy: Busy the specified MGW
Parms: [<All> {All}]
[<Force> {Force}]
[<Nowait> {Nowait}]
```

**Parameters**  
Table 2-66 lists and defines the parameters for the BSY command.

Table 2-66  
BSY command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>{All}</td>
<td>Busy all MGWs in the posted set.</td>
</tr>
<tr>
<td>Force</td>
<td>{Force}</td>
<td>Force a MGW currently running calls out of service. This will cause all calls to be released.</td>
</tr>
</tbody>
</table>
### RTS command

#### Description

This command attempts to transition the posted MGW to an INSV state.

#### Syntax

```plaintext
>help rts
Rts: Return the specified MGW to service
Parms: [<All> {All}]
[<Nowait> {Nowait}]
```
Parameters

Table 2-67 lists and defines the parameters for the RTS command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>{All}</td>
<td>RTS all MGWs in the posted set.</td>
</tr>
<tr>
<td>Nowait</td>
<td>{Nowait}</td>
<td>Do not wait for a response from MAPCI before returning the prompt.</td>
</tr>
</tbody>
</table>

Example

Figure 2-119 shows an RTS command display example.

Figure 2-119
RTS command display

Offl command

This command attempts to transition the posted MGW to an OFFL state.

Syntax

>help offl
>Offl: Set specified MGW offline
Parms: [<All> {All}]
[<Nowait> {Nowait}]
Parameters

Table 2-68 lists and defines the parameters for the Offl command.

Table 2-68
Offl command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>{All}</td>
<td>RTS all MGWs in the posted set.</td>
</tr>
<tr>
<td>Nowait</td>
<td>{Nowait}</td>
<td>Do not wait for a response from MAPCI before returning the prompt.</td>
</tr>
</tbody>
</table>

Example

Figure 2-120 shows an Offl command display example.

Figure 2-120
Offl command display

QueryPM command

This command displays information about the posted PM.

Syntax

>help querypm
QueryPM: Query miscellaneous information about the specified MGW

Parameters

The QueryPM command has no parameters.
Example

Figure 2-121 shows a QueryPM command display example.

Figure 2-121
QueryPM command display

```
<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Lns</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Quit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ListSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Disp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Next</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>QueryPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>USERID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MGW 34 InSv

QueryPM
MID: ABCDE
Registered: Yes
H.248 protocol Version: 1
IP Address: 47.207.215.153
Port: 9857
Congestion Level: 0
Heartbeat Failure Count: 0
Deloading: Yes

USERID
Time 17:03 >
```

Disp command
This command displays a list of posted PMs that are in a specified maintenance state.

Syntax

```
>help disp
Disp: Display all PMs in specified PM state.
Parms: <Option> {STATE <state> (SysB, ManB, OffL, CBsy, ISTb, InSv)}
```

Parameters

Table 2-69 lists and defines the parameters for the Disp command.

Table 2-69
Disp command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>SysB, ManB, OffL, CBsy, ISTb, InSv</td>
<td>Display all PMs in specified PM state.</td>
</tr>
</tbody>
</table>
Example

Figure 2-122 shows a Disp command display example.

Figure 2-122
Disp command display

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Lns</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 Quit
2 Post_
3 ListSet

MGW 34 InSv
disp state insv

InSv MGW : 34

ListSet command

This command displays a list of PMs in the currently posted set.

Syntax

>help ListSet
List the contents of the post set
no parm - the current pm type on the screen
a pm type (i.e., MGW)
ALL - The entire post set

Parms: [<PARMS> {TM2, TM4, AT4, TM8, MTM, DCM, OAU, STM, T8A, TMA,
MMA, TAN, DES, LGC, DTC, LTC, SMR,
SMS, SMU, MSB7, RMM, IDTC, ILGC, LTC,
PTM, ADTC, PDTC, TDTC, TLGC, TLTC, ALGC, LIU7, PLGC, SPMS,
TMS, FP, AP, HSI2, DTCI, EIU, ICP, EXND, HSLR, ELIU, DTM,
DFI, HLRI, GSMP, NIU, CMT, SMA2, GPP, AIM, SVR7, MLIU, MGW, ALL}]

Example

Figure 2-123 shows a ListSet command display example.
Figure 2-123
ListSet command display

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Lns</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGW</td>
<td>0</td>
<td>Quit</td>
<td>PM</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>MGW</td>
<td>2</td>
<td>Post_</td>
<td>MGW</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>MGW</td>
<td>3</td>
<td>ListSet</td>
<td>MGW</td>
<td>34</td>
<td>InSv</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>5</td>
<td>ListSet</td>
<td>MGW</td>
<td>30, 40, 55.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>7</td>
<td>Bsy</td>
<td>ListSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>8</td>
<td>RTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>9</td>
<td>Offl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>10</td>
<td>Disp_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>11</td>
<td>Next</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGW</td>
<td>12</td>
<td>QueryPM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USERID</td>
<td>17</td>
<td>&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**POST command**
This command displays information about the selected MGW (or all).

**Syntax**

>help Post

**NEXT command**
This command displays the next entry in the posted set.

**Syntax**

>help Next

**QUIT command**
The Quit all command quits the MGW directory and returns the user to the CI level. To exit MGWDIR and return to the CI prompt, enter the following command and press return:

>quit all
PNPROCI is a MAPCI level that enables operating company personnel to access and change information regarding the Local Number Portability (LNP) feature.

The LNP feature implements number portability on the MSC for service providers. Local Number Portability enables a subscriber to retain their number when they change networks. The LNP feature supports the following:

- Service Number Portability (LNP for non-geographic numbers such as a free phone)
- Administrative query of ported numbers
- Facilitated provisioning for ported -in,-out, or -across service numbers

*Note:* The term ‘ported number’ is a general term used for directory number (DN) or service number.

**PNPROCI**

To access PNPROCI from the CI prompt, enter the following command and press return:

```
> PNPROCI
```

**QUIT**

To exit the PNPROCI level and return to CI, enter the following command and press return:

```
> QUIT
```

**Commands**

The PNPROCI provides the following commands to operating company personnel:

- **QPORT**—lists the ported numbers
- **ADDPOR**—adds or modifies the ported numbers
- **DELPOR**—deletes ported numbers
- **ADDNIC**—adds or modifies the NIC routing info
- **DELNIC**—deletes the NIC routing info
- **SHOWXLA**—displays the available XLASYS and XLANAME
- **OVE**—OVErrides the check for DELPORT/DELNIC commands
- **QUIT**—quits out of the Number Portability Provisioning
QPORT command

This command lists all ported numbers in a network (at the point of interconnect node) or in a switch (at a local node) based on the specified port type.

Syntax

The syntax for the QPORT command is:

\[
>\text{qport[} <\text{query type}> \{\text{PORTEDIN, PORTEDOUT, PORTEDACR, SERVICENO, NIC <Dxxx, x is 0 to 9> STRING, NUMBER <ported number / enter "$" for wildcard search> STRING, \} ALL}\}
[<\text{Display mode \{BRIEF\}> \{BRIEF\}]
\]

Parameters

Table 2-70 lists and describes the parameters applicable to the QPort command.

Table 2-70
QPORT command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORTEDIN</td>
<td>Indicates the numbers ported into the network.</td>
</tr>
<tr>
<td>PORTEDOUT</td>
<td>Indicates the numbers ported out of the network.</td>
</tr>
<tr>
<td>PORTEDACR</td>
<td>Indicates the numbers from other networks (not your own network).</td>
</tr>
<tr>
<td>SERVICENO</td>
<td>Indicates the numbers of a service provider</td>
</tr>
<tr>
<td>NIC</td>
<td>Indicates the network identification code (NIC)</td>
</tr>
<tr>
<td>NUMBER</td>
<td>Indicates a directory number.</td>
</tr>
<tr>
<td>ALL</td>
<td>Indicates all the ported types in the system including: PORTEDIN, PORTEDOUT, PORTEDACR, and SERVICENO.</td>
</tr>
<tr>
<td>Display mode</td>
<td>Indicates that the DN is displayed on the report.</td>
</tr>
</tbody>
</table>

Example

An example of the command follows.

\[
>\text{qport portedin}
\]

PORTED NUMBER: PORTEDTYPE NIC XLASYS XLANAME
------------------- -------------------
System responses

Table 2-71 provides the system responses sent regarding the QPort command.

### Table 2-71

**System responses regarding the QPORT command**

<table>
<thead>
<tr>
<th>Response</th>
<th>Explanation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARNING: Table PNSCRN is empty</td>
<td>Table PNSCRN has no tuple.</td>
<td>Add a tuple to table PNSCRN.</td>
</tr>
<tr>
<td>ERROR: NIC is a 4-digit of format Dxxx First digit for NIC must be a ‘D’</td>
<td>The first digit entered for the NIC must be a hex digit ‘D’.</td>
<td>Re-enter a NIC with format ‘Dxxx’ where x is a digit from 0 to 9.</td>
</tr>
<tr>
<td>ERROR: NIC is a 4-digit of format Dxxx</td>
<td>The NIC length must be 4.</td>
<td>Re-enter a NIC with format ‘Dxxx’ where x is a digit from 0 to 9.</td>
</tr>
<tr>
<td>ERROR: maximum length of the ported DN is 30.</td>
<td>The number entered is longer than 30 digits.</td>
<td>Re-enter the number less than or equal to 30 digits.</td>
</tr>
<tr>
<td>Invalid ported DN digits entered</td>
<td>The number entered is not a valid digit from 0 to 9.</td>
<td>Re-enter valid digits for the number.</td>
</tr>
<tr>
<td>Ported Number xxx is not found in table PNSCRN</td>
<td>The number entered is not a ported number.</td>
<td>Re-enter a number which has been ported.</td>
</tr>
</tbody>
</table>

**ADDPORT command**

ADDPORT adds or modifies a single ported number, or a range of ported numbers, to the attribute PRTINFO of table PNSCRN. A range of ported numbers is specified by the parameters fromD and toD. The directory numbers in the fromD and toD parameters must be the same length. For each DN in the range, a tuple is created and assigned the routing information.

ADDPORT writes the result in the journal file. A warning is prompted upon entering the ADDPORT command if the journal file is not available.
Syntax

The syntax for the ADDPORT command is:

```
>addport

Parms: <fromD> STRING
<toD> STRING
<prtinfo> {PORTEDIN <nic> STRING,
PORTEDOUT <nic> STRING,
PORTEDACR <nic> STRING,
SERVICENO <spic> STRING}
[<writemode{NOREPLACE/REPLACE}> {NOREPLACE,
REPLACE}]
```

Parameters

Table 2-72 lists and defines the parameters applicable to the ADDPort command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>fromD</td>
<td>STRING</td>
<td>A string of 1 to 30 digits representing the lower limit of the range. The length of the parameter fromD must be less than or equal to toD parameter.</td>
</tr>
<tr>
<td>toD</td>
<td>STRING</td>
<td>A string of 1 to 30 digits representing the upper limit of the range. The length of the parameter toD parameter must be greater than or equal to fromD parameter.</td>
</tr>
<tr>
<td>ported type</td>
<td>PORTEDIN</td>
<td>Indicates numbers that are ported into the network.</td>
</tr>
<tr>
<td></td>
<td>PORTEDOUT</td>
<td>Indicates numbers that are ported out of the network.</td>
</tr>
<tr>
<td></td>
<td>PORTEDACR</td>
<td>Indicates numbers that are ported from other networks (not your own network).</td>
</tr>
<tr>
<td></td>
<td>SERVICENO</td>
<td>Indicates numbers of a service provider.</td>
</tr>
<tr>
<td>NIC</td>
<td>D000 to D999</td>
<td>Indicates a network identification code.</td>
</tr>
<tr>
<td>writemode</td>
<td>NOREPLACE, REPLACE</td>
<td>Default is NOREPLACE. If REPLACE is specified, all tuples within the “from D to D” range that already exist are replaced with the specified attribute options. Operating company personnel are prompted to verify if REPLACE is defined.</td>
</tr>
</tbody>
</table>

Example

One example of the command follows.
>addport 5690 5695 portedin D008

**ADDPORT Summary**

<table>
<thead>
<tr>
<th>Ported numbers added</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ported numbers replaced</td>
<td>0</td>
</tr>
<tr>
<td>Last ported number datafilled</td>
<td>5695</td>
</tr>
<tr>
<td>Total number of tuples written to Journal file</td>
<td>6</td>
</tr>
</tbody>
</table>

*Note:* The display may vary slightly depending on the parameter used with the ADDPORT command.

**System responses**

Table 2-73 lists and defines the system responses sent regarding the ADDPort command.

<table>
<thead>
<tr>
<th>Response</th>
<th>Explanation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ported number xxxx is not found in table PNSCRN</td>
<td>The number entered is not a ported number. The xxxx is the number in question.</td>
<td>Re-enter a number that has been ported.</td>
</tr>
<tr>
<td>ERROR: maximum length of &lt;FieldName&gt; is 30.</td>
<td>The number entered for the field is longer than 30 digits.</td>
<td>Re-enter a number less than 30 digits.</td>
</tr>
<tr>
<td>Invalid &lt;FieldName&gt; digits entered Vector of up to 30 {0,1,2,3,4,5,6,7,8,9}'</td>
<td>The number entered in the field is not a digit from 0 to 9.</td>
<td>Re-enter a valid digit.</td>
</tr>
<tr>
<td>ERROR: fromD and toD digit strings must have the same digit length</td>
<td>The numbers entered for the fromD and toD field do not have the same length.</td>
<td>Re-enter a number with same digit length for both fromD and toD fields.</td>
</tr>
<tr>
<td>ERROR: fromD must be less than or equal to toD</td>
<td>The number entered for the fromD is greater than the toD field.</td>
<td>Re-enter a number for fromD that is less than or equal to the toD field.</td>
</tr>
<tr>
<td>ERROR: NIC is a 4-digit of format Dxxx. First digit for NIC must be a 'D'</td>
<td>The first digit entered for the NIC must be a hex digit 'D'.</td>
<td>Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.</td>
</tr>
<tr>
<td>ERROR: NIC is a 4-digit of format Dxxx</td>
<td>The NIC length must be 4.</td>
<td>Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.</td>
</tr>
</tbody>
</table>
DELPORT command

DELPORT deletes a single ported number or a range of ported numbers from the attribute PRTINFO of table PNSCRN. A range of ported numbers is specified by the parameters fromD and toD. The directory numbers in the fromD and toD parameters must be the same length.

DELPORT writes the result in the journal file. A warning is prompted upon entering the DELPORT command if the journal file is not available.

Syntax

The syntax for the DELPORT command is

```
>delport[fromD> STRING
<toD> STRING]
```

Parameters

Table 2-74 lists and defines the parameters applicable to the DELPort command.

Table 2-74
DELPORT command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>fromD</td>
<td>STRING</td>
<td>A string of 1 to 30 digits representing the lower limit of the range. The length of the parameter fromD must be less than or equal to toD parameter.</td>
</tr>
<tr>
<td>toD</td>
<td>STRING</td>
<td>A string of 1 to 30 digits representing the upper limit of the range. The length of the parameter toD parameter must be greater than or equal to fromD parameter.</td>
</tr>
</tbody>
</table>

Example

One example of the command follows.

```
>DELPORT 123 123
ENTER Y TO CONFIRM DELPORT OR N TO QUIT
Please confirm (“YES”, “Y”, “NO”, or “N”):
>y
DELPORT Summary
------------------
Ported numbers deleted 1
Number of tuples not updated 0
Last DN deleted 123
```
Total number of tuples written to Journal file     1

Note: The display may vary slightly depending on the parameter used with the ADDPORT command.

System responses
Table 2-75 lists and defines the system responses sent regarding the DELPort command.

Table 2-75
System responses to the DELPORT command

<table>
<thead>
<tr>
<th>Response</th>
<th>Explanation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR: maximum length of &lt;FieldName&gt; is 30.</td>
<td>The number entered for the field is longer than 30 digits.</td>
<td>Re-enter a number less than 30 digits.</td>
</tr>
<tr>
<td>Invalid &lt;FieldName&gt; digits entered Vector of up to 30 {0,1,2,3,4,5,6,7,8,9}'</td>
<td>The number entered in the field is not a digit from 0 to 9.</td>
<td>Re-enter a valid digit.</td>
</tr>
<tr>
<td>ERROR: fromD and toD digit strings must have the same digit length</td>
<td>The numbers entered for the fromD and toD field do not have the same length.</td>
<td>Re-enter a number with same digit length for both fromD and toD fields.</td>
</tr>
<tr>
<td>ERROR: fromD must be less than or equal to toD</td>
<td>The number entered for the fromD is greater than the toD field.</td>
<td>Re-enter a number for fromD, which is less than or equal to the toD field.</td>
</tr>
<tr>
<td>ENTER Y TO CONFIRM DELPORT OR N TO QUIT</td>
<td>Warning message displayed for the command.</td>
<td>Enter Y/yes to proceed or N/no to cancel the command.</td>
</tr>
</tbody>
</table>

ADDNIC command
This command adds or modifies the routing information associated with a Network Interface Card (NIC) in table PNINFO.

Syntax
The syntax for the ADDNIC command is:

```
>addnic<NIC> STRING
<<xlasys> {AC, PX, CT, FA, OFC, DN, AM,
```
FT, CC, NCS, CTY, NN, VPN)
<xlaname> STRING
<pfbilling> {NO, YES}
[<writemode{NOREPLACE/REPLACE}> {NOREPLACE, REPLACE}]

Parameters
Table 2-76 lists and defines the parameters for the ADDNIC command.

Table 2-76
ADDNIC command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIC</td>
<td>D000 to D999</td>
<td>Indicates the network identification code</td>
</tr>
<tr>
<td>XLASYS</td>
<td>Valid xlasy</td>
<td>Indicates the translation system</td>
</tr>
<tr>
<td>XLANAME</td>
<td>Valid xlaname</td>
<td>Indicates the translation name</td>
</tr>
<tr>
<td>PFBILLING</td>
<td>Yes/No</td>
<td>Indicates the billing record is prefixed with the NIC indication</td>
</tr>
<tr>
<td>WRITEMODE</td>
<td>noreplace/replace</td>
<td>Specifies the option to override the existing tuple</td>
</tr>
</tbody>
</table>

Example
>addnic d005 px ruaintl yes

TUPLE ADDED TO TABLE PNINFO SUCCESSFULLY

DELNIC command
This command removes the routing information associated with a NIC in table PNINFO. A warning message is printed since the NIC might be referenced by a tuple in table PNSCRN.

Syntax
The syntax for the DELNIC command is

>delnic
Parms: <NIC> STRING
Parameters

Table 2-77 lists and defines the DELNIC parameters.

Table 2-77
DELNIC parameter definition

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIC</td>
<td>D000 to D999</td>
<td>Network identification code</td>
</tr>
</tbody>
</table>

Example

>delnic d005
WARNING: TUPLE COULD BE REFERRED TO BY TABLE PNSCRN
TUPLE DELETED FROM TABLE PNINFO SUCCESSFULLY

SHOWXLA command

The command SHOWXLA displays the available translation systems (XLASYS) and translation names (XLANAME) in the switch. If the option ‘ALL’ is entered, the available XLASYS’s and their XLANAME’s are displayed.

Syntax

The syntax for the SHOWXLA command is:

>showxla<xlasys/all> {AC, PX, CT, FA, OFC, DN, AM, FT, CC, NSC, CTY, NN, VPN, all}

Parameters

Table 2-78 lists and describes the parameters for the SHOWXLA command.

Table 2-78
SHOWXLA parameter definitions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>xlasys</td>
<td>STRING</td>
<td>Indicates the translation system that all translation names belong to.</td>
</tr>
</tbody>
</table>
Table 2-78
SHOWXLA parameter definitions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>STRING</td>
<td>Indicates the system should show all xlasys in the node.</td>
</tr>
</tbody>
</table>

Example

```plaintext
>showxla fa
XLASYS: FA
XLANAME: RUAXLFA CRESXLFA STEPXLFA RUASPEC

>showxla all
XLASYS: AC
XLANAME: PTLOCAC REMPOTS
XLASYS: CT
XLANAME: STEPXLCT RUAXLCT CRESXLCT
XLASYS: FA
XLANAME: RUAXLFA CRESXLFA STEPXLFA RUASPEC
XLASYS: OFC
XLANAME: STEPXOFC RUAXOF CRESXOFC ODPXLOF1 ODPXLOF2 ODPXLOF4 ODPXLOF5
XLASYS: AM
XLANAME: FFWCAXLA
XLASYS: FT
XLANAME: LNPXLFT
XLASYS: NSC
XLANAME: 
```

**OVE command**

This command is used to override the checking of the DELPORT command.

**Syntax**

The syntax for the OVE command is:
Parameters
This command has no parameters.

Example
>ove

OVERRIDE mode ON. No confirmation prompt for the DELPORT/DELNIC commands.

QUIT command
This command is used to quit out of the Number Portability Provisioning.

Syntax
The syntax for the QUIT command is:

> PNPROCI
quit
Software Optionality Control (commonly known as SOC) provides one method of controlling software optionality in the MSC family of switches.

A major benefit of using SOC is that you control option functionality and resource usage on the MSC without changing software loads. Customers can choose specifically what functionality they require, allowing them to customize their switches to best suit their operations and subscriber requirements. Customers are provided with an expeditious delivery method of activating options that are built into their current Product Computing module Loads (PCL) at any time, without having to wait for a complete software reload, or even a switch restart.

SOC allows options to be purchased and activated for use. Options are enabled using a purchased password or key code. Nortel generates key codes on demand using a key code generator. Key codes are unique for each option on each switch. A set of SOC key codes can be applied to a switch, allowing the set of options corresponding to those key codes to be activated or used.

Two states are supported by the SOC Option, ON and IDLE as shown in Figure 1. The state of an option (IDLE or ON) may be changed directly by the customer, on site, causing the option’s component functionality to change state.

**Note:** Key codes are different for each option on each switch.

The Software Optionality Control (SOC) tool
- provides access to options that are not part of the standard base load, and
- enables the purchase and activation of different options

On the MSC, the SOC tool operates in the same manner as it does on other switches. The only difference is the MSC SOC tool accepts the GSM entries listed in Table 2-79.

<table>
<thead>
<tr>
<th>GSM option</th>
<th>Option order code</th>
<th>Option name on switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Change Capture</td>
<td>BASE0011</td>
<td>CO Data Chg Capture</td>
</tr>
<tr>
<td>Local Number Portability Database Query</td>
<td>GMB00180</td>
<td>GSB LNP DB Query</td>
</tr>
<tr>
<td>Calling Name Delivery</td>
<td>GMB00480</td>
<td>GMB CallingNameDelivery</td>
</tr>
</tbody>
</table>
Table 2-79
GSM SOC entries

<table>
<thead>
<tr>
<th>GSM option</th>
<th>Option order code</th>
<th>Option name on switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension Services</td>
<td>GMSP0408</td>
<td>Extension Services</td>
</tr>
<tr>
<td>INAP DP3</td>
<td>GSM00068</td>
<td>IN DP3</td>
</tr>
<tr>
<td>INAP DP12</td>
<td>GSM00080</td>
<td>IN DP12 and T-BCSM I/W</td>
</tr>
<tr>
<td>INAP DP2</td>
<td>GSM00088</td>
<td>IN DP2</td>
</tr>
<tr>
<td>INAP DP2 T</td>
<td>GSM00098</td>
<td>IN DP2T</td>
</tr>
<tr>
<td>Accelerate Call Forwarding No Reply (CFNRY) Call Termination</td>
<td>GSM00101</td>
<td>CF NO RCT GSM10</td>
</tr>
<tr>
<td>Explicit Call Transfer (ECT) Fraud Control</td>
<td>GSM00102</td>
<td>EXPLICIT CALL -GSM10</td>
</tr>
<tr>
<td>Mobile Unstructured Supplementary Service Date (USSD) Billing Zone Query (BZQ)</td>
<td>GSM00110</td>
<td>Mobile USSD Billing Zone</td>
</tr>
<tr>
<td>Anonymous Call Rejection (ACRJ)</td>
<td>GSM00111</td>
<td>Anonymous Call Reject</td>
</tr>
<tr>
<td>GSM Support of Optimal routing</td>
<td>GSM00112</td>
<td>Optimal Routing</td>
</tr>
<tr>
<td>iDEN Plus Dialing, Endeavor mobile sets</td>
<td>GSM00113</td>
<td>iDEN Plus Dialing</td>
</tr>
<tr>
<td>MMU Capability</td>
<td>GSM00114</td>
<td>Support for MMU</td>
</tr>
<tr>
<td>FG IN DP-CF</td>
<td>GSM00115</td>
<td>FG IN DP-CF</td>
</tr>
<tr>
<td>Network AOC</td>
<td>GSM00116</td>
<td>Network AOC</td>
</tr>
<tr>
<td>SSF enhance for MO SMS</td>
<td>GSM00117</td>
<td>SSF enhance for MO SMS</td>
</tr>
<tr>
<td>CALEA subject-initiated signaling</td>
<td>GSM00137</td>
<td>Subject initiated dialing</td>
</tr>
<tr>
<td>CALEA network signaling</td>
<td>GSM00138</td>
<td>In/out band signaling</td>
</tr>
<tr>
<td>Multiple MCC/MNC</td>
<td>GSSM0001</td>
<td>Multiple MNC</td>
</tr>
<tr>
<td>SSP Location Trigger</td>
<td>GSSM0003</td>
<td>SSP Location Trigger</td>
</tr>
<tr>
<td>DMS-MSC Ericsson</td>
<td>GSSM0004</td>
<td>DMS-MSC/Ericsson</td>
</tr>
<tr>
<td>V.42 bits Data Compression</td>
<td>GSSM0005</td>
<td>V42 bits Data Compr</td>
</tr>
<tr>
<td>14.4 Kbps Data Rate</td>
<td>GSSM0006</td>
<td>144kbps Data Rate</td>
</tr>
<tr>
<td>MIP V3 UIT (Universal IWF Trunk) Trunk</td>
<td>GSSM0007</td>
<td>MIPV3 UIT Trunk</td>
</tr>
</tbody>
</table>
Table 2-79
GSM SOC entries

<table>
<thead>
<tr>
<th>GSM option</th>
<th>Option order code</th>
<th>Option name on switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel CFU Limit</td>
<td>GSMM0008</td>
<td>Parallel CFU Limit</td>
</tr>
<tr>
<td>ISP7 Hop Counter</td>
<td>ISP70002</td>
<td>ISP7 Hop Counter</td>
</tr>
<tr>
<td>GSM Off-board IN Provisioning</td>
<td>OBIN0001</td>
<td>OffBoard IN Routing</td>
</tr>
<tr>
<td>STP Integration</td>
<td>STPE0300</td>
<td>STP Integration</td>
</tr>
<tr>
<td>Supercharger</td>
<td>SUPR0001</td>
<td>Supercharger</td>
</tr>
<tr>
<td>CCS7 Channelized Access</td>
<td>TEL00002</td>
<td>C7 Channelized Access</td>
</tr>
<tr>
<td>CCS7 Routeset Increment</td>
<td>TEL00004</td>
<td>C7 Routeset Increment</td>
</tr>
<tr>
<td>CCS7 Link Fault Locator</td>
<td>TEL00007</td>
<td>C7 Link Flt. Locator</td>
</tr>
<tr>
<td>CCS7 Network Integrity</td>
<td>TEL00009</td>
<td>C7 Network Integrity items</td>
</tr>
</tbody>
</table>

Note: For more information on how to use the SOC tool, refer to NTP Software Optionality Control Users Manual, 297-8991-901.

Accessing SOC
To access the SOC directory and commands, type the SOC command at the CI prompt and press return. The SOC command prompt displays:

  >SOC

  SOC:

Commands
The SOC command uses the following subcommands:
- ASSIGN
- DBAUDIT
- QUIT
- REMOVE
- SELECT
- SOCDEBUG
- VALIDATE
- SCINFO
- ASSIGN LIMIT
**Note:** For a complete list of SOC commands, refer to NTP *Software Optionality Control Users Manual*, 297-8991-901.

**ASSIGN command**

This command enables the user to assign a new state or a right-to-use to a named option.

**Syntax**

The syntax for the ASSIGN command is:

```
>ASSIGN <Action> {STATE <State> {IDLE, ON} <To> {TO} <Option> STRING, RTU <KeyCode> STRING <To> {TO} <Option> STRING, KEYS <From> {FROM} <filename> {FILE, (otherwise) [<Device> STRING]}, LIMIT <Limit> STRING <KeyCode> STRING <To> {TO} <Option> STRING, THRESHOLD <Threshold> {-2147483648 TO 2147483647} [<ThreshType> {ABSOLUTE, PERCENT}] <To> {TO} <Option> STRING}
```

**Parameters**

Table 2-80 shows the parameters for the ASSIGN command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>N/A</td>
<td>A value of &quot;STATE&quot; indicates that this is a request to change the state of an option.</td>
</tr>
<tr>
<td>&lt;state&gt;</td>
<td>IDLE</td>
<td>Indicates the feature is OFF.</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>Indicates this feature is activated.</td>
</tr>
<tr>
<td>&lt;option order code&gt;</td>
<td>CNAM0001</td>
<td>Identifies the Nortel-defined order code, used to identify options.</td>
</tr>
</tbody>
</table>

---

**Example**

```
>assign state on to GSMR0151
Done
```
(No action required; option was already ON)

>assign state on to GSMR0152
Right to use not granted

Set the RTU to ON before changing the State to ON.

Using the ASSIGN STATE command the operator can change the state of SOC Parallel CFVLR Limit.

SOC:
   >ASSIGN STATE ON TO GSM01814

When the SOC is in the ON state, CFVLR fraud control is fully activated and the operator can change the value of office parameter Max_Parallel_CFVLR_Calls.

Operator can deactivate the CFVLR fraud control feature by changing the state of SOC to IDLE state.

   >ASSIGN STATE IDLE TO GSM01814

When the SOC is in the IDLE state, any attempt to change the office parameter Max_Parallel_CFVLR_Calls results in the following warning message on the switch,

************* WARNING *************
the attempt to change the office parm is not allowed

DBAUDIT command
This command performs an audit of SOC data and reports any inconsistencies.

Syntax
The syntax for the DBAUDIT command is:

>dbaudit

QUIT command
This command quits the SOC utility.

Syntax
The syntax for the QUIT command is:

>quit
**REMOVE command**

This command removes the right-to-use from a state-controlled option.

**Syntax**

The syntax for the REMOVE command is:

```
>remove<Action> {RTU}
<KeyCode> STRING
<From> {FROM}
<Option> STRING
```

**SELECT command**

This command displays information about a SOC option.

**Syntax**

The syntax for the SELECT command is:

```
>select <SelType> {ALL [<RptType> {BRIEF, VERBOSE, PACK}],
OPTION <OrderCode> STRING
[<RptType> {BRIEF, VERBOSE}],
NAME <OptName> STRING
[<RptType> {BRIEF, VERBOSE}],
STATE <State> {IDLE, ON, ERR, ALL}
[<RptType> {BRIEF, VERBOSE}],
RTU <RTU status> {YES, NO, Y, N}
[<RptType> {BRIEF, VERBOSE}],
USAGE <Usage> {ALL, ZERO, NONZERO, OVER_THRESHOLD}
[<RptType> {BRIEF, VERBOSE}],
GROUP <Group> STRING
[<RptType> {BRIEF, VERBOSE}]
```

**SOCDEBUG command**

This command enters SOC debug utility.

*Note:* This command is intended for NT Field Support use only.

**Syntax**

The syntax for the SOCDEBUG command is:

```
>socdebug
```

**VALIDATE command**

This command tests whether the specified state transition will succeed.
Syntax

The syntax for the VALIDATE command is:

>validate<Option> STRING
<State> {IDLE, ON}

SCINFO command

The SCINFO command aids the Craftsperson with managing the Combined MSC/HLR Subscriber Capacity feature. The command is only available in Combined MSC/HLR loads (to which the Subscriber Capacity feature is applicable). The command displays information relating to the Subscriber Capacity feature.

Syntax

The syntax for the SCINFO command is:

>SCINFO

Response

The following information is displayed when SCINFO is entered at the command prompt:

SOC option GSM01802 usage limit: <value>
SOC option GSM01802 usage: <value>
Number of HLR subscribers: <value>
Value of GSLR_MAX_THOU_SUBSCRIBERS: <value>
HLR hard subscriber limit (in 1000s): <value>
Number of VLR subscribers: <value>
Value of MAX_SUBSCRIBERS_IN_VLR: <value>
VLR hard subscriber limit (in 1024s): <value>

Explanation

Line 1 Displays the usage limit for SOC option GSM01802.

When referring to HLR subscribers the usage limit is in units of 1000.

When referring to VLR subscribers the usage limit is in units of 1024.

Line 2 Displays the current usage for SOC option GSM01802. The usage is calculated as follows: 1) Divide the total number of HLR subscribers by 1000; 2) Divide the total number of VLR subscribers by 1024; 3) Take the larger of the two results and the usage is the whole part of the number.
Line 3  Displays the number of HLR subscribers in the HLR database.

Line 4  Displays the value of the office parameter GHLR_MAX_THOU_SUBSCRIBERS.

Line 5  Displays the value of the HLR hard subscriber limit in units of 1000.

Line 6  Displays the number of VLR subscribers currently supported by the VLR.

Line 7  Displays the value of the office parameter MAX_SUBSCRIBERS_IN_VLR.

Line 8  Displays the value of the VLR hard subscriber limit in units of 1024.

**System action**

None

**User action**

If the SOC usage is greater than the SOC usage limit, an inconsistency has occurred. The SOC usage limit has been decreased but there were more subscribers than the new usage limit. To avoid SOC audit logs reporting that the usage exceeds the usage limit, change the usage limit back to its original value. This will be the same value as the HLR and VLR hard subscriber limit values (the hard subscriber limits are not changed if the SOC usage limit is decreased and an inconsistency occurs).

**Notes**

The command is only available in Combined MSC/HLR loads. It is not recognized in non-combined MSC/HLR loads.

**Example**

Following is an example of entering SCINFO at a CI prompt:

SOC option GSM01802 usage limit: 50  
SOC option GSM01802 usage: 41  
Number of HLR subscribers: 41345  
Value of GHLR_MAX_THOU_SUBSCRIBERS: 46  
HLR hard subscriber limit (in 1000s): 50  
Number of VLR subscribers: 22784
Value of MAX_SUBSCRIBERS_IN_VLR: 48
VLR hard subscriber limit (in 1024s): 50

ASSIGN LIMIT command
The ASSIGN LIMIT command is an existing Software Optionality Control (SOC) command. When the command is used in conjunction with SOC option GSM01802, additional information to the normal SOC responses is provided to the user.

Syntax
>`ASSIGN LIMIT`

Parameters
None

Response
When using the ASSIGN LIMIT command with SOC option GSM01802 one of the following responses is provided depending on the setting of the SOC usage limit (in addition to normal SOC responses):

SOC usage limit = 20 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 20K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit = 50 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 50K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit = 100 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 100K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit =200:
The HLR/VLR Subscriber Capacity has been changed to the maximum number of subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit decreased but the number of HLR/VLR subscribers exceeds the usage limit.

WARNING: The new usage limit is less than the number of HLR/VLR subscribers. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

SOC usage limit is not 20, 50, 100 or 200:

WARNING: Invalid usage limit for SOC option GSM01802. Valid usage limit values are 20, 50, 100, 200. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

**Explanation**
The first four responses confirm the setting of the subscriber limit via SOC option GSM01802 under normal circumstances.

The fifth and sixth responses highlight a problem with the new usage limit.

**System action**
None

**User action**
For the first four responses no action is required - response is for information purposes only.

For the fifth and sixth responses, the old usage limit should be restored as instructed.

**Example**
Setting the SOC usage limit to 50 and the number of HLR/VLR subscribers does not exceed the usage limit:

```
> soc
SOC:
> assign limit 50 A65HKE3E4JL25C5DGH9W to GSM01802
```
Done.
The HLR/VLR Subscriber Capacity has been changed to 50K subscribers.
Type SCINFO to view Subscriber Capacity information.

Setting the SOC usage limit to 200:

> soc
SOC:
> assign limit 200 R85HKM3E4JL43C58GH1A to GSM01802
Done.
The HLR/VLR Subscriber Capacity has been changed to the maximum
number of subscribers. Type SCINFO to view Subscriber Capacity
information.

Setting the SOC usage limit to 50 but there are greater than 50000 HLR
subscribers:

> soc
SOC:
> assign limit 50 A65HKE3E4JL25C5DGH9W to GSM01802
Done.
WARNING: The new usage limit is less than the number of HLR/VLR
subscribers. The HLR/VLR subscriber capacity has NOT been changed to
use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

Setting the SOC usage limit to 41 (unexpected usage limit):

> soc
SOC:
> assign limit 41 G27HKH9E4JP45C5FDH1T to GSM01802
Done.
WARNING: Invalid usage limit for SOC option GSM01802. Valid usage
limit values are 20, 50, 100, 200. The HLR/VLR subscriber capacity has
NOT been changed to use the new usage limit. PLEASE RESTORE THE
OLD USAGE LIMIT.
The MUV_AUDIT directory includes the MCSI parameter in the subcommand START.

**START command**

This feature modifies the START command to kick start the audit process for MCSI.

**Syntax**

The syntax for the START command is:

```
>start <mmuquota>, <mcsi>
```

**Parameters**

Table 2-81 lists and describes the parameters for the START command.

**Table 2-81**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMUQUOTA</td>
<td>258</td>
<td>MSGTYPE</td>
</tr>
<tr>
<td>MCSI</td>
<td>14</td>
<td>TUPLE_TYPE</td>
</tr>
</tbody>
</table>
PROGDIR tool accommodates the LOGPSTRACE, MAKEGCDR, PARMFIND, FINDOM, and QGSMVLR commands.

LOGPSTRACE command

LOGPSTRACE is a PROGDIR command. LOGPSTRACE manages the Logging Enhancements display data. It controls the Logging Enhancements functionality and also sets the level of procedure traceback.

Accessing LOGPSTRACE

To access LOGPSTRACE, enter the following command:

CI:
>LOGPSTRACE

Exiting LOGPSTRACE

To exit the LOGPSTRACE tool and return to the CI level, enter the following command and press Return:

>QUIT

Syntax

The syntax for the LOGPSTRACE command is:

LOGPSTRACE ON
LOGPSTRACE OFF
LOGPSTRACE SETLEVEL <LEVEL_COUNT>
LOGPSTRACE STATUS

Parameters

Table 2-82 lists and describes the parameters applicable to LOGPSTRACE.

Table 2-82
LOGPSTRACE parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON/OFF</td>
<td>NONE</td>
<td>Switch the Log PS Traceback functionality on/off.</td>
</tr>
<tr>
<td>STATUS</td>
<td>NONE</td>
<td>Display status of the Log PS Traceback functionality.</td>
</tr>
<tr>
<td>SETLEVEL</td>
<td>INTEGER 0&lt;=x&lt;=4</td>
<td>Set the display procedure name as the number of levels above the original procedure where the error actually occurred.</td>
</tr>
</tbody>
</table>
Responses

LOGPSTTRACE ON

The Log PS Traceback functionality is switched ON. GMSC system failure logs generated after this command is executed have the origination point information associated with it.

When LOGPSTTRACE is already off:

PS Capturing enabled for INFO logs

When LOGPSTTRACE is on:

No change in status. Functionality already on.

LOGPSTRACTE OFF

The Log PS Traceback functionality is switched OFF. No origination point information of the log will be there the with GSMC system failure logs which are generated after this command is executed. Display of earlier generated GMSC system failure logs (which were generated with Log PS Traceback functionality on) have the origination point information associated with it.

When LOGPSTTRACE is on:

PS Capturing disabled for INFO logs

When LOGPSTTRACE is off:

No change in status. Functionality already OFF.

LOGPSTTRACE SETLEVEL <LEVEL_COUNT>

The display level count is set to the user given value. In GMSC system failure logs generated after this command is executed, the displayed procedure address is not the exact place where the error occurred, but <level_count> procedures above it in a traceback. The level command is valued only for RC=0.

When tool is on and current set level_count not equal to the parameter value:

Display level set to <level_count>

When tool is off:

Display level set to <level_count>

***PS Capturing is disabled for INFO logs. Level count change has no effect until the tool is switched ON.***

No change in status. Functionality already OFF.
LOGPSTRACE STATUS

The current status of the tool is displayed.

PS Capturing for INFO logs - Enabled/Disabled
Level Count - <level_count>

MAKEGCDR command

MAKEGCDR is a PROGDIR command. MAKEGCDR is used to generate GSM billing without any calls being made. The records generated by MAKEGCDR are processed and written to the active file for the GSM data stream along with all other call processing generated call records. To distinguish records produced by the MAKEGCDR from other records, the MAKEGCDR-generated records are marked as TEST CALL.

The MAKEGCDR command is used to generate GSM billing records without using any physical facility. The billing records are processed and written to the active file for the GSM data stream with all other GSM records. The records produced by the CI command can be distinguished from other GSM records by examining the study indicator field.

CAUTION

Perform this task during low traffic periods.
The MAKEGCDR command should be issued during low traffic periods to avoid unnecessary real-time impact.

Accessing MAKEGCDR

To access MAKEGCDR, enter the following command:

CI:
>PROGDIR:
>MAKEGCDR

Exiting MAKEGCDR

To exit the MAKEGCDR tool and return to the CI level, enter the following command and press Return:

>QUIT

Syntax

To generate a billing record without making a call, enter a MAKEGCDR command at the CI prompt and press Return. The syntax for the MAKEGCDR command is:

MAKEGCDR<call_code> {1 to 6, 15}
[<quantity> {1 to 100}]
SC{1 to 6}
MC{1 to 6}
<mc_quantity> {1 to 100}

**ATTENTION**
Perform this task during low traffic periods. Issue the MAKEGCDR command during low traffic periods to avoid unnecessary real-time impact.

**Example**
An example of the switch output follows:

CI:
>imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpcl7bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>MAKEGCDR
Next par is: <CALL CODE> {1 TO 17}
Enter: <CALL CODE> [<QUANTITY>] [<STREAM>] [<STRUCTURE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>]
Parameters

Table 2-83 lists and describes the parameters applicable to MAKEGCDR.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>call_code</td>
<td>Mandatory</td>
<td>Determines the call code output in the GSM billing record. Enter a value from 1 to 6, or 15, where: 1 means mobile originated call, 2 means mobile terminated call, 3 means location updating, 4 means supplementary services, 5 means SMS mobile origination, 6 means SMS mobile termination, 15 means common equipment usage records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> At this time, SMS mobile originations and terminations are not supported.</td>
</tr>
<tr>
<td>quantity</td>
<td>Optional</td>
<td>Allows the operating company personnel to specify how many records are to be produced. Values from 1 to 100 can be entered. Default value is 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> If the user enters more than 100, a default value of 1 is given.</td>
</tr>
<tr>
<td>stream</td>
<td>Optional</td>
<td>Defines the stream for the GSM billing record.</td>
</tr>
<tr>
<td>structure code</td>
<td>Optional</td>
<td>Allows the operating company personnel to specify the structure code to be produced. Default value depends on the call code. Enter a value from 1 to 6, or 19, where: 1 means location updating, 2 means mobile originated, 3 means mobile terminated, 4 means SMS mobile origination, 5 means SMS mobile termination, 6 means supplementary services, 19 means common equipment usage records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> At this time, SMS mobile originations and terminations are not supported.</td>
</tr>
</tbody>
</table>
### Table 2-83
MAKEGCDR parameters (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>module code</td>
<td>Optional</td>
<td>Allows the operating company personnel to specify the module code(s) to be appended to this record.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enter a value from 1 to 6, where:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 means AT specific information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 means bearer services information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 means location and channel information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 means location information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 means supplementary services information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 means teleservices information</td>
</tr>
</tbody>
</table>

---

**Example output**

An example of a query performed on the MAKEGCDR command follows.

```
>Q MAKEGCDR
THE MAKEGCDR COMMAND IS USED TO GENERATE GSM BILLING RECORDS WITHOUT USING ANY PHYSICAL FACILITY. THE BILLING RECORDS ARE PROCESSED AND WRITTEN TO THE ACTIVE FILE FOR THE GSM DATA STREAM WITH ALL OTHER GSM RECORDS. THE RECORDS PRODUCED BY THE CI COMMAND CAN BE DISTINGUISHED FROM OTHER GSM RECORDS BY EXAMINING THE STUDY INDICATOR FIELD.

Parms: <CALL CODE> {1 TO 15}
[<QUANTITY> {1 to 100}]
[<STRUCTURE_CODE> {SC <STRUCT_CODE> {1 TO 19}}]
[<MODULE_CODE> {MC <MODULE_CODE> {1 TO 17}]
[<MCI_QUANTITY> {1 TO 100}]]
[<MODULE_CODE> {MC <MODULE_CODE> {1 TO 17}]
[<MCI_QUANTITY> {1 TO 100}]]
[<MODULE_CODE> {MC <MODULE_CODE> {1 TO 17}]
[<MCI_QUANTITY> {1 TO 100}]]
[<MODULE_CODE> {MC <MODULE_CODE> {1 TO 17}]
[<MCI_QUANTITY> {1 TO 100}]]
[<MODULE_CODE> {MC <MODULE_CODE> {1 TO 17}]
[<MCI_QUANTITY> {1 TO 100}]]
```

---
Example commands

The following MAKEGCDR command produces 10 GSM records for call code 003 (location updating).

>MAKEGCDR 3 10

The next command produces 15 GSM records for call code 2 (a mobile terminated call) with structure code of 3 (location updating).

>MAKEGCDR 2 15 SC 3

The next command produces 5 GSM records for call code 2 (a mobile terminated call) with structure code of 3 (mobile terminated), and a module code of 2 (bearer services information).

>MAKEGCDR 2 5 SC 3 MC 2

The last command produces 20 GSM records for call code 15 with structure code of 19 (common equipment usage records). The module code 6 (teleservice information) is appended to these records.

>MAKEGCDR 15 20 SC 19 MC 6

Error messages

Table 2-84 lists and describes the error messages produced by the MAKEGCDR command.

Table 2-84
MAKEGCDR error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invalid call code</td>
<td>An invalid call code was supplied. Enter a valid call code from 1 to 6 or 15.</td>
</tr>
<tr>
<td>Out of range: &lt;CALL CODE&gt;</td>
<td></td>
</tr>
<tr>
<td>{1 to 6, 15}</td>
<td></td>
</tr>
<tr>
<td>Enter: &lt;CALL CODE&gt;</td>
<td></td>
</tr>
<tr>
<td>[QUANTITY&gt;]</td>
<td></td>
</tr>
<tr>
<td>[&lt;STRUCTURE CODE&gt;]</td>
<td></td>
</tr>
<tr>
<td>[&lt;MODULE CODE&gt;]</td>
<td></td>
</tr>
<tr>
<td>[&lt;MODULE CODE&gt;]</td>
<td></td>
</tr>
<tr>
<td>[&lt;MODULE CODE&gt;]</td>
<td></td>
</tr>
<tr>
<td>[&lt;MODULE CODE&gt;]</td>
<td></td>
</tr>
<tr>
<td>6}</td>
<td></td>
</tr>
<tr>
<td>Call code n is not</td>
<td>A non-supported call code (5 or 6) was entered. Re-enter the command with a</td>
</tr>
<tr>
<td>supported yet.</td>
<td>valid call code from 1 to 6 or 15.</td>
</tr>
<tr>
<td>Invalid structure code</td>
<td>An invalid structure code was supplied. Enter a valid structure code from 1</td>
</tr>
<tr>
<td>specified.</td>
<td>to 6.</td>
</tr>
<tr>
<td>Error</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td></td>
</tr>
</tbody>
</table>
| Module code out of range  
Out of range: <MODULE CODE> {1 to 6}  
Enter: <MODULE CODE>  
[MC_QUANTITY>]  
[<MODULE CODE>]  
[<MODULE CODE>]  
[<MODULE CODE>] |
| Description |
| An invalid module code was supplied. Enter a valid module code from 1 to 6. |

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure code m is incompatible with call code n.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>An invalid structure code was supplied for the provided call code. Re-enter the command with a valid structure code.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module code m is incompatible with call code n.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>An invalid module code was supplied for the provided structure code. Re-enter the command with a valid structure code.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>An invalid quantity number has been supplied.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>For informational purposes only. The default quantity number 1 is used to generate the record.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command abort. Module code m only allowed n record(s).</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>The module code specified exceeds the maximum limit. Re-enter the command with a valid quantity of module code.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>A GSM billing PRU block is required to produce the requested record, but there is none available. n billing records generated.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>An attempt was made to generate a billing record and there was no PRU available at the time. Try again at a later time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>A GSM billing M(X)RU is required to produce the requested record, but there is none available.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>An attempt was made to generate a billing record and there was no PRU available at the time. Try again at a later time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested module codes exceeded 1K buffer limit. Exceeded portion not appended.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>For informational purposes only.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command aborted. Mandatory parameter error.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>An attempt was made to enter the command and the user aborted at the quantity field.</td>
</tr>
</tbody>
</table>
CI:
> imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpc17bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>q MAKEGCDR

Parms: <CALL CODE> {1 TO 17}
[<QUANTITY> {0 TO 100}]
[<STREAM> {0 TO 1}]
[<STRUCTURE CODE> {SC <STRUCT_CODE> {1 TO 21}}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]
[<MODULE CODE> {MC <MODULE_CODE> {1 TO 28}}]
[<MCI_QUANTITY> {1 TO 100}]

Error description
The following example shows the MAKGCDR error messages and switch output.

Invalid call code
Out of range: <CALL CODE> {1 to 6, 15}
Enter: <CALL CODE> [QUANTITY]
[<STRUCTURE CODE>]
[<MODULE CODE>]
[<MODULE CODE>]
[<MODULE CODE>]
6}
Switch output

The following example shows the switch output:

```bash
>MAKEGCDR 0 0 sc 0 mc 6
Out of range: <CALL CODE> {1 TO 17}
Enter: <CALL CODE> [<QUANTITY>] [<STREAM> [<STRUCTURE CODE>]] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>]
```

PARMFIND command

The PARMFIND command provides an interface to search through office tables to locate office parameters. The search displays all the office parameters of which the searched string is a part. The tool uses a search logic to locate the tuples in the following office tables:

- OFCVAR (common to MSC and HLR)
- OFCENG (common to MSC and HLR)
- OFCSTD (common to MSC and HLR)
- OFCAUT (common to MSC and HLR)
- OFCOPT (common to MSC and HLR)
- GMMUENG (specific to MSC)
- GSMVAR (specific to MSC)
- GHLRPARM (specific to HLR)
- GHLRDFLT (specific to HLR)

Syntax

To access this command use the following syntax:

```bash
>PARMFIND <string_to_be_searched>
```

Help section for PARMFIND

Typing PARMFIND <any_string> at the CI prompt gives a brief description on the tool. Figure 2-124 provides an example output for the help command.
>help PARMFIND

Usage:
    PARMFIND <string_to_be_searched>

Description:
    This tool searches for <string_to_be_searched> in the following office tables.
    OFCVAR OFCENG (common to MSC and HLR)
    OFCSTD OFCOPT (common to MSC and HLR)
    OFCAUT (common to MSC and HLR)
    GSMUENG GSMVAR (specific to MSC)
    GHLRPARM GHLRDFLT (specific to HLR)

The output comes in the following format
TABLE PARAMETER_NAME VALUE
----- -------------- -----

where VALUE will be the PARAMETER Value in TABLE.

Parameters

Table 2-85 provides PARMFIND parameters and their descriptions.

Table 2-85
PARMFIND parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRING</td>
<td>any string</td>
<td>string to be searched in the office tables</td>
</tr>
</tbody>
</table>

Example

Figure 2-125 provides an example of PARMFIND output. Figure 2-126 provides an example of PARMFIND output when no results are returned.
Figure 2-125
PARMFIND output

```plaintext
>parmfind audit
TABLE_NAME            TUPLE
---------- ---------------------------
OFCVAR    ATTACHED_MOBILE_AUDIT 52
OFCVAR    DETACHED_MOBILE_AUDIT 0
OFCVAR    ESRK_POOL_AUDIT_INTERVAL 300
OFCVAR    GPP_AUDIT_INTERVAL 0 0
OFCVAR    GSM_LIDBQ_ACG_AUDIT_TIME 30
OFCVAR    GSM_LNP_ACG_AUDIT_TIME 30
OFCVAR    GSM_TF_ACG_AUDIT_TIME 30
OFCVAR    IWF_Audit_PERIOD 0
OFCVAR    SCREEN_AUDIT_PERIOD 0
OFCVAR    VLR_MOBILE_AUDIT_PERIOD 24
OFCENG    CIRCUIT_QUERY_AUDIT_START_TIME 2 0
OFCENG    DIRP_PFILE_AUDIT N 3 30
OFCENG    FTRQAUDIT 10
OFCENG    MASCN_AUDIT -1
OFCENG    ST_AUDIT_START_TIME 2 30
OFCENG    TRK_MEMSEL_AUDIT_TIME 0
Do you want to see more entries?
Please confirm ("YES", "Y", "NO", or "N"):
>y
TABLE_NAME            TUPLE
---------- ---------------------------
OFCSTD    AUDIT_INTERVAL 15
```

Figure 2-126
PARMFIND output - no results

```plaintext
>PARMFIND
Next par is: <Search String> STRING
Enter: <Search String>
>asdf
No entries found matching "ASDF"
```

Responses

Do you want to see more entries?
Please confirm ("YES", "Y", "NO", or "N"):

Explanation

Whenever the number of tuples found for the given string is more than 15, a response asks if there are more tuples to be seen. If the answer is yes, then the next 15 tuples are displayed. This continues until either all the tuples are completed or the display process is stopped.
System action
If y is entered then the next 15 tuples display. If n is entered, then the tool quits.

User action
Enter y to see more tuples or n to quit.

**No entries found**

Explanation
No entries found matching the string in any of the office tables searched.

System action
Quits the tool.

User action:
Search with another option.

FINDOM command
The FINDOM command locates, lists, and prints all the registers and OM group names which contain the string to be searched. The search displays all the OM groups and the registers in MSC, HLR and trinode configuration.

Syntax
To access this command use the following syntax:

> FINDOM <string_to_be_searched>

Help section for FINDOM
Typing FINDOM <any_string> at the CI prompt gives a brief description on the tool. Figure 2-127 provides an example output for the help command.

Figure 2-127
FINDOM Help example

> help findom

FINDOM command
-------------
Finds all OMs which contain the specific set of characters.

The parameter is:
<OM NAME> part of an OM name or the whole OM name.

Parms: <om name> STRING
Parameters

Table 2-86 provides FINDOM parameters and their descriptions

Table 2-86
FINDOM parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRING</td>
<td>any string</td>
<td>string to be searched in the OM group_names table and in register names.</td>
</tr>
</tbody>
</table>

Example

Figure 2-128 provides an example of FINDOM output. Figure 2-129 provides an example of FINDOM output when no results are returned.
Figure 2-128
FINDOM output

```
>findom ssc

<table>
<thead>
<tr>
<th>OMRGP: TRK2NET2</th>
<th>OMFIELD: THIS OMRGP IS NOT DEFINED/ACTIVATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMRGP: TRK2NET1</td>
<td>OMFIELD: THIS OMRGP IS NOT DEFINED/ACTIVATED</td>
</tr>
<tr>
<td>OMRGP: LMD</td>
<td>OMFIELD: THIS OMRGP IS NOT DEFINED/ACTIVATED</td>
</tr>
<tr>
<td>OMRGP: LMSCPUST</td>
<td>OMREG: LMSSCHED</td>
</tr>
<tr>
<td>OMRGP: CPUSTAT</td>
<td>OMREG: CPSSCHED</td>
</tr>
<tr>
<td>OMRGP: XASTAT</td>
<td>OMREG: XASSCHED</td>
</tr>
<tr>
<td>OMRGP: C7SCCP</td>
<td>OMREG: C7RTFSSC</td>
</tr>
<tr>
<td>OMRGP: G7SCCP</td>
<td>OMREG: G7RTFSSC</td>
</tr>
<tr>
<td>OMRGP: GHLRSSCF</td>
<td></td>
</tr>
<tr>
<td>OMRGP: GHLRSSCB</td>
<td></td>
</tr>
<tr>
<td>OMRGP: GHLRSSCW</td>
<td></td>
</tr>
<tr>
<td>OMRGP: HLRCAML2</td>
<td>OMREG: SSCSI</td>
</tr>
<tr>
<td>OMRGP: HLRCAML2</td>
<td>OMREG: SSCSI2</td>
</tr>
<tr>
<td>OMRGP: HLRCAML2</td>
<td>OMREG: SSCSIAC</td>
</tr>
<tr>
<td>OMRGP: HLRCAML2</td>
<td>OMREG: SSCSIAC2</td>
</tr>
<tr>
<td>OMRGP: HLRCAML2</td>
<td>OMREG: SSCSIN2</td>
</tr>
<tr>
<td>OMRGP: GINAF</td>
<td>OMREG: GIAUCSSC</td>
</tr>
<tr>
<td>OMRGP: GINAF</td>
<td>OMREG: GIASOSSC</td>
</tr>
<tr>
<td>OMRGP: GSBARMMU</td>
<td>OMREG: GSSCRNMU</td>
</tr>
<tr>
<td>OMRGP: GSBARMMU</td>
<td>OMREG: GSSCRMU2</td>
</tr>
</tbody>
</table>

Your search string was: SSC
OMGRPs Matched: 3 out of 600  OMREGs Matched: 15 out of 7486
NilKey:42  NotDef:3  NilFld:0
```

Figure 2-129
FINDOM output no results

```
>findom
Next par is: <om name> STRING
Enter: <om name>
>hfhg
No matching entries found "HFHG"
```
Responses

**No entries found**

Explanation
No entries matching the string in any of the OM group names searched.

System action
Quits the tool.

User action
Search with another option.

QGSMVLR command
This tool is used to query the Visitor Location Register (VLR) database for Mobile Subscriber (MS) and VLR status information.

Syntax

CI|                                  |
|QGSMVLR |{<key type>,<key value>;}| |
|        |{pause}                  |
Where there can be up to five (5)
{<key type>,<key value>};
combinations and:
<kkey> ::= < IMSI/MSRN/Msisdn/TMSI > <value> ::= < 4...15
decimal for IMSI/MSRN/Msisdn > ::= < 1...8 hex or 1...10
decimal for TMSI>
pause ::= 'pause' search for each MS located
NOTE: When 'pause' is specified, each time a MS is located, the
search will pause until the user presses "<enter>" to resume
the search. If 'pause' is not specified, each MS searched on
is outputted to the DMS MAP as soon as it is located.

Responses

*** QGSMVLR ERROR ***
The maximum number keys (n) have already been specified.
Additional keys are ignored.

Explanation
The maximum number(5)keys allowed to be searched on in one invocation of
'QGSMVLR' was exceeded. All keys exceeding (n) have been ignored and
will not be searched on.

System action
The first (n) keys specified are searched on.

User action
None
The `<key>` `<value>` is not in the VLR Database.
Where:
`<key>` ::= { TMSI }
`<value>` ::= { 1..8 hex or 1..10 decimal }

**Explanation**
The `<key>` specified for 'QGSMVLR' to search on was not located in the VLR Database.

**System action**
Inform user.

**User action**
Search for a `<key>` that is in the VLR Database.

*** search paused : press <enter> to continue

**Explanation**
The user specified the 'pause' option on the command line. The MS was located and displayed on the MSC MAP. The search is 'paused' until the user presses `<enter>`.

**System action**
Inform user that search has been paused, and wait until `<enter>` has been pressed before continuing the search.

**User action**
Press `<enter>` when ready for the search to continue.

*Note:* To query in hex, please use '#' in front of the hex value.- It will ask to re-enter a number when the input TMSI key value exceeds the maximal digits(4294967295). For example,

```
>qgsmvrlr tmsi #432526356
Too many digits: <key value> {0 TO 4294967295}
Enter: <key value>
[<parm>]...
```

**NEW OSB information:** A list of applied new OSB categories (TYPE5, TYPE6 and TYPE7) is displayed if the Subscriber Status is OPERATOR BARRED.

**Explanation**
Only the OSBs that are registered are displayed. Response is visible on all processors.

**System Action**
None
**User Action**

None

**VLR MS Information**

Enter the following command to retrieve MS information within the VLR:

`qgsmvlr <key type> and <key value>`

Table 2-87 provides the possible key types:

Table 2-87

<table>
<thead>
<tr>
<th>Key type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSI</td>
<td>IMSI of the MS being searched on</td>
</tr>
<tr>
<td>MSRN</td>
<td>MSRN of the MS being searched on</td>
</tr>
<tr>
<td>MSISDN</td>
<td>MSISDN of the MS being searched on</td>
</tr>
<tr>
<td>TMSI</td>
<td>TMSI of the MS being searched on</td>
</tr>
</tbody>
</table>

The possible key values for IMSI/MSRN/MSISDN are *a string of digits between 4 and 15 digits*.

The possible key values for TMSI are:

- a string of digits between 1 and 10 decimal digits.
- a string of digits between 1 and 8 hex digits.

For more information on MSISDN searches and the optional ‘np’ parameter, see **NOTES** later in this section.

**VLR Status Information**

To display the current status of the VLR, specify the parm ‘status.’

**VLR Tuple Deletion**

The Tuple specified by either IMSI or MSISDN is removed when ‘delete’ is specified.

**Notes**

- A linear search of the VLR is required when searching on MSISDNs. The search time may be extensive depending on:
  - Current call processing load on the switch
  - Position of the MS within the VLR database
MAP directories

Current VLR population
- The ‘np’ <no prompt> parm only affects MSISDN searches. The prompt that asks for user confirmation for a VLR linear search is overridden, and the search begins immediately.
- The ‘pause’ option pauses the search after each key is located. The user must press Enter before the search resumes.
- A maximum of five keys can be searched on at a time.

Examples
- qgsmvlr status
- qgsmvlr imsi 12345 msisdn 54321 msisdn 5551212 np
- qgsmvlr tmsi #12345678
- qgsmvlr tmsi 12345678
- qgsmvlr msrn123456789012345 imsi 443322 pause status
- qgsmvlr delete IMSI 12345
- qgsmvlr delete MSISDN 54321
- qgsmvlr delete TMSI #12345678
- qgsmvlr delete TMSI 123456789

Parms: [<parm>...{<IMSI<KEY VALUE> STRING,
MSRN <key value> STRING,
MSISDN <key value> STRING,
TMSI <key value> {0 TO 4294967295}
STATUS,
NP,
PAUSE,
DELETE <parm? {IMSI <key value> STRING,
MSISDN <key value> STRING,
TMSI <key value> {0 TO 4294967295}]]}

LCS subscription data
The following descriptions are for the LCS subscription data displayed by the QGSMVLR tool.
- Displays up to 40 External LCS Clients for both Call-related and Call-unrelated privacy class.
- Displays the new notification type LocationNotAllowed.
- Displays the positioning data stored in the VLR along with the location estimate. The positioning data has a list of methods tried for positioning the mobile and the corresponding usage information about each method. The method field of the positioning data can have the following values.
  — timing_advance (00000)
  — mobile_assisted_eotd (00011)
— mobile_based_eotd (00100)
— mobile_assisted_gps (00101)
— mobile_based_gps (00110)
— conventional_gps (00111)
— u_tdoa (01000)
— reserved

Table 2-88 shows possible values of usage field and its description.

<table>
<thead>
<tr>
<th>Usage</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsuccessful</td>
<td>000</td>
<td>The positioning method was attempted unsuccessfully due to failure or interruption</td>
</tr>
<tr>
<td>success_not_used</td>
<td>001</td>
<td>The positioning by this method was successful but the results were not used to generate location information</td>
</tr>
<tr>
<td>success_verify</td>
<td>010</td>
<td>The positioning by this method was successful and the results were used to verify the positioning results of another method</td>
</tr>
<tr>
<td>success</td>
<td>011</td>
<td>Positioning was successful and the results were used to generate location information</td>
</tr>
<tr>
<td>success_method_unknwon</td>
<td>100</td>
<td>The positioning by this method was successful but the MS supports multiple mobile based positioning methods and the actual method used by the mobile is unknown.</td>
</tr>
</tbody>
</table>

Accessing QGSMVLR

To access QGSMVLR, enter the following commands:

CI:
>PROGDIR:
>QGSMVLR

Exiting QGSMVLR

The QGSMVLR tool automatically quits and returns to the CI level when the requested operation completes.

Example 1
>qgsmvlr imsi 505024101216023
MOBILE SUBSCRIBER

IMSI : 505024101216023 IS ATTACHED TMSI : 16777899
IMEI NUMBER: 100000000000070
IMEI STATUS: White
LOC DONE : FALSE

MSISDN : 1 1 1 12141215070
MSRN : <not allocated>
TIMESTAMP : 107 VLR TIMESTAMP : 115 AGEOFLOC: 38
HLR NUMBER : 12146030000 LAC : 401 LOCATION ID: 9
LAC or services LAC : 401 Mobility LAC : 401
CATEGORY : #0A MSG WAITING : NO AN: BSS
HLRCNF : Confirmed RADCONF : Confirmed
AUXMISDN : 11112141915070 DATMISDN : $
RRDTUF : NO LAC REGIONALLY RESTRICTED : NO
Age Indicator : 06 12 34 56 78 90 00
LMU INDICATOR : NO
Multiband Restrict : NO
PIC LIST : <not provisioned>
Gs-State: Gs-Null SGSN Number:
Gs-Association: Normal, unspecified

TELESERVICES
TELEPHONY, AUXTELEPHONY, SMSMT, SMSMO, FAX3ALTSFCH
BEARER SERVICES
cda300, cda1200, cda2400, cda4800, cda9600, cds1200, cds2400,
cds4800, cds9600, altspchdata, spchfbdata
OPERATOR DETERMINED BARRING:
SERVICE GRANTED ORIGINATING CAMEL SUBSCRIPTION INFO
CCH:Phase 3
Detection Point Service Key SCP Address Default Call
Handling DP2 0 19726030002 ReleaseCall

MOBILITY CAMEL SUBSCRIPTION INFO
Mobility Triggers Service Key SCP Address
Location Update in same VLR 0 61418103003
SPEECH SS DATA IN VLR
CFU d e o, CFB r a 123456789 2 3, CFNRY e d o, CFNRC e d o,
HOLD a r o

AUX SPCH SS DATA IN VLR
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o
CDA SS
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o
CDS SS
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o
FAX SS
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o
SMS_MO SS
*** NO SS PROVISIONED ***
VGS SS
*** NOT PROVISIONED ***
VGCS SUBSCRIPTION
Example 2
>qgsmvlr status
--------------------------------------------------------------
VLR:
Total
-----
Population : 3 MS Next TMSI : 16777322
CM Only
------
Capacity : 48K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
Regional Subscription:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
Closed User Group:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
Malicious Call Trace:
Capacity : 50K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
CAMEL OCSI-DP2, SS-CSI, TIF-CSI:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
... 
Auxiliary Speech:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
UMTS Subs:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
Location Services:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
CAMEL Dialed Service CSI:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
CAMEL Mobile Originated Short Message Service CSI:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
CAMEL Mobility Service CSI:
Capacity : 3K Subscribers Population : 0 MS
Usage : 0% AutoPro : ON
Response
The state of the new flag LOCCONF (Y/N) is displayed.

Explanation
The state of the new flag LOCCONF (Y/N) is displayed.

System action
None

User action
None

Example
The following is an example of QGSMVLR for displaying MS information.

>qgsmvlr imsi 505024101205000

-----------------------------------------------
MOBILE SUBSCRIBER
IMSI : 505024101205000 IS ATTACHED TMSI:17461263
IMEI NUMBER: 010000000000000000
IMEI STATUS: White
LOC DONE : FALSE
IMSI SDN : 1 1 1 61411205000
MSRN : <not allocated>
TIMESTAMP : 26 VLR TIMESTAMP: 26
AGEOFLOC: 0
HNR NUMBER : 614161200000 LAC : 404
LOCATION ID: 1
CATEGORY : #0A MSG WAITING : NO
AN: BSS
DATCONF : Confirmed RADCONF : Confirmed

LOCCONF : Confirmed
AUXMISDN : $ DATMISDN : 1 1 1 61411205000
RRDTUF : NO LAC REGIONALLY RESTRICTED : NO
LMU INDICATOR : NO
Multiband Restrict : NO
PIC LIST : <not provisioned>
Gs-State: Gs-Null SGSN Number: Gs-
Association: Normal, unspecified

TELESERVICES
TELEPHONY, SMSMT, SMSMO, AUTOFAX3, VGCS
BEARER SERVICES
  cda300, cda1200, cda12_75, cda2400, cda4800, cda9600, cds1200, 
cds2400, cds4800, cds9600

OPERATOR DETERMINED BARRING:
  Operator Barring HPLMN type1, HPLMN type 4, HPLMN type6, 
  HLPLMN type7

SPEECH SS DATA IN VLR
  CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o

  AUX SPCH SS DATA IN VLR
  *** NOT PROVISIONED ***

  CDA SS
  CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o CDS
  SS
  CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o

FAX SS
  CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o

  SMS_MO SS
  *** NO SS PROVISIONED ***

  VGS SS
  *** NO SS PROVISIONED ***

  VGCS SUBSCRIPTION

  Group IDs

  --------
  180

  VBS SUBSCRIPTION

  *** NOT PROVISIONED ***
  LCS SUBSCRIPTION DATA
  *** NOT PROVISIONED ***
  REGIONAL SUBSCRIPTION
  *** NOT PROVISIONED ***

The subscriber is in CM.

VLR Corruption Alarm
This Alarm is raised when VLR data corruption is detected in an MMU, 
during any VLR data access operation using IMSI or MSISDN key.

If the Alarm is raised, then the craft person has to be told about the VLR data 
corruption. This alarm is removed by a manual BSY/RTS of MMU.

Figure 2-130 is an example of a VLR Corruption Alarm
VLR corruption alarm

Figure 2-130

<table>
<thead>
<tr>
<th>CM Flt</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C7Server</td>
<td>CCS7</td>
<td>M</td>
<td><em>C</em></td>
<td>M</td>
<td><em>C</em></td>
<td><em>C</em></td>
<td><em>C</em></td>
<td></td>
</tr>
</tbody>
</table>

0 Quit 2 RSC

2 Post_

3

4 11111

5

6

7 Bsy_ Svr State Resource PM State

8 RTS_ 2 IsTb SVR7 2 InSv

9 OffL_ Size of Posted Set = 1

QsvrFlt

11 Server : 2

12 Next ISTB conditions:

VLR Corruption Alarm: Critical

The alarms in the MMU server display by the command QsvrFlt in CCS/C7SERVER level. The command information is as shown below.

Enter the MAPCI C7SERVER level by typing , > mapci, mtc, ccs, ccs7, c7server
and post the MMU server 2 by,
> post 2

Figure 2-131 is an example of the MAP level C7SERVER MAPCI fields information.

Figure 2-131

Map Level C7SERVER MAPCI fields

<table>
<thead>
<tr>
<th>CM Flt</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C7Server</td>
<td>CCS7</td>
<td>M</td>
<td><em>C</em></td>
<td>M</td>
<td><em>C</em></td>
<td><em>C</em></td>
<td><em>C</em></td>
<td></td>
</tr>
</tbody>
</table>

0 Quit 2 RSC

2 Post_
If data corruption is detected in an MMU during IMSI or MSISDN operation, then a VLR corruption alarm generates and displays using the command QSvrFlt as show in Figure 2-132, Displaying VLR Corruption Alarm using QSvrFlt command.

**Figure 2-132**

VLR corruption Alarm using QSvrFlt command
About SWACTCIDIR

In GSM15/UMTS02, the MSC has the ability to use the NORESTARTSWACT and MTCSWACT commands through the SWACTCIDIR directory.

RESTARTSWACT command

The RESTARTSWACT command is the CC Warm SWACT command which executes a cold restart on the newly active side to recover the system during a CC Warm SWACT. Using the RESTARTSWACT command results in a call processing outage of approximately 2 to 10 minutes, depending on the switch configuration. Prior to GSM15, the MSC used RestartSwact to perform the CC Warm SWACT of the ONP.

Syntax

RESTARTSWACT <CHKTYPE> {NOMATCH}

Parameters

No parameters are changed.

Response

NORESTARTSWACT should be used instead of RESTARTSWACT.
Do you wish to continue with RESTARTSWACT?
Please confirm (“YES”, “Y”, “NO”, or “N”):

Explanation

Informs the user that NORESTARTSWACT is supported for this office. The user can continue with RestartSwact or stop and perform a NORESTARTSWACT.

System action

The system has the following possible actions:

• If the user replies “YES”, RESTARTSWACT command continues.
• If the user replies “NO”, RESTARTSWACT command is cancelled.

User action

User responds to the question with a YES/NO answer.

• If user answers NO to the question, then the RESTARTSWACT command is aborted.
• If user answers YES to the question, then the RESTARTSWACT command continues.

Example

The following steps are required to invoke a RESTARTSWACT:
CI:

> BCSUPDATE

BCSUPDATE>>

> SWACTCI

SWACTCI:

> RESTARTSWACT

NORESTARTSWACT should be used instead of RESTARTSWACT. Do you wish to continue with RESTARTSWACT? Please confirm ("YES", "Y", "NO", or "N"):

**NORESTARTSWACT**

The NORESTARTSWACT command allows the MSC product to perform a CC Warm SWACT without causing a cold restart on the newly active side. The call processing outage is less than 30 seconds. The response to this command is changed since NRS is supported on the MSC.

The NORESTARTSWACT command is not supported on a Standalone HLR/Trinode.

**Syntax**

NORESTARTSWACT<CHKTYPE>(NOMATCH)

**Parameters**


**Responses**

The command responses associated with the NORESTARTSWACT command are not affected by this feature. This feature is enabling all responses related to the NORESTARTSWACT command for the MSC product.

The NORESTARTSWACT command is not supported for the Standalone HLR Trinode.

For further information on the list of responses generated by the NORESTARTSWACT command, see the MM section of feature AR0172, CC WARM SWACT OUTAGE REDUCTION HIGH-LEVEL DESIGN.

**Response on MSC**

> NORESTARTSWACT

Beginning SWACT checks:

All the SWACT checks have finished successfully.
ACTIVE DEFAULT SETTINGS:
NOMATCH set OFF
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"): 

Explanation
• Checks that the NORESTARTSWACT application information is correct.
• CC Warm SWACT settings are displayed to the user.
• The question is prompting the user if the NORESTARTSWACT should continue. This is the final opportunity for the user to abort the NORESTARTSWACT.

System action
The system has the following possible actions:
• If the user replies “YES”, NORESTARTSWACT command continues. See section 6.2.3.8 for the next system response.
• If the user replies “NO”, NORESTARTSWACT command is cancelled.

User action
The NORESTARTSWACT user has the following possible actions:
• Enter “YES” to continue the NORESTARTSWACT processing.
• Enter “NO” to stop the NORESTARTSWACT processing.

Response
If user responds YES to the question in 6.2.3.8, then:
All Pre-SWACT checks completed. Starting Warm SWACT now.
******* The cursor will not be returned *******
******* unless a critical failure occurs *******
******* Now monitoring Warm SWACT messages *******

Explanation
Indicates to the user that a NORESTARTSWACT is about to be executed. After the switch of activity, the user must log into the newly active side.

System action
Performs the switch of activity and recover the switch. After the switch of activity, the user is logged off the MAP terminal.

User action
User needs to login after the switch of activity. After logging in, the user can proceed with the ONP by performing the POSTSWACT step.

Example
The following are the steps required to invoke a NORESTARTSWACT:
CI:
  > BCSUPDATE
  BCSUPDATE>>
  > SWACTCI
  SWACTCI:
  > NORESTARTSWACT

Beginning SWACT checks:
ACTIVE DEFAULT SETTINGS:
NOMATCH set OFF
Do you wish to continue?
Please confirm (“YES”, “Y”, “NO”, or “N”):
  > YES

All Pre-SWACT checks completed. Starting Warm SWACT now.
******* The cursor will not be returned *******
******* unless a critical failure occurs *******
******* Now monitoring Warm SWACT messages *******

Response on Standalone HLR/Trinode
  > NORESTARTSWACT

Beginning SWACT checks:
The following software does not support the NORESTARTSWACT command:
  Standalone HLR/Trinode
  RESTARTSWACT must be used.
The SWACT checks have failed. Please follow instruction above.

MTCSWACT

This command forces a split mode, performs specified restarts on the inactive side and switches activity.

MTCSWACT is used instead of restart commands. The MTCSWACT command, by invoking a restart on the inactive side, eliminates call processing outage caused by ordinary restart commands.

Since MTCSWACT uses the NORESTARTSWACT utility, the system outage is reduced to less than 30 seconds. The responses to this command are changed since MTCSWACT is being supported on the MSC.

This feature does not support the MTCSWACT on a Standalone HLR.

Syntax

MTCSWACT <restart type> [PAUSE]

Parameters

Responses
The command responses associated with the MTCSWACT command are not affected by this feature. This feature is enabling the MTCSWACT command for the MSC.

For further information on the list of responses generated by the MTCSWACT command, see the MM section of feature AR0912, MTCSWACT.

Response
CI:
>MTCSWACTCI
MTCSWACTCI> MTCSWACT <Restart type> [PAUSE]

Explanation
The system outputs dots to the MTCSWACT user’s terminal to indicate that MTCSWACT is progressing.

System action
The dots indicate that the system is processing the MTCSWACT command. It is performing the execution of MTCSWACT applications. A dot and a space are displayed in 5 second intervals. For every 30 dots output, a carriage return character is displayed to advance to the next line.

If there is any message to be output to the user, the dot outputting is stopped. The message is displayed on a new line. If MTCSWACT processing continues, the dot outputting is resumed on a new line on the MTCSWACT user’s terminal.

User action
There is no user action required for this response. The dots are for informational purposes only.

Note: The MTCSWACT functionality is supported and available in all BRISC and POWERPC offices where NORESTARTSWACT is supported and available.

Example
MTCSWACTCI> MTCSWACT COLD

Response
The switch is about to drop sync.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
**Explaination**
The system is requesting a response from the user. The user can continue the MTCSWACT command by letting the system drop the unsplit mode or the user can stop and quit the MTCSWACT command at this point.

**System action**
The system has the following possible actions:

- If the user replies “YES”, the MTCSWACT command continues and the switch splits and performs the requested restart.
- If the user replies “NO”, the MTCSWACT command is cancelled.

**User action**
The MTCSWACT user has the following possible actions:

- Enter “YES” to resume the MTCSWACT processing.
- Enter “NO” to stop the MTCSWACT processing.

**Example**
The following output provides examples of possible scenarios.

The user wants to continue the MTCSWACT command:

```
MTCSWACTCI> MTCSWACT COLD
...............................
The switch is about to drop sync.
Do you wish to continue?
Please confirm (“YES”, “Y”, “NO”, or “N”):
>YES
Splitting system.
...
Running in simplex mode with active CPU 0.
...
Restart cold on inactive CPU is complete.
```

**Response**
Performing restart <restart type> on the inactive CPU.

```
...............................
Restart <restart type> on inactive CPU is completed.
```

**Explanation**
Indicates to the user the requested restart is being executed on the inactive side.

**System action**
Perform the restart on the inactive side.

*Note:* The MTCSWACT functionality is supported and available in all BRISC and POWERPC offices where NORESTARTSWACT is supported/available.
If a WARM restart is requested when the user invokes the MTCSWACT command, then MTCSWACT initiates a WARM restart followed by a COLD restart on the inactive side. The cold restart is performed to properly clean up the call processing data on the inactive side.

**Example**

Performing restart COLD on the inactive CPU.

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Restart COLD on inactive CPU is completed.
Response
A switch of activity is about to occur.
Do you wish to continue?
Please confirm (“YES”, “Y”, “NO”, or “N”):
```

**Explanation**

After splitting, the MTCSWACT command is ready to switch activity. Before the switch of activity, the user is prompted to continue with the MTCSWACT or the user can cancel the MTCSWACT at this point. If the user selects to cancel the MTCSWACT at this point, the switch remains in simplex mode (split mode).

**System action**

The system has the following possible actions:

- If the user types “YES”, the system continues with the MTCSWACT and performs a switch of activity. The user is automatically logged in on the newly active side of the switch after the NORESTARTSWACT.

- If the user types “NO”, the system stops the MTCSWACT. The system aborts all the application steps to clean up after itself, displays a message to notify the MTCSWACT user, and quits the MTCSWACTCI.

**User action**

The MTCSWACT user has the following possible actions:

- Type “YES” to proceed with the MTCSWACT processing. Upon successful completion of the switch of activity, the MTCSWACT user is logged in on a MTCSWACTCI session immediately on the newly active side. There is no action required from the MTCSWACT user to log on.

- Type “NO” to stop the MTCSWACT processing. The switch is left running in simplex mode. The user has to manually unsplit the switch if required.

**Response**

```
$<Login Id> Login on <date> at <time>.
```
Explanation
The system performs a NORESTARTSWACT as part of the MTCSWACT processing. The system displays a “$” on all currently logged in users’ terminal as the result of the NORESTARTSWACT.

After the NORESTARTSWACT, the MTCSWACT user (the one who invokes the MTCSWACT command) is automatically logged into the switch by the system. If the system is successful, a message stating the MTCSWACT user name, date and time are displayed on the MTCSWACT user’s terminal.

Other users who were logged into the switch at the time the NORESTARTSWACT occurred will be prompted to login after the NORESTARTSWACT by the system with a “Please Login.” message.

System action
The system performs a switch of activity using the NORESTARTSWACT procedure.

The system displays the login message on the MTCSWACT user’s terminal and then continues to process the MTCSWACT command.

For other users who were logged on at the time of the NORESTARTSWACT, the system displays a message “Please Login.” to invite them to log in.

User action
Some users will have to login.

Example
After the NORESTARTSWACT has completed:

The MTCSWACT user is automatically logged in on the newly active side after the NORESTARTSWACT is over.

>MTCSWACT COLD
...
$ TEAM1 Login on 1994/05/31 at 23:30:31.

• Other users are invited to log in with the message “Please Login.” on the newly active side after the NORESTARTSWACT is over.

>MTCSWACT COLD
...
$ Please Login.
Response
The switch is about to sync
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):

Explanation
After the successful completion of the SWACT, the system is ready to synch up the switch.

System action
The system has the following possible actions:

• Upon receiving a positive response from the MTCSWACT user at this time, the system starts to unsplit the switch. Upon completing the unsplit operation, both CM RTIF windows shows “Sync” on the header line. On any MAP window under the CM level, the system displays that the switch has been unsplit.

• Upon receiving a negative response from the MTCSWACT user at this time, the system stops the MTCSWACT processing, displays a message to notify the user and quits the MTCSWACTCI.

User action
The MTCSWACT user has the following possible actions. In any case, the MTCSWACT command finishes.

• Type “YES” to put the switch in unsplit mode.
• Type “NO” to leave the switch in split mode.

Example
The following gives the examples of all possible outcome.

The MTCSWACT user wants MTCSWACT to unsplit the switch. After the switch of activity the user is prompted with the following message:

... The switch is about to sync.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
>YES

Response
Starting sync
...........................
Synchronisation successful.
MTCSWACT completes

Explanation
Indicates to user that the MTCSWACT is done.
**System action**
Perform the unsplit.

**User action**
NONE

**Response on Standalone HLR/Trinode**

MTCSWACTCI:
> MTCSWACT
Next par is:<Restart type>{WARM, COLD, RELOAD}
Enter: <Restart type>[<Pause option>]
>COLD pause
WARNING: MTCSWACT runs with the switch out of sync.
The pause option will prolong this state.
Problem: The following software does not support the MTCSWACT command:
Standalone HLR/Trinode
>

*Note:* The system response varies according to MAP terminal type. For example, the MTCSWACT system dot display mentioned in this section is only applicable to the ASYNC MAPs and the dots will be displayed as one dot per line for the X25 MAPs.
TACC

About TACC

The Tariff Administration Change Control (TACC) directory level

• implements the TACC functionality
• enables personnel to check table bands, above and beyond the New Table Control (NTC) verify procedures
• enables personnel to schedule tariff changeovers for a specified date and time

Accessing TACC

To access the TACC directory and commands, enter the following command at the CI prompt and press return. The TACC command prompt displays:

CI: >TACC

Commands

The following commands are accessed from the TACC directory level:

• TACOPY
• TACHECK
• TAVIEWCO
• TASUBMITCO
• TAUNFREEZE
• TACANCELCO
• TAROLLBACKCO
• HELP
• QUIT

TACOPY command

This TACOPY command copies tariff system tables from the active tariff to the inactive tariff. An entire tariff system can be copied by supplying the ‘ALL’ option or an individual table can be copied by supplying the ‘TABLE’ option and the generic table name of a valid tariff system table. If a table name that is not part of the tariff system is provided as a parameter to the TACOPY command, the command will output the names of all tariff system tables.

Syntax

The syntax for the TACOPY command is:
TACCOPY command

The TACCOPY command copies changes to inactive tables. An entire tariff system can be checked by supplying the ‘ALL’ option or an individual table can be checked by supplying the ‘TABLE’ option and the generic table name. Only the TACOPY command with the ‘ALL’ option can trigger a transition to the checked state. The TACOPY command with a table name as an option generates only a status message. The TACOPY command must be provided with a parameter, but the specific parameter choice is selectable.

Syntax

The syntax for the TACOPY command is:

```
TACC>>
> TACOPY TABLE <generic table name>
> TACOPY ALL
```

Parameters

Table 2-89 lists and describes the parameters for the TACOPY command.

Table 2-89
TACOPY parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE &lt;table name&gt;</td>
<td>TSDAY TSTIME TSDATE TARAO TARDET</td>
<td>Describes the table name of an active tariff table. The TACOPY command must be provided with a parameter, but the specific parameter choice is selectable.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Identifies all the active tariff tables.</td>
</tr>
</tbody>
</table>

TACHECK command

The TACHECK command checks the changes to inactive tables. An entire tariff system can be checked by supplying the ‘ALL’ option or an individual table can be checked by supplying the ‘TABLE’ option and the generic table name. Only the TACHECK command with the ‘ALL’ option can trigger a transition to the checked state. The TACHECK command with a table name as an option generates only a status message. The TACHECK command must be provided with a parameter, but the specific parameter choice is selectable.

Syntax

The syntax for the TACHECK command is:

```
TACC>>
> TACHECK TABLE <generic table name>
> TACHECK ALL
```

Parameters

Table 2-90 lists and describes the parameters for the TACHECK command.

Table 2-90
TACHECK parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE &lt;table name&gt;</td>
<td>TSDAY TSTIME TSDATE TARAO TARDET</td>
<td>The table name of an active tariff table.</td>
</tr>
</tbody>
</table>
The TA VIEWCO command displays the pending changeover request, if any. Alternatively, the status of the changeover and of the tariff system can be checked by viewing the read-only table, TARSYS.

Syntax
The syntax for the TA VIEWCO command is:

```
TACC>>
> TA VIEWCO
```

TASUBMITCO command
The system administrator uses the TASUBMITCO command to submit a changeover request. A changeover request can be:
- instantly invoked by selecting IMMEDIATE option or
- scheduled for a specific date and time by selecting the SCHEDULED option

When using the SCHEDULED option, provide the date and time (in the YYMMDD and HHMM format) when the changeover is to be submitted.

The TASUBMITCO command also backs up the copy of the old tariff data. The backup copy is preserved in standby mode until subsequent changes are made to the inactive tables. Once changes are made to the inactive tables, the backup tariff data is lost.

The TASUBMITCO command must be provided with a parameter, but the specific parameter choice is selectable.

Syntax
The syntax for the TASUBMITCO command is:

```
TACC>>
> TASUBMITCO IMMEDIATE
> TASUBMITCO SCHEDULED <yymmdd> <hhmm>
```
Parameters

Table 2-91 lists and describes the parameters for the TASUBMITCO command.

Table 2-91
TASUBMITCO parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMMEDIATE</td>
<td>N/A</td>
<td>Specifies that a changeover request is to happen immediately without delay.</td>
</tr>
<tr>
<td>SCHEDULED</td>
<td>&lt;date&gt; &lt;time&gt;</td>
<td>N/A</td>
</tr>
</tbody>
</table>

TAUNFREEZE command

The TAUNFREEZE command

• enables the inactive tables to be edited after they have been checked or scheduled for changeover and

• cancels a changeover request if a scheduled changeover request is in the standby state

An entire tariff system is unfrozen when this command is issued. This command also is valid from the available/backup state. Administrator access is required for this command, except while in the checked state.

Syntax

The syntax for the TAUNFREEZE command is:

TACC>>
> TAUNFREEZE

TACANCELCO command

The TACANCELCO command cancels the changeover request in the standby state and returns the system to the checked state. Administrator access is required for this command.

Syntax

The syntax for the TACANCELCO command is:

TACC>>
> TACANCELCO
TAROLLBACKCO command
The TAROLLBACKCO command rolls back the active tariff system with the standby (backup) tariff system. TAROLLBACKCO may be used to “undo” a TASUBMITCO that has been identified as problematic.

TAROLLBACKCO command is valid until any one of the inactive tables is accessed through the NTC “table” command. Administrator access is required for this command.

Syntax
The syntax for the TAROLLBACKCO command is:

TACC>>
> TAROLLBACKCO

HELP command
The HELP command displays a list of commands and their definitions and syntax. Invoking this command without parameters displays the list of commands.

Syntax
The syntax for the HELP command is:

TACC>>
> HELP

Example
An example of the switch output follows:

TACC>>
> imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using pgmscstpc17bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>help
TARIFF ADMINISTRATION CHANGE CONTROL (TACC) - SUBCOMMANDS ARE:
TACOPY
TACHECK
TAVIEWCO
TASUBMITCO
TAUNFREEZE
TACANCELCO
TAROLLBACKCO
>HELP
QUIT
QUIT command

This command exits the TACC directory level.

Syntax

The syntax for the QUIT command is:

>quit
VLR

About VLR
Occasionally, after a Reload Restart and during the recovery period, the messaging link between the Visitor Location Register (VLR) and the Home Location Register (HLR) becomes congested. This MAP level displays VLR specific alarms. It contains the VLRCON alarm. The WhatIs VLRCON command displays the information that the alarm is related to; for example, the VLRCONCI tool throttling messages between the VLR and HLR.

Accessing VLR
This directory is used to create a new VLR MAP level under APPL. On the MAP enter:

mapci;mtc;appl;vlr

To exit the VLR MAP level, quit. On the MAP enter:

quit all

WHATIS command
WhatIs provides a description of the alarms that appear under the VLR MAPCI level. Currently only the WhatIs VLRCON is supported.

Syntax
>help whatis
WhatIs - display help text for specified application.
Parms: <appl_name> STRING

Parameters
Table 2-92 describes the WhatIs parameters

Table 2-92
WHATIS Parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>appl_name</td>
<td>STRING</td>
<td>Currently only VLRCON is supported.</td>
</tr>
</tbody>
</table>

Response
whatis vlrcon

VLRCON : GSM VLR Message Congestion Tool Alarm
**Example**

**Figure 2-133**
MSC VLRCON MAP Level Display

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IOD</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Lns</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
<th>VLRCON</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>VLRCON</td>
<td>OAMAP</td>
<td>SDM</td>
<td>SWMTC</td>
<td>SDMBIL</td>
<td>HLR</td>
<td>VLR</td>
<td>VLRCON</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Quit</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>STATUS</td>
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<td>11</td>
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<td>16</td>
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<td>17</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>USERID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time 17:03 >

whatis vlrcon

VLRCON: GSM VLR Message Congestion Tool Alarm
VLRCON

About VLRCON
VLRCON displays VLRCON alarm information. It supports the subcommand STATUS. This command will state whether message throttling is active, the percentage of the ULs and PRNs throttled, whether Authentication has been disabled, and the default MSISDN associated with the VLRCONCI VLR default data.

Accessing VLRCON
This directory is used to create a new VLRCON MAP level under VLR. On the MAP enter:

```
mapci;mtc;appl;vlr;vlrcon
```

To exit the VLRCON MAP level, quit. On the MAPCI enter:

```
quit all
```

STATUS command
The Status command prints the current state of VLRCONCI. This command output states whether message throttling is active, the percentage of the ULs and PRNs throttled, whether Authentication has been disabled, and the default MSISDN associated with the VLRCONCI VLR default data.

Syntax
```
>help status
STATUS -- Display the current VLRCONCI status
```

Parameters
No parameters.

Response
```
Status
VLR Message Throttling is disabled
Percent UL Throttled: 10
Percent PRN Throttled: 10
NoAuth: None
MSISDN: Digits: 1234567
NOA: International
NPI: ISDN
```

Explanation
Displays whether the tool has been Started, then prints the current status of NoAuth and Percent.
**System action**
No system action required.

**User action**
There is no user action required.

**Example**

Figure 2-134
MSC VLRCON MAP Level Display

<table>
<thead>
<tr>
<th>CM</th>
<th>MS</th>
<th>IID</th>
<th>Net</th>
<th>PM</th>
<th>CCS</th>
<th>Ins</th>
<th>Trks</th>
<th>Ext</th>
<th>APPL</th>
<th>VLRCON</th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>VLR</td>
<td>M</td>
</tr>
<tr>
<td>0</td>
<td>Quit</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>VLRCON</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td>STATUS</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>VLR Message Throttling is enabled.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>Percent UL: 50</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>Percent DEN: 60</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>NoAuth: All</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>MSISDN: Digits: 1234567</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>NOA: International</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>NPI: ISDN</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>USERID</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Time 17:03</td>
<td>.</td>
<td>.</td>
<td>.</td>
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<td>.</td>
<td>.</td>
<td>.</td>
<td>&gt;</td>
<td></td>
</tr>
</tbody>
</table>


VLRCONCI

About VLRCONCI
The purpose of VLRCONCI is to give the crafts person a method of throttling the number of messages the VLR will send to the HLR when there is a congestion alarm on the VLR to HLR messaging link.

Accessing VLRCONCI
Access to this tool is allowed only when the OFCVAR ENABLE_VLRCONCI_TOOL is set to Y. On the MAP enter:

> vlrconci
VLRCONCI>

To return to CI

To exit VLRCONCI, quit. On the MAP enter:

quit

START command
Start enables message throttling, and, if the NoAuth option was selected, disables the sending of Authentication. This will only occur for IMSIs associated with invalid or no VLR data.

Warning
You will be warned that the tool may become destructive and you will be prompted as to whether to start message throttling.

Syntax
>Help start
START -- Starts VLR throttling

Parameters
None.

Response
>start
WARNING: VLRCONCI is destructive to Call Processing. Please confirm ("YES", "Y", "NO", or "N"):
>Y
Warning: Every time a field is modified after START data will be downloaded to the MMU. To prevent this enter STOP before changing the data
Throttling enabled
**Explanation**

Enables the throttling of Update Location and Provide Roaming number messages, and, if the NoAuth option was selected, disable Authentication.

**System action**

Start throttling ULs and PRNs, and, if the NoAuth option was selected, disable Authentication.

**User action**

There is no user action required.

**Example**

```
> start
WARNING: VLRCONCI is destructive to Call Processing.
Please confirm ("YES", "Y", "NO", or "N"):
>Y
```

Warning: Every time a field is modified after START data will be downloaded to the MMU. To prevent this enter STOP before changing the data.

```
Throttling enabled
> start
WARNING: VLRCONCI is destructive to Call Processing.
Please confirm ("YES", "Y", "NO", or "N"):
>N
Command terminated due to request.
```

**STOP command**

Stop command disables the UL and PRN throttling.

**Warning**

Not applicable.

**Syntax**

The command syntax for STOP is:

```
>help stop
STOP -- Stops VLR throttling
```

**Parameters**

None.

**Response**

```
stop
Throttling disabled
```

**Explanation**

Stops the throttling of ULs and PRNs. Authentication proceeds normally.
**System action**
Stops the throttling of ULs and PRNs. Authentication proceed normally.

**User action**
None.

**Example**

```plaintext
> stop
Throttling disabled
```

**NoAuth**

NoAuth command causes Authentication to be disabled for all calls associated with an IMSI which has invalid VLR data when message throttling is enabled.

**Warning**
Not applicable.

**Syntax**
The command syntax for NoAuth is:

```plaintext
>help noauth
NOAUTH -- Disables Authentication
Parms: <NoAuth option> {None, All, Range <IMSI From> STRING <IMSI To> STRING, Range2 <IMSI From> STRING <IMSI To> STRING, Range3 <IMSI From> STRING <IMSI To> STRING, Range4 <IMSI From> STRING <IMSI To> STRING, Range5 <IMSI From> STRING <IMSI To> STRING, InterPLMN}
```

**Parameters**
Table 2-93 lists the parameter definitions for the VLRCONCI command.

Table 2-93
<table>
<thead>
<tr>
<th>VLRCONCI NoAuth Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARAMETER</strong></td>
</tr>
<tr>
<td>&lt;IMSI&gt;</td>
</tr>
</tbody>
</table>
Response

noauth all

Authentication disabled for all IMSIs with invalid or no VLR data when tool is STARTed

noauth range 555 666

Authentication disabled for all IMSIs with invalid or no VLR data that are included within the specified range when tool is STARTed

noauth interplmn

Authentication disabled for all Inter PLMN IMSIs with invalid or no VLR data when tool is STARTed

noauth none

Authentication will proceed normally.

Explanation

Setting NoAuth to All, a Range of IMSIs, or interplmn causes Authentication to be disabled for the specified IMSIs if the VLR data associated with the IMSI is invalid or not present. This command only takes affect when the tool is Started.

System action

Setting NoAuth anything other than None causes Authentication to be disabled for the specified IMSIs if the HLR would need to be queried for data.

User action

There is no user action required.

Example

>noauth all
Authentication disabled when tool is STARTed
>noauth range 555 666
Authentication disabled when tool is STARTed
>noauth interplmn
Authentication disabled when tool is STARTed
>noauth none
Authentication enabled

STATUS command

Status prints the current state of VLRCONCI.

Warning

Not applicable.
Syntax

The command syntax for NoAuth is:

```
>help status
STATUS -- Display the current tool settings
Parms: <MMU> {MMU}
```

Parameters

If MMU is entered, the status of VLRCONCI on each MMU is shown onscreen or printed. Table 2-94 shows the parameters for the VLRCONCI command.

Table 2-94
VLRCOINCI parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;MMU&gt;</td>
<td>{MMU}</td>
<td>If no parameter is entered, the status of the tool on the CM is printed, if MMU is entered, the status of VLRCONCI on each MMU will be printed.</td>
</tr>
</tbody>
</table>

Response

Status
VLR Message Throttling is enabled
Percent UL throttled: 10
Percent PRN throttled: 20
NoAuth: None
Status for MMU 1
MMU 1
VLR Message Throttling is enabled
Percent UL throttled: 10
Percent PRN throttled: 20
NoAuth: None
MSISDN: Digits: 1234567
NOA: International
NPI: ISDN
Category: 10
HOLD: Y
MPTY6PORT: Y
MPTY3PORT: Y
ECT: Y
CM Status
VLR Message Throttling is enabled
Percent UL throttled: 10
Percent PRN throttled: 20
NoAuth Range: None

Explanation

Displays whether the tool has been Started, then prints the current status of NoAuth and Percent.
**System action**
No system action required.

**User action**
If the CM and the MMU data do not match, STOP and START the tool to cause the data to be downloaded again.

**Example**

```
>Status
CM Status
VLR Message Throttling is enabled.
Percent UL throttled: 100
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5
NoAuth Range 5: 1 to 1

>Status MMU
VLR Message Throttling is enabled.
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5
NoAuth Range 5: 1 to 1
MSISDN: Digits: 1234567

NOA: International
NPI: ISDN
Category: 10
HOLD: Y
MPTY6PORT: Y
MPTY3PORT: Y
ECT: Y

CM Status
VLR Message Throttling is enabled
Percent UL throttled: 100
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5
NoAuth Range 5: 1 to 1
```

**PERCENT command**
Percent allows the percentage of message throttled to be altered.
**Warning**
Not applicable.

**Syntax**
The command syntax for VLRCONCI is:

```
> help percent
```

PERCENT -- Percentage of messages to throttle

Parms: <UL or PRN> UL {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}
PRN {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}

**Parameters**
Table 2-95 shows the percent parameters for VLRCONCI.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL or PRN</td>
<td>UL {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100} PRN {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}</td>
<td>Provide the percent of Update Location or Provide Roaming Numbers to be throttled.</td>
</tr>
</tbody>
</table>

**Response**

```
percent UL 10
```

1 in 10 messages will be throttled when VLRCONCI is STARTed.

**Explanation**
Sets the percentage of messages to be throttled.

**System action**
When VLRCONCI is STARTed, the selected percentage of messages will be throttled.

**User action**
None.

**Example**
```
>percent PRN 70
Percent updated
```
**VLRDATA command**

This command allows the VLR default data fields to be printed, modified or reset to their initial value. The VLRDATA fields are MSISDN, Category, Hold, Mpty6port, Mpty3port, and ECT. A definition of each field is contained in the following table. **Table 2-96** shows the parameters for the VLRDATA command.

**Table 2-96**

<table>
<thead>
<tr>
<th>Command</th>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSISDN</td>
<td>4 to 15 digits</td>
<td>The MSISDN allows a default MSISDN to be entered. It takes one parameter, a digit string. This digit string can be between 4 and 15 digits and does not have to be a valid DN, although if the MSISDN is not valid any features requiring the translation of the originators DN will fail.</td>
</tr>
<tr>
<td>CATEGORY</td>
<td>0 to 255</td>
<td>The Category command allows the category in the default data to be altered.</td>
</tr>
<tr>
<td>HOLD</td>
<td>y or n</td>
<td>The Hold command allows or denies call hold. Y implies hold is Registered and Operative. N implies that the service is not available.</td>
</tr>
<tr>
<td>MPTY6PORT</td>
<td>y or n</td>
<td>The MPTY6PORT command allows or denies Multi-party 6 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.</td>
</tr>
<tr>
<td>MPTY3PORT</td>
<td>y or n</td>
<td>The MPTY3PORT command allows or denies Multi-party 3 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.</td>
</tr>
<tr>
<td>ECT</td>
<td>y or n</td>
<td>The ECT command allows or denies Explicit Call Transfer. Y implies the service is Registered and Operative. N implies that the service is not available.</td>
</tr>
</tbody>
</table>

---

**Syntax**

The command syntax for VLRDATA is:

```
>help vlrdata

VLRDATA -- Print, Edit, or Reset VLR default data
```
Parms: <PRINT, EDIT, or RESET> {PRINT <FIELD> {MSISDN, CATEGORY, HOLD, MPTY6PORT, MPTY3PORT, ECT}, EDIT <FIELD> {MSISDN <MSISDN> STRING,<npi> {unknown, ISDN, national, private}<noa> {unknown, national, international, network}}

CATEGORY <CATEGORY> {0 TO 255}, HOLD <N or Y> {N,Y},
MPTY6PORT <N or Y> {N,Y}, MPTY3PORT <N or Y> {N,Y},
ECT <N or Y> {N,Y},
RESET <FIELD> {MSISDN,CATEGORY,HOLD,MPTY6PORT,MPTY3PORT,ECT}}

Parameters
Table 2-97 show the parameter definitions for the VLRCONCI and VLRDATA commands.

Table 2-97
VLRCONCI VLRDATA parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINT</td>
<td>{msisdn, category, hold, mpty6port, mpty3port, ect, all}</td>
<td>Determines which field to print.</td>
</tr>
<tr>
<td>RESET</td>
<td>{msisdn, category, hold, mpty6port, mpty3port, ect, all}</td>
<td>Determines which field to reset.</td>
</tr>
<tr>
<td>EDIT</td>
<td>msisdn &lt;msisdn&gt; string, &lt;npi&gt; {unknown, ISDN, national, private}, &lt;noa&gt; {unknown, national, international, network} category &lt;category&gt; {0 to 255}, hold &lt;n or y&gt; {n, y}, mpty6port &lt;n or y&gt; {n, y}, mpty3port &lt;n or y&gt; {n, y}, ect &lt;n or y&gt; {n, y}</td>
<td>Determines which field to modify.</td>
</tr>
</tbody>
</table>

Response
VLRLDATA PRINT allows either an individual VLRDATA field to be displayed or all VLRDATA fields to be displayed.

Explanation
Displays the current value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA PRINT or displays every VLRDATA field if VLRDATA PRINT ALL is entered.
**System action**
Print the appropriate VLRDATA fields.

**User action**
There is no user action required.

**VLRDATA EDIT command**

VLRDATA EDIT allows an individual VLRDATA field to be modified.

VLRDATA EDIT MSISDN allows a default MSISDN to be entered. It takes one parameter, a digit string. This non-zero digit string can be between 4 and 15 digits and does not have to be a valid DN, although if the MSISDN is not valid any features requiring the translation of the originators DN will fail.

VLRDATA EDIT CATEGORY allows the category in the default data to be altered.

VLRDATA EDIT HOLD allows or denies call hold. Y implies hold is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT MPTY6PORT allows or denies Multi-party 6 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT MPTY3PORT allows or denies Multi-party 3 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT ECT allows or denies Explicit Call Transfer. Y implies the service is Registered and Operative. N implies that the service is not available.

**Explanation**
Modifies the current value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA EDIT.

**System action**
Modify the appropriate VLRDATA fields.

**User action**
None
VLRDATA RESET command

VLRDATA RESET allows either an individual VLRDATA field or all VLRDATA fields to be reset to their initial values. These values are contained in Table 2-98, which also lists the VLRDATA RESET parameters.

Table 2-98
VLRDATA RESET parameters

<table>
<thead>
<tr>
<th>Field</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>msisdn</td>
<td>1234567</td>
<td>Mobile Station International ISDN Number. The MSISDN is permanent subscriber data.</td>
</tr>
<tr>
<td>category</td>
<td>10</td>
<td>Default the Category to Ordinary Subscriber</td>
</tr>
<tr>
<td>hold</td>
<td>y</td>
<td>Hold is Registered and Operative.</td>
</tr>
<tr>
<td>mpty6port</td>
<td>y</td>
<td>Multi-party 6 port conference is Registered and Operative.</td>
</tr>
<tr>
<td>mpty3port</td>
<td>y</td>
<td>Multi-party 3 port conference is Registered and Operative.</td>
</tr>
<tr>
<td>ect</td>
<td>y</td>
<td>Explicit Call Transfer is Registered and Operative.</td>
</tr>
</tbody>
</table>

Explanation
Reset the value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA RESET or resets every VLRDATA field if VLRDATA RESET ALL is entered.

System action
Reset the appropriate VLRDATA fields.

User action
There is no user action required.

Example
> vlrdta print all
MSISDN: 1234567
NOA: International

    NPI: ISDN

    Category: 10
    HOLD: Y
    MPTY6PORT: Y
    MPTY3PORT: Y
    ECT: Y
>vlrdata print msisdn
MSISDN: Digits: 7777777
   NOA: International
   NPI: ISDN

>vlrdata reset msisdn
VLR Default Data Reset
>vlrdata print msisdn
MSISDN: Digits: 1234567
   NOA: International
   NPI: ISDN

>vlrdata edit msisdn digits 55555
MSISDN updated
MSISDN: Digits: 55555
   NOA: International
   NPI: ISDN

>vlrdata edit msisdn digits 55
Too few digits specified for MISDN. 4 to 15 digits expected.
>vlrdata edit msisdn digits 00000
MISDN must contain digits other than 0

>vlrdata print category
Category: 10
>vlrdata edit category 11
Category Updated.
>vlrdata reset category
VLR Default Data Reset

>vlrdata print category
Category: 10
>vlrdata print Hold
Hold: y
>vlrdata edit Hold n
Default VLR Hold is Service Denied
>vlrdata print Hold
Hold: n
>vlrdata reset Hold
VLR Default Data Reset
>vlrdata print Hold
Hold: y

>vlrdata print Mpty6Port
Mpty6Port: y
>vlrdata edit Mpty6Port n
Miscellaneous MAP commands

This section describes various MAP commands specific to the MSC that are not discussed in "MAP directories".
Most of the commands discussed in this chapter are CI level commands. The commands are presented in alphabetical order.
AMADUMP

About AMADUMP

The MSC switch produces Automatic Message Accounting (AMA) files. These files are used for billing purposes.

AMADUMP is a command that:
• formats records from a DIRP file
• provides a display or hard-copy printout of the contents of Automatic Message Accounting (AMA) files

AMADUMP uses the following output formats:
• A block-by-block hexadecimal dump that contains the contents of a file. The file’s range of blocks can be optionally specified by the operating company personnel.
• A record-by-record dump that contains AMA call entries, data entries, or header entries within an AMA file. The screening used on the file can be optionally specified by the operating company personnel.

Implementing AMADUMP

Before the AMADUMP utility can be used, complete the steps identified in Procedure 3-1.

Note: This procedure is performed only the first time AMADUMP is used.

Procedure 3-1
AMADUMP setup

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Datafill table CRSFMT to define the call data streams and formats. Change NUM_CALLREC_STREAMS in Table OFCENG.</td>
</tr>
<tr>
<td>2</td>
<td>Datafill table CRSMAP to associate call data streams with various call types.</td>
</tr>
<tr>
<td>3</td>
<td>Perform a warm restart.</td>
</tr>
<tr>
<td>4</td>
<td>Datafill table DIRPPOOL to define physical characteristics of a data stream.</td>
</tr>
<tr>
<td>5</td>
<td>Datafill table DIRPSSYS to define the DIRP device for the target stream.</td>
</tr>
<tr>
<td>6</td>
<td>Datafill table DIRPSSYS to define the DIRP device for the target stream.</td>
</tr>
</tbody>
</table>
**Procedure 3-1**
**AMADUMP setup (continued)**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Enter MAPCI;MTC;IOD;DIRP at the MAP display to mount a volume for the target stream.</td>
</tr>
<tr>
<td>8</td>
<td>Enter ROTATEGCDR at the MAP display to activate the disk.</td>
</tr>
<tr>
<td>9</td>
<td>Datafill OPARM GSM_BILLING_REPORT in table OFCVAR by entering Y to allow display of GSM billing log GC0600.</td>
</tr>
<tr>
<td>10</td>
<td>Enter the MAKEGCDR command to generate test calls.</td>
</tr>
<tr>
<td>11</td>
<td>Verify that the buffer to which the internal call record was sent was cleared.</td>
</tr>
<tr>
<td>12</td>
<td>Enter the AMADUMP command to verify that the AMA call entries generated by the test calls exist.</td>
</tr>
</tbody>
</table>

To exit the AMADUMP utility, enter QUIT.

**AMADUMP>QUIT**

**Syntax**

The syntax for the AMADUMP command is:

```
AMADUMP>>
DUMP <CALL [DETAILS startblk numblks]>
<data>
<hdr>
<hex>
FILTER<ADD [rc]> [[ALL]]
<DELETE> rc [[ALL]]
<DISPLAY> rc[[ALL]]
<ENABLE>
<DISABLE>
```

**Parameters**

Table 3-1 lists and describes the parameters used with the AMADUMP DUMP command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL</td>
<td>Dumps header entries, control entries, and call entries in the C1C1 call record block in ASCII (including associated call extension entries, if present).</td>
</tr>
</tbody>
</table>
Table 3-2 describes the parameters used with the AMADUMP FILTER command.

### Table 3-2
**AMADUMP FILTER parameter descriptions**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD</td>
<td>Adds the data that the user wants to search for to the filter table. The user specifies the call record code to be screened. The FILTER command prompts the user to enter screening values for each field associated with that call record code. The user can enter a BCD value to be screened for, an asterisk (*), a combination of BCD values and asterisks, or a carriage return. All characters following the asterisk are ignored. When all fields have values, type ALL (in capital letters) following the next prompt. All remaining field values are filled with asterisks and ignored in the screening process. Up to ten filter entries can be added to the filter table.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Removes the specified record code from the filter table.</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Displays the contents of the record code specified in the filter table. DISPLAY can be used as a means of verification.</td>
</tr>
<tr>
<td>rc</td>
<td>Represents the call record code. One or more record codes can be entered, but each record code must be separated by a space.</td>
</tr>
</tbody>
</table>
Performing a call summary dump

Before beginning an AMADUMP call summary dump, access DISKUT (disk utilities) and list the files on the volume. List the desired file by entering LF before the filename. In the following example, S00DGCDR is the filename.

```
CI>DISKUT
DISKUT>LF S00DGCDR
```

Execute an AMADUMP on the file by entering AMADUMP GSM and the name of the file to be dumped. In the following example, the name of the file to be dumped is U921115214501GCDR.

```
CI>AMADUMP GSM U921115214501GCDR
AMADUMP>
```

Examples

Figure 3-1 provides an example of the information given after the AMADUMP DUMP command is executed.
Figure 3-1
AMADUMP DUMP command example

```
CI>AMADUMP GSM U21115214501GCDR
AMADUMP>>>
dump call summary
>>>GSM AMA FILE U9211115214501GCDR IS BEING PROCESSED

>>>BLOCK NUMBER 1 CONTAINS 2 RECORDS
>>>BLOCK NUMBER 2 CONTAINS 11 RECORDS
>>>BLOCK NUMBER 3 CONTAINS 11 RECORDS
>>>BLOCK NUMBER 4 CONTAINS 12 RECORDS

>>>36 RECORDS WERE FOUND IN 4 BLOCKS

>>>END OF FILE: U9211115214501GCDR
```

> dump call details <start block> <stop block>
dump hex <start block> <stop block>

Figure 3-2 shows the steps completed to add call record code F1 to the filter table.

Figure 3-2
Example of call record code being added to filter table

```
AMADUMP>>>
>FILTER ADD f1

>>>CALL RECORD CODE: F1
ENTRY CODE:
>97
INFO DIGS:
>2*
>
CLG NO:
>ALL
>>>FUNCTION COMPLETED
```

Figure 3-3 shows the response to the FILTER DISPLAY command.
Figure 3-3
Example response to FILTER DISPLAY command

AMADUMP>>
>FILTER DISPLAY f1

>>>CALL RECORD CODE: F1
*REC CODE:F1 ENTRY CODE:97 INFO DIGS:2* SFEAT CODE:**
CLG NO:
*************** CLD NO: *********** CLD NO: *********
EVENT INFO:
* TIME: DAY = *** HR=** MIN=** SEC=***
ELAPSED TIME=***** TOPS:
OP NO=**** TEAM NO=** ID=****
ORIG TYPE=***
>

>
CFIWFCI

This tool is used to display the mapped members of the CFIWF trunk groups and their states. For example, a CFIWF trunk group pair datafilled in a tuple of CFIWFMAP. A CFIWF trunk group CLLI is entered, and if datafilled in CFIWFMAP, the other trunk group mapped to is printed along with the mapped members and their states. The states are only a snapshot of the trunk member states when the command was issued. If more current state information for the members is desired, use the existing TTP level of MAPCI and post the chosen CFIWF trunk group.

The CFIWFCI command can highlight state mismatched between members of a paired CFIWF trunk group, except in the following instances:

- when either the MIWF or CIWF member is in state IDL and the peer member is in state INI.
- when either the MIWF or CIWF member is in state PMB and the peer member is in state CFL.

Commands
The subcommands for CFIWFCI include:

- QUIT
- TRKMAP

Syntax

>CFIWFCI
>help

Example
See Figure 3-4 for the output example.
Figure 3-4
CFIWF trunk group mapping

CFIWF Trunk Group Mapping Display

This command is used to display mapped trunk groups and their trunk members in table CFIWFMAP. The timeslot and external trunk name of each mapped member pair should match in number. If not, a warning is output.

Available CFIWFCI subcommands:

| TRKMAP <CLLI>: display mapped members for a CFIWF trunk group. |
| HELP : display this help |
| QUIT : exits CFIWFCI |

Parameters

Table 3-3 lists the CFIWFCI command parameters, values, and definitions.

Table 3-3
CFIWFCI parameters, values, and definitions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;CLLI&gt;</td>
<td>Vector of up to 16 characters</td>
<td>CFIWF trunk group name datafilled in table CLLI, TRKGRP, TRKSGRP, TRKMEM, and CFIWFMAP, to display the mapped trunk group and its members.</td>
</tr>
</tbody>
</table>

Invalid trunk CLLI error response

>CFIWFCI
>TRKMAP
Next par is: <CLLI> {STRING1, STRING2, ... STRINGN}
Enter: <CLLI>
>CFIWFTRKGRP1
ERROR: Unknown trunk group. Please enter a CLLI in tables CLLI, TRKGRP, TRKSGRP, TRKMEM, and CFIWFMAP.

Explanation

An unknown trunk group CLLI was entered for subcommand TRKMAP. The CLLI entered was not datafilled in one or all of the following tables: CLLI, TRKGRP, TRKSGRP, TRKMEM, CFIWFMAP.
**User action**

Re-enter the command with a CLLI datafilled in tables CLLI, TRKGRP, TRKSGRP, TRKMEM and CFIWFMAP.

**Examples**

Figure 3-5 shows an example of the CFIWFIC TRKMAP display.

**Figure 3-5**

CFIWFIC>TRKMAP display

```
>CFIWFIC
>TRKMAP  CFIWFTRKGRP2

MIWF Trunk Group   MAPPED TO   CIWF Trunk Group
=============================  ==============================  
CFIWFTRKGRP2    CFIWFTRKGRP4

<table>
<thead>
<tr>
<th>EXTNM</th>
<th>PM</th>
<th>NO</th>
<th>CKT</th>
<th>TS</th>
<th>STATE</th>
<th>EXTNM</th>
<th>PM</th>
<th>NO</th>
<th>CKT</th>
<th>TS</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>MGW</td>
<td>1</td>
<td>1</td>
<td></td>
<td>INB</td>
<td>101</td>
<td>DTC</td>
<td>2</td>
<td>1</td>
<td></td>
<td>INB</td>
</tr>
<tr>
<td>102</td>
<td>MGW</td>
<td>1</td>
<td>2</td>
<td></td>
<td>CPB</td>
<td>102</td>
<td>DTC</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>CPB</td>
</tr>
<tr>
<td>103</td>
<td>MGW</td>
<td>1</td>
<td>3</td>
<td></td>
<td>IDL</td>
<td>103</td>
<td>DTC</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>IDL</td>
</tr>
<tr>
<td>104</td>
<td>MGW</td>
<td>1</td>
<td>4</td>
<td></td>
<td>IDL</td>
<td>104</td>
<td>DTC</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>IDL</td>
</tr>
<tr>
<td>105</td>
<td>MGW</td>
<td>1</td>
<td>5</td>
<td></td>
<td>IDL</td>
<td>105</td>
<td>DTC</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>IDL</td>
</tr>
</tbody>
</table>

Total # of members: 5
```

**Warnings**

This command generates a warning for trunk mappings in table CFIWFMAP in which both trunk groups have no members. Tuples in CFIWFMAP should have at least 1 member present for each trunk group mapped. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct this, members should be datafilled for the trunk groups in TRKMEM, or the mapping should be deleted from CFIWFMAP.

The no members warning reads:

**WARNING:** No trunk members are present for the trunk groups shown mapped in CFIWFMAP. These trunk groups cannot be used for CFIWF service until some trunk members are added for each trunk group.

This command also generates a warning about the number of trunk mismatches for a CFIWF trunk group pair datafilled in CFIWFMAP. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct the mismatch, make datafill changes to these tables.

The mismatch in trunk members warning reads:
WARNING: Unmatched members were detected in CFIWF trunk group pair. Loss of service may result if this CFIWF trunk group pair is selected. Please correct datafill in tables CFIWFMAP and TRKMEM.

This command also generates a warning for mismatches in timeslot number and external trunk name for a CFIWF trunk group pair datafilled in CFIWFMAP. See Figure 3-6 for an example. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct the mismatch, datafill changes are required to these tables.

Figure 3-6
Unmatched trunk members

```
>CFIWFCI
>MGWHWGRP1

MIWF Trunk Group   MAPPED TO   CFIWF Trunk Group
-----------------------------------------------------------------------
MGWHWGRP1               DTCHWGRP1
EXTNM PM NO CKT TS STATE EXTNM PM NO CKT TS STATE
-----------------------------------------------------------------------
135 MGW 8 0 1 IDL                                 *** unmatched member
136 MGW 8 0 2 IDL                                 *** unmatched member
137 MGW 8 0 3 IDL                                 *** unmatched member
145 DTC 15 5 4 IDL                                 *** unmatched member
146 DTC 15 5 5 IDL                                 *** unmatched member
147 DTC 15 5 6 IDL                                 *** unmatched member

Total # of members: 3                               Total # of members: 3
```

WARNING: Unmatched members were detected in CFIWF trunk group pair. Loss of service may result if CFIWF trunk group pair is selected. Please correct datafill in tables CFIWFMAP and TRKMEM.

Note that the TRKMAP subcommand initially tries to match up members in a CFIWF trunk group pair based on external trunk name or member number. If a member cannot be found in the peer trunk group with matching external trunk name, the subcommand tries to find a member in the peer CFIWF trunk group with matching timeslot. Otherwise, a mismatch is declared for the MIWF trunk group member and nothing is displayed. Then, no attempt is made to initially match up timeslots in the display even though this is a requirement for CFIWF bridge connectivity. Ideally, when provisioning both MIWF and CIWF trunk group members in a CFIWF trunk group pair, both their external trunk names and timeslots should match up.

The mismatch in timeslot number or external trunk name warning reads:
**WARNING**: Mismatch detected in timeslot number or external trunk name for CFIWF trunk group pair. Loss of service may result if this CFIWF trunk group pair is selected. Please correct data fill in tables CFIWFMAP and TRKMEM.

**Errors**
This command generates the following errors:

ERROR: Cannot map trunk group in table CFIWFMAP.

ERROR: Node information could not be determined for this member.
About CATASTROPHE

CATASTROPHE is a CI command used to:
- change the switch’s catastrophe state from ON to OFF
- change the switch’s catastrophe state from OFF to ON
- query the switch’s state by entering CATASTROPHE QUERY

If the switch is set to CATASTROPHE ON, all non-priority calls are sent to treatment.

Accessing CATASTROPHE

CATASTROPHE is a CI command. Therefore, it is accessed at the CI level by entering CATASTROPHE and its appropriate parameters.

CI:
> CATASTROPHE <parameter>

Parameters

Table 3-4 identifies the possible parameters and acceptable input for the CATASTROPHE command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>N/A</td>
<td>Sets the catastrophe mode to ‘ON’ which causes all non-priority calls to be sent to treatment.</td>
</tr>
<tr>
<td>OFF</td>
<td>N/A</td>
<td>Sets the catastrophe mode to ‘OFF.’</td>
</tr>
<tr>
<td>QUERY</td>
<td>N/A</td>
<td>Displays the current catastrophe state.</td>
</tr>
</tbody>
</table>

Examples

The examples in Figure 3-7 apply if the MSC is set to CATASTROPHE OFF when the command is entered.
Figure 3-7
Examples of the CATASTROPHE ON command

> CATASTROPHE ON
Now set to CATASTROPHE ON
- or -
> CATASTROPHE OFF
Already set to CATASTROPHE OFF
- or -
> CATASTROPHE QUERY

Current state: CATASTROPHE OFF

The examples in Figure 3-8 apply if the MSC is set to CATASTROPHE ON when the command is entered.

Figure 3-8
Examples of the CATASTROPHE OFF command

> CATASTROPHE ON
Already set to CATASTROPHE ON
- or -
> CATASTROPHE OFF
Now set to CATASTROPHE OFF
- or -
> CATASTROPHE QUERY

Current state: CATASTROPHE ON
GNAOCTCI commands

GNAOCTCI is a CI directory level that enables the operator to query the internal Tariff Change Over (TCO) database for tariff information. The following information is displayed:

- General information for the specified Carrier/Reseller
  - Next TCO Index
  - Next TCO time (in Greenwich MeanTime)
- Zone specific information:
  - Current TCO Index
  - If there is a TCO within the next hour for this zone

Accessing GNAOCTCI

To access the GNAOCTCI_DIR level commands, type the following command at the CI prompt and press return:

> GNAOCTCI:

Commands

The following commands are available at the GNAOCTCI command level:

- QUIT
- HELP
- DISPLAY
- MDISPLAY
- CNTI
- CTIME
- CWAKE
- CCI
- CPERIOD
- WPQ

QUIT command

QUIT is a menu command. This command quits the CI tool and returns to the MAP.
Syntax
The command syntax for QUIT is:

>quit

HELP command
This command provides information regarding the commands available in the GNAOCTCI_DIR.

Syntax
The syntax for the HELP command is

>HELP

DISPLAY command
DISPLAY queries the internal Tariff Change Over (TCO) database for the following information for a specified carrier/reseller and zone combination.

General information for a carrier/reseller:
• next TCO index
• next TCO in Greenwich Mean Time
Zone specific information:
• current TCO index
• any TCOs within the next hour for this zone

Note: The next TCO index and its Greenwich Mean Time are only displayed if it occurs within the next 59 minutes. Otherwise, the index will show the value 31 and the time 64 (...).

Syntax
The command syntax for DISPLAY is:

>DISPLAY<carres> <zone>
PARM 1: <carres>
PARM 2: <zone>
Parameters

Table 3-5 lists and describes the optional parameters that can be used with the DISPLAY command.

Table 3-5
DISPLAY parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>carres</td>
<td>vector of up to 8 characters</td>
<td>NAOC_CARRIER_NAME</td>
</tr>
<tr>
<td>zone</td>
<td>0-127</td>
<td>ZONE</td>
</tr>
</tbody>
</table>

MDISPLAY command

MDISPLAY command queries the internal Tariff Change Over (TCO) database for the following information for a specified carrier/reseller and a range of zones.

General information for a carrier/reseller:
• next TCO index
• next TCO in Greenwich Mean Time

Zone specific information (multiple zones):
• current TCO index
• any TCOs within the next hour for this zone

Note: The next TCO index and its Greenwich Mean Time are only displayed if it occurs within the next 59 minutes. Otherwise, the index will show the value 31 and the time 64 (...).

Syntax

The command syntax for MDISPLAY is:

>MDISPLAY<carres> <x> <y>

PARM 1: <carres>

PARM 2/3: <zone x> <zone y>
Parameters

Table 3-6 lists and describes the optional parameter that can be used with the MDISPLAY command.

Table 3-6
MDISPLAY parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>carres</td>
<td>vector of up to 8 characters</td>
<td>NAOC_CARRIER_NAME</td>
</tr>
<tr>
<td>zone x</td>
<td>0-127</td>
<td>ZONE</td>
</tr>
<tr>
<td>zone y</td>
<td>0-127</td>
<td>ZONE</td>
</tr>
</tbody>
</table>

CNTI command

CNTI command changes the value of the field NTI.

Syntax

The command syntax for CNTI is:

>CNTI<carrier/reseller> <next TCO index>

PARM 1: <carrier/reseller> STRING
PARM 2: <next TCO index> {0 to 15}

CTIME command

CTIME command is used to manipulate the tco_time_in_gmt field of naoc_tcoindex_map.

Syntax

The command syntax for CTIME is:

>CTIME<carrier/reseller> <changeover hour>

PARM 1: <carrier/reseller> STRING
PARM 2: <changeover hour> {-1 to 23}

CWAKE command

CWAKE command is used to manipulate the pre_wakeup_on_time field of naoc_tco_index_map.

Syntax

The syntax for the CWAKE command is:

>CWAKE<carrier/reseller> <prewakeup on time>
CCTI command
CCTI command is used to manipulate the cti field of naoc_tco_index_map.

Syntax
The command syntax for CCTI is:

```
>CCTI<carrier/reseller> <zone number> <current TCO index>
```

| PARM 1: <carrier/reseller> STRING |
| PARM 2: <zone number> {0 to 127} |
| PARM 3: <current TCO index> {0 to 15} |

CPERIOD command
CPERIOD command is used to manipulate the within_tco_period of naoc_tco_index_map field.

Syntax
The command syntax for CPERIOD is:

```
>CNTI<carrier/reseller> <zone number> <in TCO period>
```

| PARM 1: <carrier/reseller> STRING |
| PARM 2: <zone number> {0 to 127} |
| PARM 2: <in TCO period> {YES or NO} |

WPQ command
The WPQ command is used to print entries in the system wakeup queue.

Syntax
The command syntax for WPQ is:

```
>WPQ <process>
```

| PARM 1: <process> STRING |
GNAOCTCI responses

Table 3-7 lists and describes the responses produced by the GNAOCTCI command level.

**Table 3-7**

<table>
<thead>
<tr>
<th>Response</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invalid Carrier/Reseller (see tables CARNAME or RESNAME).</td>
<td>The requested Carrier/Reseller is not valid (wrong or too many characters). Tables CARNAME or RESNAME lists all available carriers.</td>
</tr>
<tr>
<td>System Action: None</td>
<td></td>
</tr>
<tr>
<td>User Action: Look up the correct name and try again.</td>
<td></td>
</tr>
<tr>
<td>Invalid Zone. The range is between 0 - 127.</td>
<td>The zone entered is out of range.</td>
</tr>
<tr>
<td>System Action: None</td>
<td></td>
</tr>
<tr>
<td>User Action: Choose a valid zone and try again.</td>
<td></td>
</tr>
<tr>
<td>Invalid range. Zone x has to be &lt;=Zone Y.</td>
<td>The range entered is invalid.</td>
</tr>
<tr>
<td>System Action: None</td>
<td></td>
</tr>
<tr>
<td>User Action: Choose a valid range and try again.</td>
<td></td>
</tr>
</tbody>
</table>

GNOACTCI:
>mdisplay CAR11 1 4
Carrier/Reseller: CAR11
  Next TCO Index:  3
  TCO Time (GMT):  12:00 (11:00)

Zone
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTI:</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>use NTI:</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

GNOACTCI:
>display CAR11 1
Carrier/Reseller: CAR11
  Next TCO Index:  3
  TCO Time (GMT):  12:00 (11:00)

Zone 1
  Current TCO Index:  2
  Next TCO Index applicable: Yes

The next TCO Index for CAR11 is 3 and the time the next TCO occurs is 12:00 (11:00 in GMT).
In zone 1, the CTI is 2 and the TCO applies for this zone.
In zone 2, the CTI is 2 and the TCO does not apply for this zone.

=end—
GTAS commands

GSM Traffic Analysis System (GTAS) is a MAPCI directory level that is part of the GSM UCC Traffic Analysis feature.

Accessing GTAS

To access the GTAS directory from the CI, enter the following command at the CI prompt and press return:

CI:>gtas
   GTAS:

After entering the GTAS directory, an GTAS directory prompt displays. This prompt displays until you exit the tool by entering QUIT.

Commands

The GTAS directory contains the following commands:

- GQUERYCLLI
- GQUERYINT
- GQUERYLAC
- GQUERYREG
- GQUERYRTS
- HELP
- QUIT

GQUERYCLLI command

The GQUERYCLLI command displays the associated trunk group.

Syntax

The syntax for the GQUERYCLLI command is:

GQUERYCLLI [<CLLI>]
   [<ALL>]
Parameters

Table 3-8 lists and describes the parameters applicable to the GQUERYCLLI command.

Table 3-8
GQUERYCLLI command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLLI</td>
<td>Any Common Language Name</td>
<td>Specifies the CLLI of the trunk group for which traffic separation numbers are displayed.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Displays all trunk CLLIs and associated traffic separation numbers.</td>
</tr>
</tbody>
</table>

Example

Figure 3-9 shows an example of the GQUERYCLLI command.

Figure 3-9
Example of the GQUERYCLLI command

GQUERYINT command

The GQUERYINT command displays sources and destinations for one or more intersections. If the source or destination is found in the LACSAC table, the corresponding LACSAC related information is also displayed.

Syntax

The syntax for the GQUERYINT command is:

GQUERYINT[<STSN> <DTSN>] [<ALL>]

Example

Figure 3-10 shows an example of the GQUERYINT command.

Figure 3-10
Example of the GQUERYINT command
Parameters
Table 3-9 lists and describes the parameters applicable to the GQUERYINT command.

Table 3-9
GQUERYINT command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>STSN</td>
<td>0 - 127</td>
<td>Specifies the source traffic separation number of the intersection.</td>
</tr>
<tr>
<td>DTSN</td>
<td>0 - 127</td>
<td>Specifies the destination traffic separation number of the intersection.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Displays sources and destinations assigned to all intersections starting at the specified intersection and continuing to the last intersection.</td>
</tr>
</tbody>
</table>

GQUERYLAC command
The GQUERYLAC command displays the traffic separations for one or more LAC and cellid.

Syntax
The syntax for the GQUERYLAC command is:

GQUERYLAC [<LACKKEY>]
[<ALL>]

Parameters
Table 3-10 lists and describes the parameters applicable to the GQUERYLAC command.

Table 3-10
GQUERYLAC command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>LACKKEY</td>
<td>LAC_KEY_TYPE</td>
<td>Specifies the LAC and cellid for which traffic separation numbers display.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Displays all LAC and cellids and the associated traffic separation number for all LAC and cellids following the specified LAC and cellid.</td>
</tr>
</tbody>
</table>

Example
Figure 3-11 shows an example of the GQUERYLAC command.
GQUERYLACSAC command

GQUERYLACSAC command displays the traffic separation number for a particular LAC and SACID or for all LAC and SACIDs starting at a specified LAC and SACID and continuing to the last LAC and SACID.

Syntax

The syntax for the GQUERYLACSAC command is:

\[
\text{GQUERYLACSAC} \ \text{<lac>} \ \text{<sacid>} \ [\text{<ALL>}]
\]

Parameters

Table 3-11 lists and describes the parameters applicable to the GQUERYLACSAC command.

Table 3-11
GQUERYLACSAC command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>lac</td>
<td>0 - 32767</td>
<td>This variable specifies the LAC for which traffic separation numbers display.</td>
</tr>
<tr>
<td>sacid</td>
<td>0 - 65535</td>
<td>This variable specifies the SACID for which traffic separation numbers display.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>This parameter is optional. If it is entered, it displays all LAC and sacids and the associated traffic separation numbers for all LAC and sacids following the specified LAC and sacid.</td>
</tr>
</tbody>
</table>

Example

Figure 3-12 shows an example of the GQUERYLACSAC command.
GQUERYREG command

The GQUERYREG command displays the intersections assigned to one or more OM registers.

Syntax

The syntax for the GQUERYREG command is:

```
GQUERYREG[<OM_REG_NO> {0-2048}]
[<ALL>]
```

Parameters

Table 3-12 lists the parameters applicable to the GQUERYREG command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM_REG_NO</td>
<td>0 - 2048</td>
<td>Specifies the OM register number for which intersections display.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Displays intersections for all OM registers following the specified OM register number.</td>
</tr>
</tbody>
</table>

Example

Figure 3-13 shows an example of the GQUERYREG command.

Figure 3-13
Example of the GQUERYREG command

```
GTAS:
> GQUERYREG
> 
```

GQUERYRTS command

The GQUERYRTS command displays the sources and destinations for one or more traffic separations. If the traffic separation number is found in the LACSAC table, the related LACSAC data is displayed.

Syntax

The syntax for the GQUERYRTS command is:

```
GQUERYRTS [TRAFCNO] (0-127)]
[<ALL>]
```
Parameters

Table 3-13 lists and describes the parameters applicable to the GQUERYRTS command.

Table 3-13
GQUERYRTS command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAFSNO</td>
<td>0-127</td>
<td>Specifies the traffic separation number for which sources and destinations display.</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>Displays information for all traffic separation numbers starting with the specified traffic separation number.</td>
</tr>
</tbody>
</table>

Example

Figure 3-14 shows an example of the GQUERYRTS command. No returned display data for the GQUERYRTS command.

HELP command

The HELP command enables the operating company personnel to display online help documentation for the GTAS directory.

Syntax

The command syntax for HELP is:

HELP [command_name]

Parameters

Table 3-14 lists and describes the parameters applicable to the HELP command.

Table 3-14
HELP command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND NAME</td>
<td>Any valid command name.</td>
<td>Provides online documentation for the specified command.</td>
</tr>
</tbody>
</table>
### QUIT command

The QUIT command exits the GTAS directory and returns to the CI MAP level.

**Syntax**

The syntax for the QUIT command is:

```
GTAS:
>QUIT
```
GSM_SCP_QUERY

About GSM_SCP_QUERY
GSM_SCP_QUERY is a CI utility that allows operating company personnel to query the service control point (SCP) database over the maintenance I/O channel. The following call-related information must be provided for Intelligent Networks 1 toll free (IN1TF) queries:

- either a 10-digit number services address (for example, an 800 number) or a number services address not constrained to 10-digits
- calling station’s local access and transport area (LATA)
- calling station’s ANI
- originating station type (ANI II information)

Operating company personnel must provide the following call-related information for line information database (LIDB) queries:

- LIDB query type
- calling station’s ANI
- a value for the SCP query response timeout (optional)

Accessing GSM_SCP_QUERY
To access the GSM_SCP_QUERY utility, enter the following command at the CI prompt:

CI:
> GSM_SCP_QUERY

After entering the command, the system prompts for valid parameters. You may answer all prompts one at a time or enter the responses on one line.

Exiting GSM_SCP_QUERY
To exit the GSM_SCP_QUERY utility, enter QUIT at the GSM_SCP_QUERY prompt.

> QUIT

Examples
Figure 3-15 shows an example of a GSM_SCP_QUERY command used in an IN1TF query.
Figure 3-15
GSM_SCP_QUERY IN1TF example

CI:GSM_SCP_QUERY>IN1TF

CI:GSM_SCP_QUERY> Next parameter is <Query based on North American Numbering Plan?(Yes/No)>
Enter <Query based on North American Numbering Plan?(Yes/No)> <CalledNumber> <LATA> <ANI> <ANI II>

CI:GSM_SCP_QUERY> Yes 8005841234 099 2146841000 64 ...Please wait while SCP is queried...

The SCP returned the following information:
Network Routing Number = 2145551234
Carrier = 0222
**ACG: Called Party Number = 2145551234/8005841234
Indicated Cause - Database Overload
Duration time length ACG would be applied - 4 sec(s)
Call Gap Interval between applying ACG control - 3 sec(s)
!ACG requested but will not be applied towards SCP queries!

CI:GSM_SCP_QUERY>QUIT

Figure 3-16 shows an example of the GSM_SCP_QUERY command used in an LIDBQ query.
Figure 3-16
GSM_SCP_QUERY LIDBQ example

GSM_SCP_QUERY:
> LIDBQ GN 2146845555 4

The SCP returned the following information:

The Response From The Database Took 1 Seconds, 617 Milliseconds

The SCP returned the following information:
Generic Name Information:
   Generic Name Presentation: Name Allowed
   Generic Name Availability: Name Available
   Generic Name Type: Calling Name
   Generic Name: GEORGE BURNS

Automatic Code Gap Information:
   ACG Digits: 214555
   Indicated Cause: Database Overload
   Duration Time: 13 level
   Call Gap Interval: 15 level

Command prompts
Table 3-15 provides a description of the prompts displayed by the GSM_SCP_QUERY utility.

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next parameter is &lt;Service&gt;</td>
<td>Mandatory: IN1TF or LIDB</td>
<td>Enter the service for which the SCP is being queried.</td>
</tr>
<tr>
<td>&lt;Query based on North American Numbering Plan? (Yes/No)&gt;</td>
<td>Yes or No</td>
<td>Enter Yes to base the query on the North American Numbering Plan. Used with 1N1TF query.</td>
</tr>
</tbody>
</table>
Table 3-15
GSM_SCP_QUERY prompts (continued)

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Called Number&gt;</td>
<td>Mandatory: SAC+NXX+XXXX; each digit within the range of 0-9:</td>
<td>Enter the called party number. Used with a 1N1TF query.</td>
</tr>
<tr>
<td></td>
<td>• For the NANP: 10 digits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• For non-NANPs: digit length not checked</td>
<td></td>
</tr>
<tr>
<td>&lt;LATA&gt;</td>
<td>Mandatory: 3 Digits; each digit within the range 0-9</td>
<td>Enter one of the Local Access and Transport (LATA) codes as described in the Local Exchange Routing Guide. Used with an 1N1TF query.</td>
</tr>
<tr>
<td>&lt;ANI&gt;</td>
<td>Optional: 3, 6 or 10 Digits; each digit within the range 0-9</td>
<td>Enter either the NPA, NPA+NXX, or NPA+NXX+XXXX. Used with an 1N1TF query.</td>
</tr>
<tr>
<td>&lt;ANI II Digits&gt;</td>
<td>Mandatory: 2 digits, for example 62</td>
<td>This is the binary representation of the ANI II digits specified in the LERG. This information identifies the characteristics of the calling station. Used with an 1N1TF query.</td>
</tr>
<tr>
<td>&lt;Query Type&gt;</td>
<td>Mandatory: GN</td>
<td>Enter the type of LIDB query the user wants to perform. Only generic name (GN) queries are supported at this time. Used with a LIDB query.</td>
</tr>
</tbody>
</table>
Table 3-15
GSM_SCP_QUERY prompts (continued)

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Calling Directory Number&gt;</td>
<td>Mandatory: Calling Directory Number digits within the range of 0-9:</td>
<td>Enter the calling directory number digits.</td>
</tr>
<tr>
<td></td>
<td>• For the NANP: 10 digits</td>
<td>Used with a LIDB query.</td>
</tr>
<tr>
<td></td>
<td>• For non-NANPs: digit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>length not checked</td>
<td></td>
</tr>
<tr>
<td>&lt;SCP Query Response Timeout&gt;</td>
<td>Optional: 1 to 6</td>
<td>Enter the time in seconds the MSC should wait for a response to the query.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If no value is entered, the value from the CNAM_SCP_TIMEOUT office parameter is used.</td>
</tr>
</tbody>
</table>

Displayed information

The GSM_SCP_QUERY utility formats the query and sends it to the SCP upon receipt of the RESPONSE from the SCP. Table 3-16 identifies the information displayed at the MAP terminal.

Table 3-16
GSM_SCPQUERY displayed information

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Routing Number</td>
<td>Identifies the SCP-provided directory number used in subsequent call routing.</td>
</tr>
<tr>
<td>Carrier</td>
<td>Identifies the Carrier Identification Code of the carrier that is to transport the call to its intended destination.</td>
</tr>
</tbody>
</table>

—sheet 1 of 2—
### Table 3-16
**GSM_SCP_QUERY displayed information (continued)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
</table>
| +++ACG: | Provides ACG information (optional):  
|         | • Called Party  
|         | • ACG Cause Indicator: reason why ACG is being applied {Vacant Code, Database Overload, Destination Mass Calling, or Service Management System (SMS) initiated}  
|         | • ACG Duration: length of time in seconds that ACG controls are to be applied  
|         | • ACG Call Gap Interval: the interval of time in seconds between applications the ACG control for the Service |
| +++SNT: | Provides SNT information (optional)  
|         | If the SCP has requested termination information, the GSM_SCP_QUERY utility displays the following message:  
|         | NOTIFICATION TERMINATION WAS REQUESTED BY THE SCP. |

**Generic Name Information**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
</table>
| Provides the following generic name information:  
| • Presentation: generic name allowed  
| • Availability: generic name available  
| • Type: calling name  
| • Name: generic name |

—sheet 2 of 2—
INTRIDCI

INTRIDCI commands

The new INTRIDCI_DIR is created to add CI commands for INTRIDCI tool for the Customized Application for Mobile Enhanced Logic (CAMEL) application. This tool allows you to:

• view the status and information of CAP/INAP Transaction IDs (TRIDs)
• run an audit on specified CAP/INAP Transaction ID
• release CAP/INAP Transaction IDs

Accessing INTRIDCI

To access the INTRIDCI directory from the CI, enter the following command at the CI prompt and press return:

CI:>intridci
INTRIDCI:

Commands

The INTRIDCI directory contains the following commands:

• REPORT
• INUSE
• HUNG
• DETAILS
• RELEASE
• RELEASEALL
• AUDIT
• HELP
• QUIT

REPORT command

The REPORT command displays the status of TRIDs allocated for CAMEL Application (CAP) and INAP. It gives the following CAP/INAP TRID counts:

• TRIDs allocated
• TRIDS IN-USE
• TRIDS linked with CALL
• HUNG TRIDS
Syntax

The syntax for the REPORT command is:

```
> REPORT <APPLICATION>
[<ALL>]
```

Parameters

Table 3-17 lists and defines the parameters that apply to the REPORT command.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP INAP</td>
<td>IN application name for INTRIDCI Tool.</td>
</tr>
</tbody>
</table>

Example

Figure 3-17 shows an example of the REPORT command.

```
>REPORT CAP
***************
* CAP TRID REPORT *
***************
TRIDs Allocated : 1000
TRIDS IN-USE : 5
LINKED TRIDS : 1
HUNG TRIDS : 4
>
```

INUSE command

The INUSE command displays all the TRID numbers, which are currently used by CAP/INAP, that are linked to the call.

Syntax

The syntax for the INUSE command is:

```
> INUSE <APPLICATION>
[<ALL>]
```
Parameters

Table 3-18 lists and defines the parameters that apply to the INUSE command.

Table 3-18
INUSE command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP</td>
<td>IN application name for INTRIDCI Tool</td>
</tr>
<tr>
<td></td>
<td>INAP</td>
<td></td>
</tr>
</tbody>
</table>

Example

Figure 3-18 shows an example of the INUSE command.

HUNG command

The HUNG command displays all the TRID numbers that are currently used by CAP/INAP and are in hung state.

Syntax

The syntax for the HUNG command is:

> HUNG <APPLICATION>
[<ALL>]
Parameters

Table 3-19 lists and defines the parameters that apply to the HUNG command.

Table 3-19
HUNG command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP</td>
<td>IN application name for INTRIDCI Tool</td>
</tr>
<tr>
<td></td>
<td>INAP</td>
<td></td>
</tr>
</tbody>
</table>

Example

Figure 3-19 shows an example of the HUNG command.

Figure 3-19
Example of the HUNG command

```
HUNG CAP
***************
* CAP HUNG TRID  *
***************

TRID No.
-------
7897
7925
8422
15510
16741

>
```
DETAILS command

The DETAILS command gives the following information:

- CAP/INAP TRID: to help the user know the details about the TRID
- Associated components: to help the user know the components associated with the Trid, and the details
- The application/user information: includes the IMSI, Service Key, first 10 Operation history

Syntax

The syntax for the DETAILS command is:

```
> DETAILS <APPLICATION> <TRANSACTION ID> [<ALL>]
```

Parameters

Table 3-20 lists and defines the parameters that apply to the DETAILS command.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP</td>
<td>IN application name for INRIDCI Tool</td>
</tr>
<tr>
<td></td>
<td>INAP</td>
<td></td>
</tr>
<tr>
<td>Transaction Id</td>
<td>0–65535</td>
<td>CAP/INAP Transaction ID number</td>
</tr>
</tbody>
</table>

Example

Figure 3-20 shows an example of the DETAILS command.
Figure 3-20
Example of the DETAILS command

```
>details CAP 8598
TC ID 8598 is: VALID
TRID AREA INFO:

=============
ASE TYPE :INITIALDP_ASE
ASE FUNCTION :ASE_REQUESTOR
ASE STATE :2
ASE EVENT :5
AE TYPE :CAPSSP
AC HANDLE :7
DP STATE :2
AC MODE :Y
PDU STATE :2
PDU EVENT :5
XFER INFO :
  XFER Mechanism : GSM_MAP_SENDIOMSG
  Node No : 16
  Terminal No MSN: 6
  Terminal No LSB: 124
ASE TRID :8598
ASE DEST TRID :4B02 0000 4C09
ASE LINKED TRID :65021
SLS FIELD :23
```

**RELEASE command**

The RELEASE command is used to release the specified hung CAP/INAP TRID. This command has another parameter ‘GMSC912 LOG’ that controls
the GMSC912 Log generation for the specified TRID. This Log captures the TRID Number, IMSI, Service Key and Operation history for the released TRID. For more information, refer to NTP GSM / UMTS MSC Log Reference Manual, 411-2231-510.

Syntax
The syntax for the RELEASE command is:

```plaintext
> RELEASE <APPLICATION> <TRANSACTION ID> <GMSC912 LOG> [<ALL>]
```

Parameters
Table 3-21 lists and defines the parameters that apply to the RELEASE command.

Table 3-21
RELEASE command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP</td>
<td>IN application name for INTRIDCI Tool</td>
</tr>
<tr>
<td></td>
<td>INAP</td>
<td></td>
</tr>
<tr>
<td>Transaction Id</td>
<td>0–65535</td>
<td>CAP/INAP Transaction ID number</td>
</tr>
<tr>
<td>GMSC912 LOG</td>
<td>ENABLELOG</td>
<td>The LOG option is used to control the generation of</td>
</tr>
<tr>
<td></td>
<td>DISABLELOG</td>
<td>'GMSC912 Expert Log'</td>
</tr>
</tbody>
</table>

Example
Figure 3-21 shows an example of the RELEASE command.
Figure 3-21
Example of the RELEASE command

```
> hung cap

************************
* CAP HUNG TRIDS *
************************

TRID No.
---------
7897
7925
>
releaseall cap DISABLE LOG
Releasing all CAP HUNG Trids.
>
```

RELEASEALL command
The RELEASEALL command releases all the HUNG CAP/INAP TRIDs. This command has another parameter ‘GMSC912 LOG’ that controls the GMSC912 Log. This Log captures the TRID, IMSI, Service Key and Operation history for the released TRIDs.

Syntax
The syntax for the RELEASEALL command is:

```
> RELEASEALL <APPLICATION> <GMSC912_LOG> [<ALL>]
```

Parameters
Table 3-22 lists and defines the parameters that apply to the RELEASEALL command.

Table 3-22
DETAILS command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP INAP</td>
<td>IN application name for INTRIDCI Tool</td>
</tr>
<tr>
<td>GMSC912_LOG</td>
<td>ENABLELOG</td>
<td>The LOG option is used to control the generation of ‘GMSC912 Expert Log’.</td>
</tr>
</tbody>
</table>
Example

Figure 3-22 shows an example of the RELEASEALL command.

Figure 3-22
Example of the RELEASEALL command

```
>intridci
INTRIDCI
>hung cap

************************
* CAP HUNG TRIDS *
************************

TRID No.
---------
7897
>
>audit cap
Audit for CAP is invoked.
This process will release all CAP Hung trids
>open idpl
Done.
IMSCD IDPL900 JUN03 13:47:54 7900 INFO Identifier
Audit Expired
   Identifier type: CAP_GSM_TRID_CLASS
   Identifier value: 7897
   Pool type:
>
>
releaseall cap DISABLE LOG
Releasing all CAP HUNG Trids.
>```

AUDIT command

The AUDIT command is used to run audits on the hung CAP/INAP TRID. It releases all the hung TRIDs. Log IDPL900 is generated for each released TRID. This log gives information about the TRID and the application.

Syntax

The syntax for the AUDIT command is:

```
> AUDIT <APPLICATION>
[<ALL>]
```
Parameters

Table 3-23 lists and defines the parameters that apply to the AUDIT command.

Table 3-23
AUDIT command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION</td>
<td>CAP</td>
<td>IN application name for INTRIDCI Tool</td>
</tr>
<tr>
<td></td>
<td>INAP</td>
<td></td>
</tr>
</tbody>
</table>

Example

Figure 3-23 shows an example of the AUDIT command.
HELP command

The HELP command provides all the available commands in the INTRIDCI directory with a brief explanation of each. It is also used with the command names (for example, HELP AUDIT) to display detailed descriptions and examples.

Syntax

The syntax for the HELP command is:

> HELP <COMMAND-NAME>
Parameters

Table 3-24 lists and defines the parameters that apply to the HELP command.

Table 3-24
HELP command parameters

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HELP</td>
<td>REPORT</td>
<td>INTRIDC tool commands.</td>
</tr>
<tr>
<td></td>
<td>INUSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HUNG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DETAILS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RELEASE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RELEASEALL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AUDIT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HELP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>QUIT</td>
<td></td>
</tr>
</tbody>
</table>

Example

Figure 3-24 shows an example of the HELP command.
Figure 3-24
Example of the HELP command

INTRIDCI:
>help HELP

Command to display HELP for INTRIDCI tool

Parms: [COMMAND-NAME> {REPORT,
    INUSE,
    HUNG,
    DETAILS,
    RELEASE,
    RELEASEALL,
    AUDIT,
    HELP,
    QUIT}]

>help

Command to display HELP for INTRIDCI tool

Parms: [COMMAND-NAME> {REPORT,
    INUSE,
    HUNG,
    DETAILS,
    RELEASE,
    RELEASEALL,
    AUDIT,
    HELP,
    QUIT}]

>
QUIT command

The QUIT/LEAVE command is used to quit from the INTRIDCI tool.

Syntax

The syntax for the QUIT command is:

>QUIT/LEAVE

Parameters

None
The primary purpose of MGWINFO CI tool is to display all the information for the conference capable MGWs. In addition, the tool is also used to:

- display information for all MGWs
- display information for a particular MGWID MGW
- display information for a particular MID MGW
- display field MGWOUTKI in table GWINV
- display whether a MGW supports TDM interface (A i/f or PSTN) when displaying information for MGWs.

Accessing
Access the MGWINFO tool from the MAPCI.

Syntax
The following examples show the syntax for the MGWINFO tool:

```
>MGWINFO
MGW_SELECT

*****Type HELP for available commands *****

>HELP
MGW selection tool

Available MGWINFO commands:
QUIT: leave MGWINFO
ALL: list information for all MGWs
GWID: list information for a particular MGWID MGW
MID: list information for a particular MID MGW
```

Switch output
The following example shows the switch output:

```
>mgwinfo
MGW_Select:

*****Type HELP for available commands *****

>GWID 1
GWID MID Protocol InAct IPADDR PORT H248VER
Trans CongLv1% TDMITF PKTIF ShrRes BBF EMGS
```

---

411-2231-809 Standard 14.05 May 2006
Entering MGWINFO

To exit the MGWINFO tool and return to the CI level, enter the following command and press Return:

>QUIT

Parameter

Table 3-25 provides the parameter supported by the MGWINFO command:

**Table 3-25**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWID</td>
<td>0 to 255</td>
<td>Lists a given GWID MGW’s info (same as pos and list in Table GWINV).</td>
</tr>
<tr>
<td>MID</td>
<td>STRING</td>
<td>Media GW identify string.</td>
</tr>
</tbody>
</table>

Switch output

The following example shows the switch output for an erroneous command, gwidno:

MGW_Select:
> q gwidno
NO COMMAND IN LINE
> gwidno
Undefined command "GWIDNO".
MSCCAP

The MSCCAP command has been removed from the MAPCI as of GSM16/UMTS03. When you attempt to access MSCCAP from the CI level, and enter the following command:

CI:
>MSCCAP parms

The following message displays:

Use CAPACITY to view the MSC Capacity measurements.
MMUSELECT

About MMUSELECT
This command provides information on the status of MMUs, the capacity of individual MMUs, and the total number of calls being handled by an individual MMU.

Syntax
The command syntax for MMUSELECT is:

    mmuselect
Forced MMU selection tool

Parameters
Table 3-26 lists and defines the command parameters used with the MMUSELECT command.

Table 3-26
MMUSELECT command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOL</td>
<td>Display the status of the MMU pool.</td>
</tr>
<tr>
<td>QIMSI</td>
<td>Display which MMU owns this IMSI.</td>
</tr>
<tr>
<td>QUIT</td>
<td>Exit the MMUSELECT tool.</td>
</tr>
<tr>
<td>STATUS</td>
<td>Display the tool's status.</td>
</tr>
<tr>
<td>ON</td>
<td>Turns force selection ON.</td>
</tr>
<tr>
<td>OFF</td>
<td>Turns force selection OFF.</td>
</tr>
<tr>
<td>REMOVE</td>
<td>Remove force selection of an MMU.</td>
</tr>
<tr>
<td>ADDMAP</td>
<td>Add mapping for a specific mobile subscriber to a particular MMU for new service request.</td>
</tr>
<tr>
<td>DELMAP</td>
<td>Delete the mapping for a mobile subscriber to a particular MMU for new service request.</td>
</tr>
<tr>
<td>DELALL</td>
<td>Delete all subscriber mapping.</td>
</tr>
</tbody>
</table>

Switch output
A switch output example follows:

    >imagename
    XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using pgmscstpcl7bn
PRODUCT: GMSO.170
LOAD: GMS00.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>mmuselect
MMUSELECT:
Type MMUSELECT for available commands.
>MMUSELECT

Forced MMU selection tool.

-----------------------
Available commands:
POOL:     Display the status of MMU Pool
QIMSI:    Display which MMU owns this IMSI
QUIT:     Exit select MMU tool
STATUS:   Display tool status
ON:       Turns force selection ON
OFF:      Turns force selection OFF
REMOVE:   Remove force selection of a MMU
ADDMAP:   Add mapping for a particular mobile subscriber to a
          particular MMU for new service request.
DELMAP:   Deletes the mapping for a mobile subscriber to a
          particular MMU for new service request.
DELALL:   Deletes all subscriber mapping

For help on a specific command, enter Q <subcommand> at the
MAP.
About QGSMVLR

QGSMVLR is a CI command that queries the visitor location register (VLR) database for:

- VLR status information, including the CCH field
  - HLRCONF - Indicates that contact with the HLR has been confirmed or not confirmed.
  - LOCCONF - Indicates the location information has been confirmed in the HLR.
- mobile subscriber (MS) status information based on the IMSI, MSRN, or MSISDN, including SAC, ageOfLocation, and Supplementary Service CAMEL Subscription Information. The “STATUS” option displays information related to CAMEL data at the VLR
  - Pool number, Pool name, Number of MSRNs allocated and Usage.
  - If the Multiple MSRN pool allocation feature is enabled (this feature is considered to be activated if the table DNROUTE has at least one tuple with valid LATAPool entry), then the output of the QGSMVLR status command shows status of all the pools that are in use separately. If the feature is not activated, then this tool displays information about the MSRN usage in one single entry even though if there are more than 2 NILLATA entries in table DNROUTE.
- the provisioning status of Malicious Call Trace (MCT), Closed User Group (CUG), and Data Circuit Duplex Asynchronous (CDA), Data Circuit Duplex Synchronous (CDS), FAX, and Auxiliary Specch (AUX SPCH) at the VLR
- the provisioning status of UMTS subscribers and GSM subscribers at the VLR
- LCS-related data including geographical location, age of location in minutes, LCS GMLC List, LCS Privacy Subscription, LCS MO-LR subscription

**Note 1:** The QGSMVLR command is enhanced so that the information for MCT, CUG, CDA, CDS, FAX, and AX SPCH can be displayed on a per subscriber basis.

**Note 2:** In NSS16/UMTS03, the QGSMVLR tool was enhanced to display D-CSI and SMS-CSI data when it exists in the VLR.

**Note 3:** This feature stores the NoA and NPI values only and is not involved with the call processing of the data.
Accessing QGSMVLR

The QGSMVLR command is accessed from the CI prompt. To perform a query on the VLR database, enter the following command and press Return:

CI:>QGSMVLR

Exiting QGSMVLR

To return to the CI level, enter the following command and press Return:

>QUIT

Syntax

The syntax for the QGSMVLR command is:

QGSMVLR ([IMSI]<key value> STRING, 
MSRN <key value> STRING, 
MSISDN <key value> STRING,

Example

An example of switch output follows:

CI:
>IMAGENAME
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using 
pgmscstpc17bn
PRODUCT: GMSO.170
LOAD: GMS00.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>QGSMVLR

NAME
qgsmvlr

DESCRIPTION
This tool is used to query the Visitor Location Register (VLR) database for Mobile Subscriber (MS) and VLR status information.

VLR MS INFORMATION
MS information within the VLR is retrieved by specifying a 'qgsmvlr' <key type> and <key value>.

Possible <key types> are:
- IMSI the IMSI of the MS being searched on
- MSRN the MSRN of the MS being searched on
- MSISDN the MSISDN of the MS being searched on

Possible <key values> are a string of digits between (4) and (15) digits.
Refer to NOTES below for information on MSISDN searches and the optional 'np' parm.

VLR STATUS INFORMATION
The current status of the VLR is displayed when the parm 'status' is specified.

VLR TUPLE DELETION
The tuple specified by either IMSI or MSISDN is removed when 'delete' is specified.

NOTES
* A linear search of the VLR is required when searching on MSISDNs. The search time may be extensive dependent upon
  - the current call processing load on the switch
  - the position of the MS within the VLR database
  - the current VLR population
* The 'np' <no prompt> parm only affects MSISDN searches. The prompt asking for user confirmation for a VLR linear search is overridden and the search begins immediately.
  - The 'pause' option will pause the search after each key is located. User must press <enter> before the search will resume.
  - A maximum of (5) keys can be searched on at one time.

EXAMPLES
* qgsmvlr status
* qgsmvlr imsi 12345 msisdn 54321 msisdn 5551212 np
* qgsmvlr msrcn 123456789012345 imsi 443322 pause status
* qgsmvlr delete IMSI 12345
* qgsmvlr delete MSISDN 54321

Parms: [<parm>... {IMSI <key value> STRING,
  MSRN <key value> STRING,
  MSISDN <key value> STRING,
  STATUS,
  NP,
  TMSI, <1..8 hex>, <1..10 dec>
  PAUSE,
  DELETE <parm> {IMSI <key value> STRING,
  MSISDN <key value> STRING})}]}
Parameters

Table 3-27 lists and defines the parameters supported by the QGSMVLR command.

Table 3-27
QGSMVLR command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMSI, MSRN, MSISDN</td>
<td>Identify a particular mobile subscriber. Enter the appropriate 4- to 15-digit number.</td>
</tr>
<tr>
<td>STATUS</td>
<td>Display the provisioning status of the M-CSI.</td>
</tr>
<tr>
<td>NP</td>
<td>No prompt.</td>
</tr>
<tr>
<td>TMSI</td>
<td>Search for TMSI.</td>
</tr>
<tr>
<td>PAUSE</td>
<td>Pause search for each located mobile station.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Delete the IMSI.</td>
</tr>
<tr>
<td>MSISDN</td>
<td>Display the MSISDN of the mobile station.</td>
</tr>
</tbody>
</table>

MSRN translation

To perform a VLR query on a specific key type (IMSI, MSRN, or MSISDN) enter the QGSMVLR command followed by a key and its value. The command format for a QGSMVLR query is:

CI:  
> QGSMVLR <IMSI, MSRN, MSISDN> <4-15 digits> <np> <pause>

Note: When searching for a mobile subscriber, based on the MSIDN, control is not returned to the MAP user until QGSMVLR completes the search or the operator presses the BREAK key and “hx” to stop program execution.

After entering the QGSMVLR command for IMSIs and MSRNs, the system automatically displays the mobile subscriber query report. If the subscriber is not checked out to a real MMU, then the system displays:

The subscriber is in CM.

If the subscriber is checked out to a real MMU, then the system displays:

The subscriber is in MMU mmu_index where mmu_index is an integer between 1 and 14.
**Note 1:** When all searched subscribers are in MMU, there will be no pause prompt between searched keys.

**Note 2:** When all searched subscribers are in CM, there will be a pause prompt between searched keys.

**Note 3:** When some of the searched subscribers are in MMU and others are in CM, all CM subscribers will be processed and displayed first with a pause prompt between them no matter what order in the list. And then all MMU subscribers will be displayed without pause prompt after all CM searches are done.

**Example**

An output example of a mobile subscriber query report follows:

```
-----------------------------------------------------------------------
MOBILE SUBSCRIBER
IMSI : 505024101215075 IS ATTACHED TMSI : 18316312
IMEI NUMBER: 100000000000075
IMEI STATUS: White
LOC DONE : FALSE
MSISDN : 1 1 1 61411215075
MSRN : <not allocated>
TIMESTAMP : 1452 VLR TIMESTAMP: 1451
AGEOFLOCATION : 6
HLR NUMBER : 614160200000 LAC : 401
LAC or services LAC : 401 Mobility LAC : 401
Location_id : 23
AN : RNS
CATEGORY : #0A MSG WAITING : NO
HLRCONF : Not Confirmed RADCONF : Confirmed
AUXMISDN : $ DATMISDN : $
RRDTUF : NO LAC REGIONALLY RESTRICTED : NO
Age Indicator: 06 12 34 56 78 90 00
LMU INDICATOR : NO
Multiband_Restrict : NO
PIC LIST : <not provisioned>
Gs-State: Gs-Null SGSN Number: Gs-
Association: Normal, unspecified
TELESERVICES
TELEPHONY, AUXTELEPHONY, SMSMT, SMSMO, FAX3ALTSPCH
-----------------------------------------------------------------------
```

**Switch output**

The following is a switch output example:

```
>qgsmvlr imsi 312042146851124
```

```
-----------------------------------------------------------------------
MOBILE SUBSCRIBER
IMSI : 312042146851124 IS ATTACHED TMSI : 447184266
IMEI NUMBER: 001004150366930
IMEI STATUS: White
-----------------------------------------------------------------------
```
LOC DONE : FALSE
MSISDN : 1 1 1 12146851124
MSRN : <not allocated>
TIMESTAMP : 535
535 AGEOFLOC: 2
HLR NUMBER : 14696190000
LOCATION ID: 1
CATEGORY : #0A
NO AN: BSS
HLRCNF : Confirmed
Confirmed
AUXMISDN : $
RRTDFU : NO
RRDTUF : NO
LAC REGIONALLY RESTRICTED : NO
Age Indicator : 06 12 34 56 78 90 00
LMU INDICATOR : NO
Multiband Restrict : NO
PIC LIST : <not provisioned>
Gs-State: Gs-Null
Gs-Association: Normal, unspecified
TELESERVICES
TELEPHONY, SMSMT, SMSMO
BEARER SERVICES
OPERATOR DETERMINED BARRING:
SERVICE GRANTED
SPEECH SS DATA IN VLR
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, BOIC d e o, CW d e o,
MPTY-3Port a r o, HOLD a r o, ECT a r o
AUX SPCH SS DATA IN VLR
*** NOT PROVISIONED ***
CDA SS
*** NOT PROVISIONED ***
CDS SS
*** NOT PROVISIONED ***
FAX SS
*** NOT PROVISIONED ***
SMS MO SS
BOIC a r o
VGS SS
*** NOT PROVISIONED ***
VGCS SUBSCRIPTION
*** NOT PROVISIONED ***
VBS SUBSCRIPTION
*** NOT PROVISIONED ***
LCS SUBSCRIPTION DATA
*** NOT PROVISIONED ***
REGIONAL SUBSCRIPTION
*** NOT PROVISIONED ***
The subscriber is in MMU 1
Query report fields

Table 3-28 provides definitions of the fields presented on the mobile subscriber query report shown in Figure 3-7.

Table 3-28
Mobile subscriber query field definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Indicator</td>
<td>Describes age of subscriber data.</td>
</tr>
<tr>
<td>IMSI</td>
<td>Identifies the IMSI assigned to the mobile subscriber.</td>
</tr>
<tr>
<td>IMEI Number</td>
<td>Identifies the valid IMEI number.</td>
</tr>
<tr>
<td>IMEI Status</td>
<td>Identifies the IMEI status (white, black, grey, and unknown equipment).</td>
</tr>
<tr>
<td>LOC DONE</td>
<td>Identifies if a call is the first call made after a location update (TRUE) or otherwise (FALSE).</td>
</tr>
<tr>
<td>MSISDN</td>
<td>Identifies the ISDN number used to dial the mobile subscriber. The first three 2-character fields of the number identify the following:</td>
</tr>
<tr>
<td></td>
<td>• GSM_MAP_NUMBERING_PLAN</td>
</tr>
<tr>
<td></td>
<td>0= NP_UNKNOWN</td>
</tr>
<tr>
<td></td>
<td>1= ISDN</td>
</tr>
<tr>
<td></td>
<td>2= NP_SPARE_2</td>
</tr>
<tr>
<td></td>
<td>3= DATA</td>
</tr>
<tr>
<td></td>
<td>4= TELEX</td>
</tr>
<tr>
<td></td>
<td>5= NP_NATL_5</td>
</tr>
<tr>
<td></td>
<td>6= NP_NATL_6</td>
</tr>
<tr>
<td></td>
<td>7= NP_SPARE_7</td>
</tr>
<tr>
<td></td>
<td>8= NATL</td>
</tr>
<tr>
<td></td>
<td>9= PRIV</td>
</tr>
<tr>
<td></td>
<td>10= NP_EXT</td>
</tr>
<tr>
<td></td>
<td>• GSM_MAP_NATURE_OR_ADDRESS</td>
</tr>
<tr>
<td></td>
<td>0= NA_UNKNOWN</td>
</tr>
<tr>
<td></td>
<td>1= INTL</td>
</tr>
<tr>
<td></td>
<td>2= NATL</td>
</tr>
<tr>
<td></td>
<td>3= NET_SPEC</td>
</tr>
<tr>
<td></td>
<td>4= DEC_PAD</td>
</tr>
<tr>
<td></td>
<td>5= NA_RESRV_5</td>
</tr>
<tr>
<td></td>
<td>6= NA_RESRV_6</td>
</tr>
<tr>
<td></td>
<td>7= NA_EXT</td>
</tr>
<tr>
<td></td>
<td>• EXTENSIONS BIT</td>
</tr>
<tr>
<td></td>
<td>0 = EXT</td>
</tr>
<tr>
<td></td>
<td>1 = NO_EXT</td>
</tr>
<tr>
<td>Field</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MSRN</td>
<td>Identifies the mobile subscriber roaming number.</td>
</tr>
<tr>
<td>TIMESTAMP</td>
<td></td>
</tr>
<tr>
<td>VLR TIMESTAMP</td>
<td></td>
</tr>
<tr>
<td>AGEOFLOC</td>
<td></td>
</tr>
<tr>
<td>HLR NUMBER</td>
<td>Identifies the HLRNUM that should be contacted for the mobile subscriber.</td>
</tr>
<tr>
<td>LAC</td>
<td>Indicates one of the following:</td>
</tr>
<tr>
<td></td>
<td>• ALLOW_LACS—the subset of this zone are the LACs where service is allowed in the MSC/VLR.</td>
</tr>
<tr>
<td></td>
<td>• RESTRICT_LACS—the subset of this zone are the LACs where service is restricted in the MSC/VLR</td>
</tr>
<tr>
<td></td>
<td>• ALLOW_ALL_LACS—service is allowed for all LACs in the MSC/VLR. No LACs should be mapped to a zone with this permission type.</td>
</tr>
<tr>
<td></td>
<td>• RESTRICT_ALL_LACS—service is restricted for all LACs in the MSC/VLR. No LACs should be mapped to a zone with this permission type.</td>
</tr>
<tr>
<td>LOCATION ID</td>
<td>Identifies the location area code of the call made by the mobile subscriber.</td>
</tr>
<tr>
<td>CATEGORY</td>
<td>Identifies the GSM category to which the mobile subscriber is assigned:</td>
</tr>
<tr>
<td></td>
<td>• #0a = Ordinary subscribers</td>
</tr>
<tr>
<td></td>
<td>• #0b = Priority subscribers</td>
</tr>
<tr>
<td></td>
<td>• #0c = Data call</td>
</tr>
<tr>
<td></td>
<td>• #0d = Test call</td>
</tr>
<tr>
<td></td>
<td>• #0f = Payphone call</td>
</tr>
<tr>
<td>MSG WAITING</td>
<td>Indicates if the message waiting function is assigned to the mobile subscriber. (YES/NO)</td>
</tr>
<tr>
<td>HLRCONF</td>
<td>Indicates that contact with the HLR has been confirmed or not confirmed.</td>
</tr>
</tbody>
</table>

—sheet 2 of 5—
<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCCONF</td>
<td>Indicates that location information has been confirmed in the HLR.</td>
</tr>
<tr>
<td>RADCONF</td>
<td></td>
</tr>
<tr>
<td>AUXMISDN</td>
<td></td>
</tr>
<tr>
<td>DATMISDN</td>
<td></td>
</tr>
<tr>
<td>RRDTUF</td>
<td>The Roaming Restriction Due To Unsupported Feature (RRDTUF) field displays</td>
</tr>
<tr>
<td></td>
<td>the status of subscriber’s roaming restrictions for the MSC. (YES/NO)</td>
</tr>
<tr>
<td>LAC REGIONALLY</td>
<td>Displays regional subscription information on a per subscriber basis and</td>
</tr>
<tr>
<td>RESTRICTED</td>
<td>shows the &quot;status&quot; of regional subscription at the VLR. Values include:</td>
</tr>
<tr>
<td></td>
<td>• YES</td>
</tr>
<tr>
<td></td>
<td>• NO</td>
</tr>
<tr>
<td></td>
<td>• MSC AREA RESTRICTED</td>
</tr>
<tr>
<td>LMU INDICATOR</td>
<td>• YES</td>
</tr>
<tr>
<td></td>
<td>• NO</td>
</tr>
<tr>
<td>Multiband_Restrict</td>
<td>• YES</td>
</tr>
<tr>
<td></td>
<td>• NO</td>
</tr>
<tr>
<td>PIC LIST</td>
<td>Identifies the primary interLATA carrier, which is a type of carrier</td>
</tr>
<tr>
<td></td>
<td>identification code (CIC).</td>
</tr>
<tr>
<td>Gs-State</td>
<td></td>
</tr>
<tr>
<td>SGSN Number</td>
<td></td>
</tr>
<tr>
<td>Gs-Association</td>
<td></td>
</tr>
<tr>
<td>TELESERVICES</td>
<td>Identifies the teleservices that are assigned to the mobile subscriber.</td>
</tr>
<tr>
<td></td>
<td>Valid teleservices include:</td>
</tr>
<tr>
<td></td>
<td>• TELEPHONY</td>
</tr>
<tr>
<td></td>
<td>• SMSMT</td>
</tr>
<tr>
<td></td>
<td>• SMSMO</td>
</tr>
<tr>
<td>Field</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>BEARER SERVICES</td>
<td></td>
</tr>
<tr>
<td>OPERATOR DETERMINED BARRING</td>
<td>Indicates the list of applied categories if the subscriber status is OPERATOR BARRED. Category types include:</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY1 baoc</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY2 boic</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY3 boicExHC</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY4 (NS) prem_info</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY5 (NS) prem_ent</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY6 (NS) ciss</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY10 baect – allECT-Barred</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY11 bchrdirect – chargeableECT-Barred</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY12 bintect – internationalECT-Barred</td>
</tr>
<tr>
<td></td>
<td>• CATEGORY14 bdbchect – doublyChargeable ECT-Barred</td>
</tr>
<tr>
<td></td>
<td>If the subscriber does not have a subscriber status of OPERATOR BARRED, SERVICE GRANTED displays in this field.</td>
</tr>
<tr>
<td>SPEECH SS DATA IN VLR</td>
<td>Displays when mobile subscriber information is queried and the subscriber has subscribed to at least one trigger detection point-request (TDP-R) in the VLR. If not, it is not displayed at all.</td>
</tr>
<tr>
<td>CFU</td>
<td>d, e, o</td>
</tr>
<tr>
<td>CFB</td>
<td>d, e, o</td>
</tr>
<tr>
<td>CFNRY</td>
<td>e, d, o</td>
</tr>
<tr>
<td>CFNRC</td>
<td>e, d, o</td>
</tr>
<tr>
<td>BOIC</td>
<td>e, d, o</td>
</tr>
<tr>
<td>CW</td>
<td>d, e, o</td>
</tr>
<tr>
<td>AUX SPCH SS DATA IN VLR</td>
<td>Indicates that the user has auxiliary speech (auxiliary telephony) teleservice.</td>
</tr>
<tr>
<td>CDA SS</td>
<td>Indicates that the user has circuit duplex asynchronous supplementary service.</td>
</tr>
</tbody>
</table>
Table 3-28
Mobile subscriber query field definitions (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS SS</td>
<td>Indicates that the user has circuit duplex synchronous supplementary service.</td>
</tr>
<tr>
<td>FAX SS</td>
<td>Indicates that the user has facsimile supplementary service.</td>
</tr>
<tr>
<td>SMS_MO SS</td>
<td>Indicates that the user has short message services mobile origination supplementary service.</td>
</tr>
<tr>
<td>VGS SS</td>
<td></td>
</tr>
<tr>
<td>VGCS SUBSCRIPTION</td>
<td></td>
</tr>
<tr>
<td>VBS SUBSCRIPTION</td>
<td></td>
</tr>
<tr>
<td>LCS SUBSCRIPTION DATA</td>
<td></td>
</tr>
<tr>
<td>REGIONAL SUBSCRIPTION</td>
<td>Determines whether the regional subscription information of LAC is allowed.</td>
</tr>
</tbody>
</table>

---sheet 5 of 5---

Example
An output example of Long Duration Call Notification follows:

GMSC618 AUG18 00:45:00 5796 INFO System Action
CKT ITACBSS1 2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001

Switch output
An example of switch output follows:

LOGUTIL:
>imagename
XAGSM BCS 54 BO built on 2003-JUL-14 at 17:08:00 using pgsmhmsu17bs
PRODUCT: GMHU.170
LOAD: GMHU0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BS
>open gmsc 618;back
Done.
MSCI GMSC618 JUL18 10:31:15 8300 INFO System Action
Location: GSMMSC Software Audit
Description: DMS Maintenance, forced release
MSISDN: 14693210001
DURATION: CallUp 1 hours 0 mins, CALLED DN: 9726845831

MSCI     GMSC618 JUL18 10:28:31 5900 INFO System Action
CKT SPMHWGRP1   16
Location: GSMMSC Software Audit
Description: DMS Maintenance, forced release
CIC: 0
MSISDN: 14693210003
DURATION: CallUp 1 hours 0 mins, CALLING DN: 1232361
QUARANTINE

About QUARANTINE
This tool is part of the MMU functionality and provides the capability to put an MMU in QUARANTINE state to bring down the workload on an MMU before it is taken Out-of-Service. In this state, the MSC does not send additional calls to the specified MMU but the existing calls are allowed to proceed as normal. Once an MMU is put in QUARANTINE state, the tool enables the crafts person to verify the number of calls running on that MMU and for how long the MMU has been in QUARANTINE. The craftsperson can use this tool to allow completion of existing calls before an MMU is taken Out-of-Service.

Note: At any given time, access to this tool is restricted to a single, authorized GPS/TAS person with access to TOOLSUP facilities.

Access QUARANTINE
To access QUARANTINE from the CI prompt, enter the following command and press return:

> QUARANTINE

Exit QUARANTINE
To exit the QUARANTINE level and return to CI, enter the following command and press return:

> QUIT

Commands
QUARANTINE provides the following commands to operating company personnel:

- SELECTMMU—selects a specified MMU in Quarantine
- REMOVEMMU—removes a specified MMU from the Quarantine
- HALTMMU—invokes the HALTMMU subtool
- STATUS—displays the status of MMU servers in Quarantine
- HELP—displays the help screen
- QUIT—exits the Quarantine tool

SELECTMMU command
The SELECTMMU subcommand puts a specified MMU in QUARANTINE state and initiates check-in of VLR tuples. A permission is sought to execute the command from the user.
Syntax

The command syntax for SELECTMMU is:

SELECTMMU par is:  <SVR7ID> {1 to 14}
Enter:  <SVR7ID>

*Note:* If an MMU is selected in QUARANTINE, it is not available to service any new calls. However, it continues to service existing calls.

Parameters

Table 3-29 lists and defines the command parameters used with the SELECTMMU command.

Table 3-29
SELECTMMU command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVR7ID</td>
<td>1 to 14</td>
<td>C7 Server ID from table C7SERVER</td>
</tr>
</tbody>
</table>

Error messages

Table 3-30 provides the descriptions of the error messages produced by the SELECTMMU command.

Table 3-30
SELECTMMU error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| WARNING: CM is in OVERLOAD state. It is NOT recommended to quarantine/deload MMUs while CM is in overload state. | The core is in OVERLOAD state. Verify it by using MSCCAPCI (BRISC node/CAPCI (XACore node) command on Core. Putting an MMU into QUARANTINE while the Core is overloaded might result in:
- Loss of latest subscriber information checked in from MMU.
- MMU VLRocc (displayed through POOL command of MMUSELECT tool) might not be updated.

User action: A permission is sought from the user. It is NOT recommended to go ahead with this command. Quarantining of the MMU should be done in the next maintenance window. The user should proceed with the command only if there is no other alternative. |
<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ERROR: This MMU is already selected in QUARANTINE.</strong></td>
<td>The MMU specified is already in QUARANTINE state. User action: No action is required, MMU is already selected. User can check it using the STATUS command.</td>
</tr>
<tr>
<td><strong>ERROR: MMUs &lt;mmu1&gt;, &lt;mmu2&gt; and &lt;mmu3&gt; is/are already in Quarantine/Deload. A maximum of three MMUs can be selected in Quarantine/Deload at a time.</strong></td>
<td>mmu1, mmu2 and mmu3 are C7SERVER ids from c7server table. Three MMUs specified are already in QUARANTINE state. At a time, user can select a maximum of 3 MMUs in QUARANTINE. User action: Three MMUs are already selected in QUARANTINE. If user want to select another MMU, remove any of the quarantined MMU using command REMOVEMMU. Alternately, perform some maintenance action (for example, MAN B) on the current MMU to take it out of QUARANTINE. User can check QUARANTINE status using STATUS command.</td>
</tr>
<tr>
<td><strong>WARNING: &lt;num_of_MMUs&gt; MMU(s) are already in Quarantine/Deload. It is NOT recommended to quarantine/deload more than one MMU under high CM/MMU traffic conditions</strong></td>
<td>num_of_MMUs is the number of MMUs under quarantine. This warning is displayed if SELECTMMU command is used to quarantine an MMU when one or more MMUs are already in quarantine. User action: It is NOT recommended to quarantine the MMU in this scenario. MMU quarantine should be tried in the next maintenance window. This is because quarantining an MMU more than once might result in: • Overloading the Core. • Loss of latest subscriber information checkedIn from any of the MMUs in quarantine. • MMU VLRocc (displayed through POOL command of MMUSELECT tool) might not be updated.</td>
</tr>
</tbody>
</table>
### Table 3-30
SELECTMMU error messages (continued)

<table>
<thead>
<tr>
<th>Error</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR: Server is not an MMU.</td>
<td>The Server is not datafilled as MMU in table C7SERVER.</td>
</tr>
<tr>
<td></td>
<td>User action: QUARANTINE tool is only for MMUs. The server must be datafilled</td>
</tr>
<tr>
<td></td>
<td>as MMU for selecting it in QUARANTINE. Refer to MMU Provisioning rules.</td>
</tr>
<tr>
<td>ERROR: Unable to set the state of MMU.</td>
<td>MMU provisioning is not correct.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Check MMU provisioning.</td>
</tr>
<tr>
<td>ERROR: Availability of this MMU is not complete. Server availability is invalid to QUARANTINE the server</td>
<td>MMU provisioning is not correct.</td>
</tr>
<tr>
<td></td>
<td><strong>User action:</strong> Check the MAP status of SVR7 peripheral and MMU server. Both</td>
</tr>
<tr>
<td></td>
<td>must be in service. Check MMU provisioning.</td>
</tr>
</tbody>
</table>

—sheet 3 of 4—
REMOVEMMU command

The REMOVEMMU subcommand takes an MMU out of QUARANTINE state and returns it to normal functioning. It also halts Check-In of VLR tuples from the MMU to the MSC.

Syntax

The command syntax for REMOVEMMU is:

REMOVEMMU par is: <SVR7ID> {1 to 14}
Enter: <SVR7ID>

Note: If an MMU is removed from Quarantine, it will be available to service new call requests.
Parameters

Table 3-31 lists and defines the command parameters used with the REMOVEMMU command.

Table 3-31
REMOVEMMU command parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVR7ID</td>
<td>1 to 14</td>
<td>C7 Server ID from table C7SERVER</td>
</tr>
</tbody>
</table>

Error messages

Table 3-32 provides the descriptions of the error messages produced by the REMOVEMMU command.

Table 3-32
REMOVEMMU error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error: Server is not selected in Quarantine.</td>
<td>This server is not selected in Quarantine, and the request to remove server for Quarantine is invalid. <strong>User action</strong>: Check Quarantine status to determine which server is in Quarantine.</td>
</tr>
<tr>
<td>ERROR: Unable to set the availability of MMU.</td>
<td>Tool is not able to deselect a particular MMU. MAP state of MMU server or SVR7 is not correct. <strong>User action</strong>: Check state of MMU server and SVR7.</td>
</tr>
<tr>
<td>ERROR: MMU availability is not partial.</td>
<td>MMU state is not a valid state of QUARANTINE. <strong>User action</strong>: Check the provisioning and state of MMU. Refer to MMU provisioning rules.</td>
</tr>
<tr>
<td>ERROR: Server is not in service.</td>
<td>SVR7 server or MMU(PM) is not in service. Server must be in service to remove from Quarantine. <strong>User action</strong>: Check the state of MMU/SVR7. It must be in service.</td>
</tr>
<tr>
<td>Warning: MMU maintenance state not found.</td>
<td>MMU maintenance state is not proper. <strong>User action</strong>: Check MMU provisioning.</td>
</tr>
</tbody>
</table>
### HALTMMU command

This command provides the ability to HALT all the MMUs. All MMUs are put into QUARANTINE. In this state, no new work is assigned to any of the MMUs, however, these MMUs continue to service existing calls. checkIn of MMU VLR tuples is also terminated, so the latest subscriber information still remains with the MMU.

The craftsperson can access this subtool only from within the QUARANTINE tool and use it to allow the existing calls before off-loading an MMU.

HALTMMU has two subcommands, SELECTALL and RESTOREALL.

**Warning**

If an authorized user is already using this subtool, then a warning is generated telling the craftsperson that access is restricted to only a single, authorized user at any given time.

**Accessing**

To access the command, do the following MAPCI commands:

- >QUARANTINE
- >HALTMMU

To return to CI level, type the following:

- >QUIT 2
Status command

This command displays the Quarantine status of MMU (Selected/Not Selected), number of calls running on each MMU, and time the MMU has been in Quarantine mode.

Syntax

The command syntax for STATUS is:

>`status`

Parameters

There are no parameters for the Status command.

Example

An example of the switch output follows:

```plaintext
>imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpc17bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>
>
2003/07/03 10:31 MFAST ** MSCX GSM17 ** GMS0170 6/19/2003
QUARANTINE:
>help

MMU Isolation tool.
-------------------
Quarantine tool is for isolating the MMU servers for any maintenance action. Once an MMU is selected, no new call origination requests will be routed to that MMU. However, the MMU will service already established calls. The idea is to bring down the number of calls on that MMU so that any maintenance action can be performed.

Available commands are

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECTMMU</td>
<td>Selects a specified MMU in Quarantine.</td>
</tr>
<tr>
<td>REMOVEMMU</td>
<td>Removes a specified MMU from the Quarantine.</td>
</tr>
<tr>
<td>HALTMMU</td>
<td>Invokes the HALTMMU SubTool.</td>
</tr>
<tr>
<td>STATUS</td>
<td>Displays the status of MMU servers in Quarantine.</td>
</tr>
<tr>
<td>HELP</td>
<td>Displays this help screen.</td>
</tr>
<tr>
<td>QUIT</td>
<td>Exits Quarantine tool</td>
</tr>
</tbody>
</table>
For help on a specific command, enter Q <subcommand> at the MAP.

Figure 3-32 shows the response received before selecting Time in quarantine status. Figure 3-33 shows the response after selecting Time in quarantine status.

Figure 3-25
Example before selecting in quarantine

<table>
<thead>
<tr>
<th>Server</th>
<th>PM</th>
<th>Status</th>
<th>Time in Quarantine</th>
<th>Call Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SVR7 400 Selected</td>
<td>00:00:00</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3-26
Example after selecting in quarantine

<table>
<thead>
<tr>
<th>Server</th>
<th>PM</th>
<th>Status</th>
<th>Time in Quarantine</th>
<th>Call Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SVR7 400 Selected</td>
<td>00:00:04</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

HELP command

This command displays the usage of each command provided by the MMU_Quarantine tool.

Syntax

The command syntax for HELP is:

HELP

QUIT command

This command exits the Quarantine tool

Syntax

The command syntax for QUIT is:

QUIT
RELEASE_SUB

About RELEASE_SUB

The RELEASE_SUB command enables operating company personnel to manually release subscribers. This command is part of the Long Duration Call Identification and Teardown feature and Long Call Release.

Call teardown can occur automatically or manually. Calls are automatically torn down when they exceed a definable threshold in the MSC. Use the RELEASE_SUB command to manually tear down a call.

Implementing long duration call identification and teardown

Use the steps outlined in Procedure 3-2 to activate the Long Duration Call Identification and Teardown feature.

Procedure 3-2
Activate long duration call ID and teardown feature

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Go to table OFCVAR.</td>
</tr>
<tr>
<td>2</td>
<td>Change the parameters for: GSM_LONG_CALL_TEARDOWN</td>
</tr>
<tr>
<td>3</td>
<td>Set the value of the Type field to:</td>
</tr>
<tr>
<td></td>
<td>• AUTO</td>
</tr>
<tr>
<td></td>
<td>• MANUAL</td>
</tr>
<tr>
<td></td>
<td>• OFF (default)</td>
</tr>
<tr>
<td>4</td>
<td>Set the value of the Hours field to:</td>
</tr>
<tr>
<td></td>
<td>• 0 – 24 (zero is default)</td>
</tr>
<tr>
<td>5</td>
<td>Set the value of the Minutes field to:</td>
</tr>
<tr>
<td></td>
<td>• 0 (default)</td>
</tr>
<tr>
<td></td>
<td>• 15</td>
</tr>
<tr>
<td></td>
<td>• 30</td>
</tr>
<tr>
<td></td>
<td>• 45</td>
</tr>
<tr>
<td>6</td>
<td>Quit the table editor.</td>
</tr>
</tbody>
</table>

—end—
Accessing office parameter GSM_LONG_CALL_TEARDOWN

The office parameter GSM_LONG_CALL_TEARDOWN is located in table OFCVAR. To view the settings from the table OFCVAR, enter:

```
pos GSM_LONG_CALL_TEARDOWN
```

The system responds with the parameter values for type, hours, and minutes as shown in Figure 3-27.

Figure 3-27
GSM_Long_Call_Tear Down format

```
>table ofcvar  
TABLE: OFCVAR
>pos gsm_long_call_teardown
    GSM_LONG_CALL_TEARDOWN OFF 0 0
```

The parameter GSM_LONG_CALL_TEARDOWN contains the following fields:

- glctd_type
- glctd_hours
- glctd_minutes

Table 3-33 provides datafill values for office parameter GSM_LONG_CALL_TEARDOWN.

<table>
<thead>
<tr>
<th>Parmname</th>
<th>Parmval</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSM_LONG_CALL_TEARDOWN</td>
<td>AUTO, MANUAL, OFF</td>
</tr>
<tr>
<td></td>
<td>0 - 24</td>
</tr>
<tr>
<td></td>
<td>0, 15, 30, 45</td>
</tr>
</tbody>
</table>

Syntax

The syntax for the RELEASE_SUB command is:

```
Parms: <identifier> {MSISDN <msisdn value> STRING}
release_sub msisdn 63664209209
```
Parameters

The parameter for Release_sub is shown in Table 3-34.

Table 3-34
RELEASE_SUB parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSISDN</td>
<td>valid MSISDN digit stream (4 to 15 digit)</td>
<td>Identifies the mobile subscriber to be located. MSISDN has to be selected to identify the mobile subscriber.</td>
</tr>
</tbody>
</table>

Examples

Figure 3-28 shows the entries used to define a mobile subscriber long call as a call that exceeds 4 hours and 30 minutes. After the 4 hours and 30 minutes, the datafill enables operating company personnel to manually release the call.

Figure 3-28
Long Duration Call manual set up

```
>table ofcvar
TABLE: OFCVAR
>pos gsm_long_call_teardown
GSM_LONG_CALL_TEARDOWN OFF 0 0
>cha
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>Y
PARMVAL: OFF 0 0
>manual 4 30
TUPLE TO BE CHANGED:
GSM_LONG_CALL_TEARDOWN
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>Y
TUPLE CHANGED
```

Figure 3-29 shows the entry used to manually release a mobile defined as a Long Duration Call subscriber. The figure also shows the resulting confirmation message.
Figure 3-29
Long Duration Call manual release

```
>release_sub msisdn 63664209209

********** LONG CALL RELEASE CI TOOL OUTPUT **********
MSISDN: 63664209209
IMSI: 50502410125030
********** MANUAL RELEASE SUCCESSFUL **********
```

Error messages
The following error messages can be produced by the RELEASE_SUB command.
- Any input error.
- Invalid digits in MSISDN.
- Too few digits in MSISDN.
- Process aborted by user.
- Error in accessing the MSC Database.
- Race condition - mobile has probably roamed out of the VLR.
- CP race condition occurred - please retry.
- VLR empty
- Mobile is not found in VLR.
- Any software problem.
- Mobile is linked to another process - please retry.
- Mobile is not involved in a call.
- Unexpected link state in MSC Database - see possible SWERR.
- Mobile is involved in an emergency call.

Verifying long calls through log GMSC618
Log report GMSC618 enables personnel to view or verify long duration call activity. An example of this log report is shown in Figure 3-30. In this example, the mobile subscriber 63664209209 exceeded the Long Duration Call Limit of 120 minutes.
Figure 3-30
Long Duration Call Notification

An output example follows:

LOGUTIL:
>imagename
XAGSM BCS 54 BO built on 2003-JUL-14 at 17:08:00 using pgsmmsu17bs
PRODUCT: GMHU.170
LOAD: GMHU0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BS

>open gmsc 618;back
Done.
MSCI     GMSC618 JUL18 10:31:15 8300 INFO System Action
Location: GSMMSC Software Audit
Description: DMS Maintenance, forced release
MSISDN: 14693210001
DURATION: CallUp 1 hours 0 mins, CALLED DN: 9726845831

GMSC618 AUG18 00:45:00 5796 INFO System Action
CKT     ITACBSS1  2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001

Example
An output example follows:

LOGUTIL:
>imagename
XAGSM BCS 54 BO built on 2003-JUL-14 at 17:08:00 using pgsmmsu17bs
PRODUCT: GMHU.170
LOAD: GMHU0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BS

>open gmsc 618;back
Done.
MSCI     GMSC618 JUL18 10:31:15 8300 INFO System Action
Location: GSMMSC Software Audit
Description: DMS Maintenance, forced release
MSISDN: 14693210001
DURATION: CallUp 1 hours 0 mins, CALLED DN: 9726845831

MSCI     GMSC618 JUL18 10:28:31 5900 INFO System Action
CKT     ITACBSS1  2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001

MSCI     GMSC618 JUL18 00:45:00 5796 INFO System Action
CKT     ITACBSS1  2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001

MSCI     GMSC618 JUL18 00:45:00 5796 INFO System Action
CKT     ITACBSS1  2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001

MSCI     GMSC618 JUL18 00:45:00 5796 INFO System Action
CKT     ITACBSS1  2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001
RENAME_IWFLKSET

About RENAME_IWFLKSET

This command allows operating company personnel to rename an existing link in table IWFLKSET. Link names datafilled in table IWFMEM are automatically changed as well.

Syntax

The command syntax for RENAME_IWFLKSET is:

```
RENAME_IWFLKSET <existing link name> <new link name>
```

Figure 3-31 shows the response received when both the existing and new link names are valid. Personnel is prompted to initiate the rename. Enter Y to rename the link or N to abort the process. The response is visible on both the 88000 and 68000 systems.

![Example of the RENAME_IWFLKSET command response](image)

Parameters

Table 3-35 lists and defines the parameters used with the RENAME_IWFLKSET command.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;existing link name&gt;</td>
<td>1 - 16 alphanumeric characters</td>
<td>Identifies the old link name in table IWFLKSET.</td>
</tr>
<tr>
<td>&lt;new link name&gt;</td>
<td>1 - 16 alphanumeric characters</td>
<td>Identifies the new link name in table IWFLKSET.</td>
</tr>
</tbody>
</table>

Switch output

An example of switch output follows:

```
CI:
>imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using pgmscstpc17bn
```
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>ran RENAME_IWFLKSET
Command to rename an IWF LinkSet

SYNTAX

rename_iwflkset <old linkset name> <new linkset name>
This command allows the user to rename an IWF linkset in
Table IWFLKSET without deleting the link set and adding
it back.
Parms: <Old Linkset Name> STRING
       <New Lkset Name > STRING

Error messages

Table 3-36 provides the descriptions of the error messages produced by the
RENAME_IWFLKSET command.

Table 3-36
RENAME_IWFLKSET error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing IWF link was not in table IWFLKSET.</td>
<td>The link name entered does not exist in table IWFLKSET.</td>
</tr>
<tr>
<td>New IWF link is already in table IWFLKSET.</td>
<td>The link name entered already exists in table IWFLKSET.</td>
</tr>
<tr>
<td>New IWF link name is too long. No more than 16 characters.</td>
<td>The link name is longer than 16 alphanumeric characters. Enter a shorter name.</td>
</tr>
</tbody>
</table>
About STATUS

This command displays the Quarantine status of MMU (Selected/Not Selected), number of calls running on each MMU, and time the MMU has been in Quarantine mode.

Syntax

The command syntax for STATUS is:

```
status
```

Example

Figure 3-32 shows the response received before selecting in quarantine status. Figure 3-33 shows the response after selecting in quarantine status.

**Figure 3-32**
Example before selecting in quarantine

```
+----------------------------------+
<table>
<thead>
<tr>
<th>Server</th>
<th>PM</th>
<th>Status</th>
<th>Time in Quarantine</th>
<th>Call</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>HH  MM  SS</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>SVR7</td>
<td>Selected</td>
<td>00:00:00</td>
<td>0</td>
</tr>
</tbody>
</table>
+----------------------------------+
```

**Figure 3-33**
Example after selecting in quarantine

```
+----------------------------------+
<table>
<thead>
<tr>
<th>Server</th>
<th>PM</th>
<th>Status</th>
<th>Time in Quarantine</th>
<th>Call</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>HH  MM  SS</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>SVR7</td>
<td>Selected</td>
<td>00:00:04</td>
<td>0</td>
</tr>
</tbody>
</table>
+----------------------------------+"
**TRAVER**

**About TRAVER**

The TRAVER (TRAnslations VERification) command is a MAP level command used to examine the translation routes of a particular call. It does involve a Call Process; however, it only simulates the translation path that a real Call Process would go through. For example, when you perform a TRAVER for a trunk-to-mobile call, it does not start a trunk-to-mobile call, but only displays the translations path that such a call would follow.

The CPC option in the TRAVER command allows specification of the Subscriber Category for use during translation verification. The CPC option accepts CPC values in the range 17 to 254.

Traver also displays results for the search for a match in Table GCPCXLA for the case of MS selector.

TRAVER uses RC SVC VIDEO input to display any new datafilled RC selector set SVC VIDEO in table GSMCHAR2.

The TRAVER command allows the user to verify the translations tables for a user-specified call. It provides translations and routing information as if it received the digits from an originator and displays the results. A TRAVER report can display the tuples of the translation tables used to translate a call with the TRACE (T) option, or the route list arrived from the result of translations with the NO TRACE (NT) option, or the results of the T and NT options with the BOTH (B) option.

TRAVER displays the results of a search for a match in table CDNCHAR. However, for table CDNCHAR based translations, only the T option is supported. The T option provides a route with CDNCHAR based translations. The NT option would give a route without CDNCHAR functionality. The B option would result in two different set of routes for call termination in the same display. This allows the user to know what could have been a possible path if CDNCHAR functionality was not used.

It can also display the results of a search for a match in table CDNCHAR for CAP and INAP protocol. Only TRAVER option B for MS selector is supported. LAC, CID/SAC options can now be replaced with XLAENTRY option. This only works with MS selector.

TRAVER was designed to help the user quickly identify translations errors, oversights, or misdirection while debugging and testing software. This allows the user to correct datafill problems more efficiently.
TRAVER is best used at the CI level of the MAP. With TRAVER, the user can specify the type of call originator, the number being processed, and the kind of report desired. TRAVER also can be used as a teaching tool to reveal how a call works its way through the MSC. For additional information on the TRAVER command, refer to DMS-100 Family Command Reference Manual, 297-1001-822.

Syntax

Following is the format and feature subset for the MSC TRAVER command that is used to test GSM wireless calls (it is not a complete list):

```plaintext
> help traver
Parms: <ORIG> {MX <OPTION> {MOBORIG}
....................................... (Note: All options not shown)
[<CPC> {CPC <CPCNAME> {FRENCH,ENGLISH GERMAN, RUSSIA, SPANISH, SPARLNG1, SPARLNG2, SPARLNG3, RESERVED, OCS, CSP, DATA, TEST, NONVOICE, PAYPHONE, CATEGORY17 CATEGORY18 ..................... (CATEGORYxx) CATEGORY225 NSEP CATEGORY227 ..................(CATEGORYxxx) CATEGORY254)]]
.........................
```

Switch output

A switch output example of the TRAVER command follows:

```
CI:
> imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using pgmscstpc17bn PRODUCT: GMSO.170 LOAD: GMSO0.170 LAYER: BAS.20.0.BO LAYER: TL.19.0.BO LAYER: SHR.19.0.AA LAYER: GSM.17.0.BN >traver
```
Next par is: <ORIG> {MX <OPTION> {MOBORIG}
<PROFNAME> STRING
[<CENTREX> {CTX <ORIGMIN> STRING}]
[<ORIGMIN> {ORIGMIN <ORIGMIN> STRING}]
[<CELL> {CELL <CELLSTR> STRING}],
RR <SWID> {1 TO 127}
<TERMTRK> {1 TO 8191}
<TRACE> {NT,
T,
B},
MS <MSISDN> STRING
[<XIMATE_ON> {MSRN,
CFN,
HON}]
[<LAC> {LAC <LAC> {0 TO 65535}]]
[<CELL/SAC> {CID <CID> {0 TO 65535},
SAC <SAC> {0 TO 65535}]
[<CUSTGRP> {CUSTGRP <CUSTGRP> {0 TO 4095}]
[<NCOS> {NCOS <NCOS> {0 TO 511}]
[<PIC> {PIC <PIC> STRING}]
[<IMSI> {IMSI <IMSI> STRING}]
BOIC,
BOICEXHC,
PREMINFO,
PREMENT,
OPS1,
OPS2,
OPS3,
OPS4}]
TA <TABLE> {SERVICE <RTEREF> {1 TO 99},
BGIDMAP},
AVLN <CLLI> STRING
<MEMBER> {0 TO 9999},
R <TABLE> {HNPARTE <HNPA> {0 TO 999}
<RTEREF> {1 TO 1023},
FNPARTE <FNPA> {0 TO 999}
<RTEREF> {1 TO 1023},
STSRTE <FNPA> {0 TO 999}
<STS> {0 TO 999}
<RTEREF> {1 TO 1023},
OFRT <RTEREF> {1 TO 1023},
IBNRTE <RTEREF> {1 TO 1023},
FXRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
FAKRE <XLANAME> STRING
<RTEREF> {1 TO 1023},
OFCTRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
CTRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
IBNRT2 <RTEREF> {1 TO 1023},
IBNRT3 <RTEREF> {1 TO 1023},
IBNRT4 <RTEREF> {1 TO 1023},
OFARTE <RTEREF> {1 TO 1023},
OFARTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
CFRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
IBNRT2 <RTEREF> {1 TO 1023},
IBNRT3 <RTEREF> {1 TO 1023},
IBNRT4 <RTEREF> {1 TO 1023},
OFR2 <RTEREF> {1 TO 1023},
OFR3 <RTEREF> {1 TO 1023},
OFR4 <RTEREF> {1 TO 1023},
OVR0 <RTEREF> {1 TO 1023},
OVR1 <RTEREF> {1 TO 1023},
OVR2 <RTEREF> {1 TO 1023},
OVR3 <RTEREF> {1 TO 1023},
OVR4 <RTEREF> {1 TO 1023},
OVR5 <RTEREF> {1 TO 1023},
OVR6 <RTEREF> {1 TO 1023},
OVR7 <RTEREF> {1 TO 1023},
OVR8 <RTEREF> {1 TO 1023},
OVR9 <RTEREF> {1 TO 1023},
OVR10 <RTEREF> {1 TO 1023},
OVR11 <RTEREF> {1 TO 1023},
OVR12 <RTEREF> {1 TO 1023},
OVR13 <RTEREF> {1 TO 1023},
OVR14 <RTEREF> {1 TO 1023},
OVR15 <RTEREF> {1 TO 1023},
OVR16 <RTEREF> {1 TO 1023},
OVR17 <RTEREF> {1 TO 1023},
OVR18 <RTEREF> {1 TO 1023},
OVR19 <RTEREF> {1 TO 1023},
OVR20 <RTEREF> {1 TO 1023},
OVR21 <RTEREF> {1 TO 1023},
OVR22 <RTEREF> {1 TO 1023},
OVR23 <RTEREF> {1 TO 1023},
OVR24 <RTEREF> {1 TO 1023},
OVR25 <RTEREF> {1 TO 1023},
OVR26 <RTEREF> {1 TO 1023},
OVR27 <RTEREF> {1 TO 1023},
OVR28 <RTEREF> {1 TO 1023},
OVR29 <RTEREF> {1 TO 1023},
OVR30 <RTEREF> {1 TO 1023},
OVR31 <RTEREF> {1 TO 1023},
OVR32 <RTEREF> {1 TO 1023},
OVR33 <RTEREF> {1 TO 1023},
OVR34 <RTEREF> {1 TO 1023},
OVR35 <RTEREF> {1 TO 1023},
OVR36 <RTEREF> {1 TO 1023},
OVR37 <RTEREF> {1 TO 1023},
OVR38 <RTEREF> {1 TO 1023},
OVR39 <RTEREF> {1 TO 1023},
OVR40 <RTEREF> {1 TO 1023},
OVR41 <RTEREF> {1 TO 1023},
OVR42 <RTEREF> {1 TO 1023},
OVR43 <RTEREF> {1 TO 1023},
OVR44 <RTEREF> {1 TO 1023},
OVR45 <RTEREF> {1 TO 1023},
OVR46 <RTEREF> {1 TO 1023},
OVR47 <RTEREF> {1 TO 1023},
OVR48 <RTEREF> {1 TO 1023},
OVR49 <RTEREF> {1 TO 1023},
OVR50 <RTEREF> {1 TO 1023},
OVR51 <RTEREF> {1 TO 1023},
OVR52 <RTEREF> {1 TO 1023},
OVR53 <RTEREF> {1 TO 1023},
OVR54 <RTEREF> {1 TO 1023},
OVR55 <RTEREF> {1 TO 1023},
OVR56 <RTEREF> {1 TO 1023},
OVR57 <RTEREF> {1 TO 1023},
OVR58 <RTEREF> {1 TO 1023},
OVR59 <RTEREF> {1 TO 1023},
OVR60 <RTEREF> {1 TO 1023},
OVR61 <RTEREF> {1 TO 1023},
OVR62 <RTEREF> {1 TO 1023},
OVR63 <RTEREF> {1 TO 1023},
OVR64 <RTEREF> {1 TO 1023},
OVR65 <RTEREF> {1 TO 1023},
OVR66 <RTEREF> {1 TO 1023},
OVR67 <RTEREF> {1 TO 1023},
OVR68 <RTEREF> {1 TO 1023},
OVR69 <RTEREF> {1 TO 1023},
OVR70 <RTEREF> {1 TO 1023},
OVR71 <RTEREF> {1 TO 1023},
OVR72 <RTEREF> {1 TO 1023},
OVR73 <RTEREF> {1 TO 1023},
OVR74 <RTEREF> {1 TO 1023},
OVR75 <RTEREF> {1 TO 1023},
OVR76 <RTEREF> {1 TO 1023},
OVR77 <RTEREF> {1 TO 1023},
OVR78 <RTEREF> {1 TO 1023},
OVR79 <RTEREF> {1 TO 1023},
OVR80 <RTEREF> {1 TO 1023},
OVR81 <RTEREF> {1 TO 1023},
OVR82 <RTEREF> {1 TO 1023},
OVR83 <RTEREF> {1 TO 1023},
OVR84 <RTEREF> {1 TO 1023},
OVR85 <RTEREF> {1 TO 1023},
OVR86 <RTEREF> {1 TO 1023},
OVR87 <RTEREF> {1 TO 1023},
OVR88 <RTEREF> {1 TO 1023},
OVR89 <RTEREF> {1 TO 1023}),
C <CONSOLE> STRING,
V <VFG> STRING
[<OPT> {OW <ZONE> STRING}],
L <LINE> STRING
[<CALL_TYPE> {VI,
CMD,
PMD}]}
[<FLASH> {FLASH}]
[<NSC> {NSC}],
TR <CLLI> STRING
[<CLLIOPT> {SAT <BOOL> "TRUE" or "FALSE"}]
[<MBGOPTS> {MBG <TYPE> {LOCAL,
NATL}]
<ID> {0 TO 4294967295}
<LP> {0 TO 255}
<GAP> STRING]
[<TRIGOPT> {TRIG <PIC> {ALL,
ORIG,
COLLECT}]}
<ACCESS_TYPE> {FGD [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
FGDSNC [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
FGDCUT [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
FGDTRANS [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
UAAUTH [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
UACARD [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
PRI,
DAL,
EDAL,
ONAL,
ONAT,
GTWIMT,
ESNPRI,
OTHER,
ESP,
IMT}

<CALL_TYPE> {ONNET,
OFFNET,
IDD,
NOO,
I800,
TIE,
WATS,
IVPN,
ZPLUSOFFNET,
ZPLUSONNET,
INTOA,
IGA,
IDA,
GVPN,
UNDETERMINED,
OTHER}

<CRITERIA> {NIL,
TRI,
REDIRECTION,
CONFERENCE}}

[<TRKMEM> {TRKMEM <TRKMEM> {0 TO 9999}}]

Enter: <ORIG> <DIGITS OR N FOR NO DIGITS> [CDNIE] [NSF] [TNSIE] [OSAIE] [BC] [SR] [PI] [TRI] [NETINFO] [INFO] [RPOAP] [RPOAS] [NOA] [AIN_OPTIONS] [AIN_INFO>
Parameters

Table 3-37 lists and describes the parameters used with the TRAVER command.

Table 3-37
TRAVER parameter descriptions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;ORIG&gt;</td>
<td>Mandatory</td>
<td>Origination.</td>
</tr>
<tr>
<td>MS &lt;MSISDN&gt;</td>
<td></td>
<td>The MSISDN parameter is a string used as the MSISDN of the originating mobile station. The MSISDN should be no more than 18 digits. After verifying that only digits are entered, the MSISDN is used as the calling number and the billing number. It is not ensured that a valid MSISDN is entered.</td>
</tr>
<tr>
<td>LAC</td>
<td>Mandatory</td>
<td>Location Area Code of the originating mobile. This parameter must be used in conjunction with the CID parameter or an error will result. The LAC specified must: • Be valid LAC used within the MSC • Use LAC 1000 when TRAVERing call forwarding, msrn, hon, vms, and vlr translations.</td>
</tr>
<tr>
<td>CID</td>
<td>Mandatory</td>
<td>Cell Identifier within the location area. This parameter must be used in conjunction with the LAC parameter or an error will result. The CID specified must: • Be valid CID used within the MSC • Use CID 1,2,3,7 &amp; 8 respectively for TRAVERing call forwarding, msrn, hon, vms, and vlr translations.</td>
</tr>
<tr>
<td>CPC</td>
<td>Optional</td>
<td>Subscriber’s category</td>
</tr>
</tbody>
</table>
### Table 3-37
TRAVER parameter descriptions (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTGRP</td>
<td>Optional</td>
<td>Customer group number. This parameter must be used in conjunction with NCOS. Valid entries: 0 to 4095.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CUSTGRP must:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Be used for hotlines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Be used for specialized routing if class of service is required.</td>
</tr>
<tr>
<td>IMSI</td>
<td>Optional</td>
<td>The International Mobile Subscriber Identifier.</td>
</tr>
<tr>
<td>NCOS</td>
<td>Optional</td>
<td>Network class of service. This parameter is used only for Mobile Subscribers with a class of service. Valid entries: 0 to 255</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The NCOS must be used in conjunction with CUSTGRP TRAVERs.</td>
</tr>
<tr>
<td>PIC</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>ODB</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>TR &lt;CLLI&gt;</td>
<td>Mandatory</td>
<td>The name of the trunk group entry. This type of TRAVER is used for:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Incoming call from PSTN/IMT to mobile</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Incoming call from PSTN/IMT to VMS and/or specified digits allowed by customer</td>
</tr>
<tr>
<td>&lt;DIGITS OR N</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>FOR NO DIGITS&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;TNS_DIGITS&gt;</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>&lt;CPC&gt;</td>
<td>Optional</td>
<td></td>
</tr>
</tbody>
</table>

—sheet 2 of 3—
TRAVER parameters

- A mobile-to-mobile call TRAVER does not display all the tables up to call termination in one pass. Multiple TRAVER commands are required to analyze different stages of translation. There are separate TRAVER commands to verify termination to HLR query and to verify the MSRN, HON or CFN translations.

- The PCS1900 TRAVER command to verify Other Common Carrier route (Equal Access) does not automatically append PIC to the called number. The PIC information must be entered as a CAC dialed call (10XXX/101XXXX + Called Number), where XXX/XXXX is subscriber PIC.

- Index 0 of table PCSATTR is used to get the originating LATA of the call. It must be datafilled with at least the originating LATA in tuple 0.

- PROTOCOL Option verifies the INAP and CAP NOA translation. PROTOCOL option is supported when MS option and CDNCHAR option are input. The PROTOCOL option is either INAP or CAP, followed by NPI and NOA values.

   PROTOCOL option is supported for MS option only. When the MS option is specified, and the CDNCHAR is used, then the INAP/CAP
option is required.

When all the required information are specified for the TRAVER, table CDNCHAR displays the result information in TRAVER. If a match is found in table CDNCHAR, the CDNNAME which has been matched is displayed. If no match is found, this fact is shown in the TRAVER. If the CDNCHAR option is not specified, table CDNCHAR does not appear in the TRAVER.

• XLAENTRY option is supported for MS option only. When the MS option is specified, the XLAENTRY option can be selected to input an index which matches a tuple in table XLAENTRY.

The XLAENTRY index is used by the TRAVER to enter a translation entry point in table XLAENTRY and then continue the translation verification.

Examples

Figure 3-34 through Figure 3-59 provide various TRAVER examples.

TRAVER call types

Use Table 3-38 to find examples of the various TRAVER call types.

Table 3-38
TRAVER call types

<table>
<thead>
<tr>
<th>Description</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAVER outgoing call for MS-to-MS call trace using T trace option</td>
<td>Figure 3-34</td>
</tr>
<tr>
<td>TRAVER incoming call for land-to-MS call trace with the T parameter</td>
<td>Figure 3-35</td>
</tr>
<tr>
<td>MS with CUSTGRP/NCOS to another MS</td>
<td>Figure 3-36</td>
</tr>
<tr>
<td>MS to land call</td>
<td>Figure 3-37</td>
</tr>
<tr>
<td>MS-to-land call with source directed routing specified</td>
<td>Figure 3-38</td>
</tr>
<tr>
<td>TRAVER with BC translation (1 of 2)</td>
<td>Figure 3-52</td>
</tr>
<tr>
<td>TRAVER with GSM category (CPC) translation</td>
<td>Figure 3-54</td>
</tr>
<tr>
<td>TRAVER with ODB translation</td>
<td>Figure 3-55</td>
</tr>
<tr>
<td>TRAVER with RANN translation</td>
<td>Figure 3-56</td>
</tr>
<tr>
<td>TRAVER with INAP DP3 query</td>
<td>Figure 3-57</td>
</tr>
<tr>
<td>Traver with CDNCHAR table output with CDNNAME match</td>
<td>Figure 3-58</td>
</tr>
<tr>
<td>TRAVER XLAENTRY option</td>
<td>Figure 3-59</td>
</tr>
</tbody>
</table>
Table 3-38
TRAVER call types (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS-1900 MS-to-land call outside the continental USA</td>
<td>Figure 3-39</td>
</tr>
<tr>
<td>PCS-1900 MS using CAC to call an international number</td>
<td>Figure 3-40</td>
</tr>
<tr>
<td>PCS-1900 MS using CAC to call a national number</td>
<td>Figure 3-41</td>
</tr>
<tr>
<td>PCS-1900 MS originated call using FGB</td>
<td>Figure 3-42</td>
</tr>
<tr>
<td>MSRN returned from the HLR</td>
<td>Figure 3-43</td>
</tr>
<tr>
<td>MS handover call</td>
<td>Figure 3-44</td>
</tr>
<tr>
<td>MS call forwarding to another MS</td>
<td>Figure 3-45</td>
</tr>
<tr>
<td>MS call forward to land</td>
<td>Figure 3-46</td>
</tr>
<tr>
<td>Lack of IN1 query capability</td>
<td>Figure 3-47</td>
</tr>
<tr>
<td>TRAVER with TNS parameter in an incoming IAM</td>
<td>Figure 3-48</td>
</tr>
<tr>
<td>TRAVER with TNS parameter received with MSRN in IAM</td>
<td>Figure 3-49</td>
</tr>
<tr>
<td>TRAVER with BC translation (1 of 2)</td>
<td>Figure 3-52</td>
</tr>
<tr>
<td>TRAVER with GSM category (CPC) translation</td>
<td>Figure 3-54</td>
</tr>
<tr>
<td>TRAVER with ODB translation</td>
<td>Figure 3-55</td>
</tr>
<tr>
<td>TRAVER with RANN translation</td>
<td>Figure 3-56</td>
</tr>
<tr>
<td>TRAVER with INAP DP3 query</td>
<td>Figure 3-57</td>
</tr>
<tr>
<td>Traver with CDNCHAR table output with CDNNAME match</td>
<td>Figure 3-58</td>
</tr>
<tr>
<td>TRAVER XLAENTRY option</td>
<td>Figure 3-59</td>
</tr>
</tbody>
</table>

**TRAVER of outgoing mobile-to-mobile call trace using T trace option**

Figure 3-34 shows TRAVER output of a test call when 61411002131002 is dialed out on a simulated network. The ‘T’ option provides call simulation and displays the tables used to translate and route the call.
Figure 3-34
TRAVER outgoing call for MS-to-MS call trace using T trace option

<table>
<thead>
<tr>
<th>Line</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>&gt;traver ms 1002131001 61411002131002 t</td>
</tr>
<tr>
<td>8</td>
<td>WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS</td>
</tr>
<tr>
<td>9</td>
<td>TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.</td>
</tr>
<tr>
<td>10</td>
<td>*** MSC TRANSLATION ***</td>
</tr>
<tr>
<td>11</td>
<td>TABLE XLAENTRY</td>
</tr>
<tr>
<td>12</td>
<td>0 PX GSMOBILE</td>
</tr>
<tr>
<td>13</td>
<td>TABLE PXHEAD</td>
</tr>
<tr>
<td>14</td>
<td>GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON</td>
</tr>
<tr>
<td>15</td>
<td>STD</td>
</tr>
<tr>
<td>16</td>
<td>THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131002</td>
</tr>
<tr>
<td>17</td>
<td>TABLE PXCODE</td>
</tr>
<tr>
<td>18</td>
<td>GSMOBILE 61411002 61411002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)$</td>
</tr>
<tr>
<td>19</td>
<td>TABLE OFCHEAD</td>
</tr>
<tr>
<td>20</td>
<td>SRI SDFLT NODFOP NOCON STD</td>
</tr>
<tr>
<td>21</td>
<td>THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 411002131002</td>
</tr>
<tr>
<td>22</td>
<td>TABLE OFCCODE</td>
</tr>
<tr>
<td>23</td>
<td>SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)$</td>
</tr>
<tr>
<td>24</td>
<td>TABLE GSMDEFS</td>
</tr>
<tr>
<td>25</td>
<td>INTL (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) $)</td>
</tr>
<tr>
<td>26</td>
<td>+++ TRAVER: SUCCESSFUL CALL TRACE +++</td>
</tr>
</tbody>
</table>

Lines 7–22 consist of the universal translations tables that are used to determine how this call should be translated. The call is given an XLANAME (translation name) of “GSMOBILE.”

Line 25 shows that the call was successfully processed.

**TRAVER of incoming land-to-mobile call trace with the T parameter**

Figure 3-35 shows an example of a TRAVER of an incoming land-to-mobile call.
Figure 3-35
TRAVER incoming call for land-to-MS call trace with the T parameter

<table>
<thead>
<tr>
<th>Line</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>&gt;traver tr pet7etsi1 61411002131002 t</td>
</tr>
<tr>
<td>33</td>
<td>TABLE TRKGRP</td>
</tr>
<tr>
<td>34</td>
<td>PET7ETSI1 PET 0 NPDGP NCRT 0 ASEQ PX GSMOBILE NILLATA MSC Y 5 1 0 0</td>
</tr>
<tr>
<td>35</td>
<td>CONT ALLOWED ALWAYS Y 6141 $</td>
</tr>
<tr>
<td>36</td>
<td>TABLE PXHEAD</td>
</tr>
<tr>
<td>37</td>
<td>GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON</td>
</tr>
<tr>
<td>38</td>
<td>STD</td>
</tr>
<tr>
<td>39</td>
<td>THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131002</td>
</tr>
<tr>
<td>40</td>
<td>TABLE PXCODE</td>
</tr>
<tr>
<td>41</td>
<td>GSMOBILE 61411002 61411002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)$</td>
</tr>
<tr>
<td>42</td>
<td>TABLE OFCHHEAD</td>
</tr>
<tr>
<td>43</td>
<td>SRI SDFLT NODFOP NOCON STD</td>
</tr>
<tr>
<td>44</td>
<td>THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 411002131002</td>
</tr>
<tr>
<td>45</td>
<td>TABLE OFCCODE</td>
</tr>
<tr>
<td>46</td>
<td>SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)$</td>
</tr>
<tr>
<td>47</td>
<td>TABLE GSMDEFS</td>
</tr>
<tr>
<td>48</td>
<td>INTL (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) $)</td>
</tr>
<tr>
<td>49</td>
<td>+ + + TRAVER: SUCCESSFUL CALL TRACE + + +</td>
</tr>
<tr>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Line 1 shows a TRAVER for a trunk originated call.

Lines 2–4 show the TRKGRP table used to bring the call in from the network in preparation for entry into the universal translations tables.

Lines 5–17 consist of the universal translations tables used to determine how this call should be translated.
TRAVER of mobile with CUSTGRP/NCOS to another MS

Figure 3-36 shows a TRAVER of an MS-to-MS call with a customer group of 37 and network class of service of 5.

Figure 3-36
MS with CUSTGRP/NCOS to another MS

```
>traver ms 61411002131002 lac 1 cid 1 custgrp 37 ncos 5 647799 t

*** VLR TRANSLATION FOR CUSTGRP AND NCOS ***

TABLE GSMCUST
37 BANK (XLT PX BANKXLA)$
TABLE GSMNCOS
37 5 BANK_MX (XLT PX MEXICXLA)$

TABLE PXHEAD
MEXICXLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 647799
TABLE PXCODE
MEXICXLA 64 64 DMOD (INSRT 214684) (DEL 2) (XLT PX DEADRTE)$

TABLE PXHEAD
DEADRTE SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
VLR TRANSFORMED CALLED NUMBER IS: 2146847799

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 0 (11)$ $ $ $ (AOC 1 ZONE1)$
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799
TABLE PXCODE
LAC1XLA 21468 21468 DBQ (NSC GSMSRI) (GSMIDX SRI6)$
TABLE GSMDEFS
SRI6 (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 25) $)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
TRAVER of a mobile-to-land call

Figure 3-37 shows a TRAVER of a mobile-to-land call. NPI and NOA are input to TRAVER command using the CNDCHAR option. Options T and NT are not supported.

Table CDNCHAR displays the required information in TRAVER. If a match is found in table CDNCHAR, the matching CDNNAME tuple is displayed. If no match is found, it is indicated in the TRAVER.

Figure 3-37
MS-to-land call

```plaintext
>traver ms 6141002131002 19726850423 b
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***
TABLE XLAENTRY
 0 PX GSMOBILE

TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE PXCODE
GSMOBILE 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$

TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE OFCCODE
PET7ETSI 1 1 RTE (DEST 1)$

TABLE: OFCRTE
KEY: PET7ETSI 1
  . S PET7ETSI1
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES
1 ETSIISUPP 61410315000 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
TRAVER of mobile-to-land call with source directed routing specified

Figure 3-38 shows a TRAVER of a mobile-to-land call that has the location area code and cell identifier specified.

Figure 3-38
MS-to-land call with source directed routing specified

>traver ms 61411002131002 lac 1 cid 2 19726850423 b

*** MSC TRANSLATION ***

TABLE LAC
1 2 ITACBSS1 UNRSTRCT 0 0 0 (11)$ $ $ $ (AOC 1 ZONE1)$
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE PXCODE
LAC1XLA 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$
TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE OFCCODE
PET7ETSI 1 1 RTE (DEST 1)$
TABLE: OFCRTE
KEY: PET7ETSI 1
  . S PET7ETSI1
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 PET7ETSI1 19726850423 ST
  BILL 61411002131002 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 VCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++

TRAVER of PCS-1900 calls

Figure 3-39 through Figure 3-42 show TRAVERs of various PCS-1900 calls.
Figure 3-39
PCS-1900 MS-to-land call outside the continental USA

>TRAVER MS 5002223242 LAC 1 CID 1 14034476674 BS

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 14034476674
TABLE PXCODE
LAC1XLA 12 19 GCP (SC 101) (XLT PX EAXLA) (MM 8 11) $
TABLE PXHEAD
EAXLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 101044414034476674
TABLE PXCODE
EAXLA 1010444 1010444 GCP (DC) (XLT PX CAR4XLA) (PF 7) $
TABLE PXHEAD
CAR4XLA DFLT CONT $ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 14034476674
TABLE PXCODE
CAR4XLA 12 19 CONT (XLT FA CAR4XLA) (PF 1) $
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE PXCODE
CAR4XLA 9 9 CONT (XLT FA CAR4XLA) $
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE PXCODE
CAR3 XLA 2 9 CRSC (CARRIER CAR 3DIG) (XLT PX SCARXLA) $
TABLE OCCINFO
CAR1 0444 TRANS Y Y Y N N N N N N N Y Y SHORT 0 NONE N N N N N N N N
TABLE FAHEAD
SCARXLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 4034476674
TABLE PXCODE
SCARXLA 403 403 RTE (DEST 1)$

TABLE: FARTE SCARXLA 403 403 RTE (DEST 1)$

KEY: SCARXLA 1
. S ITACANSI2
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 ITACANSI2 4034476674 ST
BILL 5002223242 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
Figure 3-40
PCS-1900 MS using CAC to call an international number

>TRAVER MS 5002223242 LAC 1 CID 1 1022201192214573140 B

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722)$
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1022201192214573140
TABLE PXCODE
LAC1XLA 10222 10222 GCP (DC) (XLT PX CAR3XLA) (PF 5)$
TABLE PXHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 01192214573140
TABLE PXCODE
CAR3XLA 011 011 GCP (INTL) (XLT PX CAR3XLA) (CLASS INTL) (PF 3)$
TABLE PXHEAD
CAR3XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE PXCODE
CAR4XLA 12 19 CONT (XLT FA CAR4XLA) (PF 1)$
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 4034476674
TABLE FACODE
CAR3XLA 2 9 CRSC (CARRIER CAR 3DIG) (XLT PX SCARXLA) $
TABLE OCCINFO
CAR1 0222 TRANS Y Y Y Y N N N N N Y Y SHORT 0 NONE N N N N N N N N N N Y N N
TABLE PXHEAD
CAR1XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE PXCODE
SCARXLA 2 9 RTE (DEST 1)$
TABLE: PXRTE
KEY: SCARXLA 1 $
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2 92214573140 ST
BILL 5002223242 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
Figure 3-41
PCS-1900 MS using CAC to call a national number

>TRAVER MS 5002223242 LAC 1 CID 1 1044417133308214 B

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722)$
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1044417133308214
TABLE PXCODE
LAC1XLA 10444 10444 GCP (DC) (XLT PX CAR3XLA) (CONSUME 5) (PF 5)$
TABLE PXHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 17133308214
TABLE PXCODE
CAR3XLA 12 19 CONT ((XLT FA CAR3XLA) (PF 1)$
TABLE FAHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 7133308214
TABLE FACODE
CAR3XLA 2 9 CRSC ((CARRIER CAR 3DIG) (XLT FA SCARXLA)$
TABLE OCCRDIG
TUPLE NOT FOUND
INSIDE CONTINENTAL USA CALL
TABLE LATAXL
DIGITS USED TO INDEX TABLE LATAXL ARE: 7133308214
DALLAS 713 INTER INTRA STD
TABLE OCCINFO
CAR1 0444 TRANS Y Y Y N N N N Y Y SHORT 0 NONE N N N N N N N N Y N N
TABLE FAHEAD
SCARXLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 7133308214
TABLE FACODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE: FARTE
KEY: SCARXLA 1
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2 17133308214 ST
BILL 5002223242 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
Figure 3-42
PCS-1900 MS originated call using FGB

```
> TRAVER MS 5002223242 LAC 1 CID 1 9503665 B
*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM PINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 9503665
TABLE PXCODE
LAC1XLA 9503665 9503665 FGB (XLT PX CARXLA) (CARRIER CAR)$
TABLE PFGBCIC4
CAR2 3665
TABLE PXHEAD
CARXLA DPIIT TRMT (OFC VACT)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 9503665
TABLE PXCODE
CARXLA 9503665 9503665 RTE (DEST 1)$
TABLE: PXRTE
KEY: CARXLA 1
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 ITACANSI2 9503665 ST
BILL 5002223242 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

TRAVER of mobile whose MSRN is returned from the HLR

Figure 3-43 shows a TRAVER of a call in which the HLR returns the mobile’s MSRN.
Figure 3-43
MSRN returned from the HLR

>traver ms 61411002131002 msrn 614140800100 b
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
2 PX MSRNXLA

TABLE PXHEAD
MSRN XLA DFLT CONT (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 614140800100
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 614140800100
TABLE PXCODE
GSMOBILE 61414 61414 CONT (MM 3 18) (CONSUME 4) (XLT PX MSRNXLA)$
TABLE PXHEAD
MSRN XLA DFLT CONT (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 40800100
TABLE PXCODE
MSRN XLA 408 408 CONT (CONSUME 0) (XLT OFC PAGING)$
TABLE OFCHAND
PAGING SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 40800100
TABLE OFCCODE
PAGING 408 408 DNRTE (DN 6141 4080)

+++ TRAVER: SUCCESSFUL CALL TRACE +++
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES
1 FEATURE 614140800100 ST
BILL 1411002131002

TREATMENT ROUTES. TREATMENT IS: GNCT
1 VCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++

TRAVER of mobile handover call

Figure 3-44 shows a TRAVER of an MS handover call.
Figure 3-44
MS handover call

```plaintext
>traver ms 4151234566 hon 5291234567 b

WARNING: NO LAC AND CID/SAC PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE PCSATTR
0 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 702) $
TABLE XLAENTRY
3 PX HONXLA

TABLE PXHEAD
HONXLA DFLT CONT ( CONSUME 0) ( XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 5291234567
TABLE PXCODE
HONXLA 529 529 CONT ( CONSUME 0) ( XLT OFC HANDOVER)$
TABLE OFCHEAD
HANDOVER SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 5291234567
TABLE OFCCODE
HANDOVER 529 529 DNRTE ( DN 214 529)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID/SAC PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

TREATMENT ROUTES. TREATMENT IS: BLDN
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

TRAVER of a mobile call forwarding to another mobile

Figure 3-45 shows a TRAVER of a mobile call forwarding to another mobile.
Figure 3-45
MS call forwarding to another MS

> traver ms 61411002131002 cfn 61411002131007 b

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
1 PX CFXLA

TABLE PXHEAD
CFXLA DFLT CONT (XLT PX GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131007

TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED

TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131007

TABLE PXCODE
GSMOBILE 614111002 614111002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)$

TABLE OFCHEAD
SRI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 411002131007

TABLE OFCCODE
SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)$

TABLE GSMDEFS
(MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) $)

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

+++ TRANSLATION ROUTES TO SRI QUERY FEATURE +++
DIGIT TRANSLATION ROUTE NOT AVAILABLE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

**TRAVER of mobile call forwarding to land**

Figure 3-46 shows a TRAVER of a mobile call forwarding to land.
>traver ms 61411002131002 cfn 19726850423 b

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
1 PX CFXLA

TABLE PXHEAD
CFXLA DFLT CONT (XLT PX GSMOBILE)$ NODFOP NOCON STD

THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED

TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD

THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE PXCODE
GSMOBILE 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$

TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD

THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 19726850423

TABLE OFCCODE
PET7ETSI 1 1 RTE (DEST 1)$

TABLE: OFCRTE
KEY: PET7ETSI 1

.S PET7ETSI1
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES
1 PET7ETSI1 19726850423 ST
   BILL 61411002131002 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 VCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++
**TRAVER for lack of IN1 query capability**

TRAVER can print a message if the call has routed to the IN1 feature, or display an error message if the MSC does not have IN1 Query capability (that is, the GSM_IN1_ACTIVE office parameter is set to “N”). After the office parameter has been modified, the TRAVER can be used to determine whether toll free SAC calls are being routed correctly to the IN1 feature. See Figure 3-47.

**Detecting a route on SCP returned routing number**

A TRAVER can be performed on the SCP returned routing number. To route on the toll free number and SCP returned routing number, additional tables must be datafilled. For details on the TRAVER command, see NTP DMX-MTX Customer Data Schema Reference Manual; 411-2131-451, Volume 1, 2, or 3, or NTP DMS-100 Family Command Reference Manual, 297-1001-822.

Figure 3-47
Lack of IN1 query capability

```
> TRAVER MS 5002223242 LAC 81 CID 1 18005551212 B
*** MSC TRANSLATION ***
TABLE LAC
  81 1 ITACBSS1 UNRSTRCT 0 0 (81)$ (GSMNA 1)$
TABLE PCSATTR
  1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 702) $
TABLE XLAENTRY
  81 PX TFSACXLA
TABLE PXHEAD
  TFSACXLA DFLT CONT (XLT AM PCSEA)$ NODFOP NOCON STD
  THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 18005551212
TABLE PXCODE
  TFSACXLA 1800 1800 DBQ (IN1TF 3) (DBQCONT AM SCPRETXLA) $
+++ THIS MSC DOES NOT HAVE IN1 SCP QUERY CAPABILITY +++
TABLE AMHEAD
  SCPRETXLA SDFLT NODFOP CON STD
...etc...
+++ TRAVER: SUCCESSFUL CALL TRACE +++
+++ THIS MSC DOES NOT HAVE IN1 SCP QUERY CAPABILITY +++
+++ TRANSLATION ROUTES TO IN1 TOLL FREE QUERY FEATURE +++
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
TRAVER with TNS parameter in an incoming IAM

The TRAVER command can be used to simulate the receipt of a TNS parameter on an incoming IAM by using the following command syntax:

`TRAVER tr <trunk name> <10xxx/101xxxx + dialled digits> b`

Since the TNS parameter is automatically prefixed to the CALLED NUMBER, the called number must be prefixed with the correct 10XXX/101XXXX CAC combination:

- If the EAEO_FOUR_DIGIT_CIC_STATUS is set to THREEDIG, the called number must be prefixed with a 10XXX, where XXX is the three digit TNS value received in the incoming IAM.
- If the office parameter is set to FOURDIG, a 101XXXX should be prefixed before the called number.
- If the office parameter is set to PERMISSIVE, you must determine whether a 3- or 4-digit TNS value is to be received and prefix the correct CAC to the called number.

The example shown in Figure 3-48 assumes that appropriate datafill is present in the associated tables. Datafill has to be set up so that a 1 is prefixed before the called number but after the 10XXX/101XXXX CAC. If not, the called number should include the 1 between the 10XXX/101XXXX and the called number.
Figure 3-48
TRAVER with TNS parameter in an incoming IAM

>traver tr tac7at1 106668175611111 b
TABLE TRKGRP
TAC7AT1 PET 0 NPDGP NCRT 0 ASEQ PX LAC81XLA DALLAS AT Y 5 0 CONT ALLOWED
ALLOWED Y 214810 $
TABLE PXHEAD
LAC81XLA DFLT CONT (XLT AM PCSEA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1066681756111111
TABLE PXCODE
LAC81XLA 10666 10666 DMOD (INSRT 1) (AFTER 5) (XLT FA PICXLA)$
TABLE FAHEAD
PICXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1066618175611111
TABLE FACODE
PICXLA 10666 10666 EA (MM 3 18) (XLT FA SWBXLA) (PF 5) (CARRIER SWBELL)$
TABLE OCCRDIG
TUPLE NOT FOUND
INSIDE CONTINENTAL USA CALL
TABLE LATAAXLA
DIGITS USED TO INDEX TABLE LATAAXLA ARE: 8175611111
DALLAS 817 INTER INTRA STD
TABLE OCCINFO
SWBELL 0666 TRANS Y Y Y N Y N N N Y Y Y Y Y Y Y Y Y N
TABLE FAHEAD
SWBXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 181756111111
TABLE FACODE
SWBXLA 1817 1817 CONT (MM 3 18) (CONSUME 4) (XLT FA SWBXLA)$
TABLE FAHEAD
SWBXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 56111111
TABLE FACODE
SWBXLA 561 561 RTE (PF 4) (DEST 1)$
TABLE: FARTE
KEY: SWBXLA 1
. S TAC7IC1
EXIT TABLE FARTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
**TRAVER with TNS option received with MSRN in IAM**

This section applies to incoming IAMs that meet the following criteria:

- The CALLED NUMBER is an MSRN (Mobile Subscriber Roaming Number)
- The incoming trunk is an INC (International Carrier) trunk
- A TNS parameter is included as an optional parameter

If these conditions are met and the call is trying to terminate to a mobile currently served by this MSC, the mobile will **not** be paged unless the operator removes the CAC from the CALLED NUMBER by using the DMOD option. For example, if an MSRN of 12144110000 is received in the incoming IAM from trkgrp TAC7AT1 with a TNS of 666, the datafill must use the DMOD option to completely remove the CAC from the CALLED NUMBER. See Figure 3-49.
Figure 3-49
TRAVER with TNS parameter received with MSRN in IAM

> traver tr tac7at1 12144110000 tns us cic 666 b
Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.
TABLE TRKGRP
TAC7AT1 PET 0 NPDGP NCRT 0 ASEQ PX LAC81XLA DALLAS AT Y 5
0 CONT ALLOWED ALLOWED Y 214810 $
TABLE PXHEAD
LAC81XLA DFLT CONT (XLT AM PCSEA)$ NODFOP TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE AMHEAD
PCSEA SDFLT
THE TOTAL NUMBER OF DIGITS IS 16.
TABLE AMCODE
PCSEA 16 EQ DMOD (XLT FA PICXLA)$
TABLE FAHEAD
PICXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1066612144110000
NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 1066612144110000
TABLE FACODE
PICXLA 10666 10666 DMOD (DEL 5) (XLT FA PCSXLA) (CONSUME 0)$
TABLE FAHEAD
PCSXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 12144110000
TABLE FACODE
PCSXLA 1214411 1214411 CONT (PF 1) (MM 3 18) (CONSUME 4) (XLT OFC PAGING)$
TABLE OFCHEAD
PAGING SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 4110000
TABLE OFCCODE
PAGING 411 411 DNRTE (DN 1214 411)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
TRAVER with ETSI in ISUP

Figure 3-50 shows the TRAVER with ETSI in ISUP command output.

Figure 3-50
TRAVER with ETSI in ISUP

```
>traver tr etsiisupp 61410315000 b cdnchar 1 1
TABLE CDNCHAR
  . Matched on CDNINTL
TABLE TRKGRP
  ETSIISUPP PET 0 NPDGP NCRT 0 ASEQ PX GSMOBILE NILLATA MSC Y 5 1 0 0 CONT ALLOWED
  ALWAYS Y 6141 $
TABLE PXHEAD
  GSMOBILE DFLT CONT ( MM 1 18) ( CONSUME 0) ( XLT PX GSMOBILE)$ NODFOP CON F
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61410315000
TABLE PXCODE
  GSMOBILE 6141031 6141031 CONT ( MM 2 18)( CONSUME 7)( XLT OFC ETSIISUPP)( CDNRT E) 
TABLE CDNUXLA
  . CDNINTL PX GSMOBILE RTE PX GSMOBILE 4
TABLE PXRTET
  KEY: GSMOBILE  4
  . S ANSIISUPP
EXIT TABLE PXRTET

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Call characteristics translations

This feature enhances the existing GSM translation systems to support call translation and routing based on the call’s information or the call’s characteristics.

The call characteristics are the qualities of a call that can be derived from the call’s setup messages, the call agents’ office datafill, or can be defined by the call processing software. The following are the call characteristics supported by this feature:

- **BC – Bearer Capability**
- **GSM category – Calling Party Category also described in Q.767.**
- **ODB – Operator Determined Barring**
- **ANT – Recorded Announcement (RANN) Type**
- **INAP DP3 Query**

Figure 3-52 through Figure 3-57 all show TRAVERs of a call with the preceding call characteristics.
**Figure 3-52**
TRAVER with BC translation (1 of 2)

```
>traver ms 61904444 lac 9 cid 9 5555 BC 64kdata b
*** MSC TRANSLATION ***
TABLE GSMCHAR
DATA64K (BC 64KDATA $)
TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 ( 99)$
TABLE XLAENTRY
99 PX GSMXLA
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
GSMXLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 5555
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE AMHEAD
RENPXLA SDFLT
THE TOTAL NUMBER OF DIGITS IS 4.
TABLE AMCODE
RENPXLA 4 LE TNUM (NNUM CALLINGDN) ( XLT PX RENPXLA)$
TABLE PXHEAD
RENPXLA DFLT TNUM (NNUM CALLEDDN) ( XLT PX GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61904444
TABLE PXCODE
RENPXLA 6190 6190 TNUM (NNUM CALLEDDN) ( XLT FA 90XLA)$
TABLE FAMHEAD
90XLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 5555
TABLE FACODE
90XLA 5 5 DMOD ( INSRT 00116190) ( XLT PX INTXLA)$
TABLE PXHEAD
INTXLA DFLT CONT (XLT AM INTXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 001161905555
TABLE PXCODE
INTXLA 0011 0011 DMOD ( DEL 4) ( XLT FA SNP61XLA)$
```
### Table FAHEAD

```plaintext
SNP61XLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61905555
```

### Table FACODE

```plaintext
SNP61XLA 61905 61905 CONT ( XLT FA IBN7XLA) $
```

### Table FAHEAD

```plaintext
IBN7XLA DFRT RTE ( DEST 2) $ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61905555
```

### Table FACODE

```plaintext
TUPLE NOT FOUND
```

### Table PARTE

```plaintext
IBN7XLA 2 (S RTE2CLLI) $
```

### Table UNIMAP

```plaintext
FA IBN7XLA 2 DATA64K OFC 64KRTE 5
DEFAULT FROM HEAD TABLE USED
```

### Table: OFCRTE

```plaintext
KEY: 64KRTE 5
  . S IBN64KDATA
EXIT TABLE OFCRTE
```

```plaintext
KEY: 64KRTE 5
  . S IBN64KDATA
EXIT TABLE OFCRTE
```
**Figure 3-54**  
**TRAVER with GSM category (CPC) translation**

```
> traver ms 61904444 lac 9 cid 9 5555 ANT cfnty CPC french b

*** MSC TRANSLATION ***

TABLE GSMCHAR
CFNRYFAN (ANT CFNRY) (CPC FRENCH) $

TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 ( 99 ) $

TABLE XLAENTRY
99 PX GSMXLA

TABLE UXLAMAP
PX GSMXLA CFNRYFAN PX CFNRYANN

TABLE PXHEAD
CFNRYANN DFLT RTE ( DEST 2 ) NODFOP NOCON STD

TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE SED

TABLE UNIMAP
CFNRYANN 2 CFNRYFAN OFC CFNRYANN 5

TABLE: OFCCRTE
KEY: CFNRYANN 5
. S FRCHANN3
EXIT TABLE OFCCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Figure 3-55
TRAVER with ODB translation

>traver ms 61904444 odb prement lac 9 cid 9 6666 b

*** MSC TRANSLATION ***

TABLE GSMCHAR
ODBPRENT (ODB PREMENT)$

TABLE XLAENTRY
4 PX RANNODB

TABLE UXLAMAP
TUPLE NOT FOUND

TABLE PXHEAD
RANNODB DFLT TNUM (NNUM CALLINGDN) (XLT AC RANNODB2) NODFOP NOCON STD

TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED

TABLE ACHEAD
RANNODB2 DFLT RTE ( DEST 2)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61904444

TABLE ACCODE
TUPLE NOT FOUND

TABLE UNIMAP
RANNODB2 2 ODBPRENT OFC RANNODB9 9

TABLE: OFCRTE
KEY: RANNODB9 9
. T OFRT 66
EXIT TABLE OFCRTE

TABLE OFRT
66 (S D ODBann36)

+++ TRAVER: SUCCESSFUL CALL TRACE +++
Figure 3-56
TRAVER with RANN translation

>Trace for: ms 61904444 lac 9 cid 9 5555 BC speech ANT page b

*** MSC TRANSLATION ***

TABLE GSMCHAR
RSPCpage (ANT page) (BC SPEECH) $

TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 (99)$

TABLE XLAENTRY
99 PX GSMXLA

TABLE UXLAMAP
PX RANN RSPCpage PX RANN1

TABLE PXHEAD
RANN1 DFLT TNUM (NNUM CALLINGDN) (XLT AC RANN2) NODFOP NOCON STD

TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED

TABLE ACHEAD
RANN2 DFLT RTE (DEST 2)$ NODFOP NOCON STD

THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61904444

TABLE ACCODE
RANN2 6150 6190 RTE (DEST 4)$

TABLE UNIMAP
RANN2 4 RSPCpage OFC RANNCLLI 5

TABLE: OFCRTE
KEY: RANNCLLI 5
. T OFRT 22
EXIT TABLE OFCRTE

TABLE OFRT
22 (S D PageAnnC)

+++ TRAVER: SUCCESSFUL CALL TRACE +++
Figure 3-57
TRAVER with INAP DP3 query

```
>traver ms 1002131001 LAC 401 CID 11 995551234567 t

*** MSC TRANSLATION ***

TABLE LAC
401 11 BSSP2CP EXNATL 0 0 0 (31)$ 1 214 0 (GSMNA 2) (PREXIDX 105)$
TABLE PCSATTR
2 OKLAHOMA (PSEUDONO 405 722 1234) (JIPINFO 405 702) $
TABLE XLAENTRY
31 PX LAC31XLA

TABLE PXHEAD
LAC31XLA DFLT CONT (CONSUME 0) (XLT AM PCSDGS)$ NODFOP NOCON C
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 995551234567
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE AMHEAD
PCSDGS SDFT
THE TOTAL NUMBER OF DIGITS IS 12.
TABLE AMCODE
PCSDGS 12 EQ CONT (XLT AC 12DIG)$
TABLE ACHEAD
12DIG DFLT NCNT $ DFOP $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 995551234567
TABLE ACCODE
12DIG 99 99 DBQ (INAP$) (DBQCONT PX INAP)$

Entering INAP Option

+++ TRANSLATIONS WILL CONTINUE WITH THE ROUTING +++
+++ NUMBER RETURNED BY THE SCP IN +++
+++ TABLE : PXHEAD TABLE +++
+++ ON XLA NAME : INAP +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Figure 3-58
Traver with CDNCHAR table output with CDNNAME match

```
>TRAVER ms 1 61410385000 b CDNCHAR CAP 1 3
  TABLE CDNCHAR
    . Matched on CAPNATL

...```

Figure 3-59
TRAVER XLAENTRY option

```
>TRAVER ms 123456 xlaentry 8 61410385000 b

  *** MSC TRANSLATION ***

  TABLE XLAENTRY
  8 PX GSMOBILE

  TABLE PXHEAD
  GSMOBILE DFLT CONT { MM 1 18 } ( CONSUME 0 ) ( XLT PX GSMOBILE )$ NODFOP CON F
```

**TRAVER for translations based on CPC**

Figure 3-60 shows TRAVER for VLR translations based on CPC. Figure 3-61 shows TRAVER for route characteristic translations based on CPC.
Figure 3-60
TRAVER VLR translations based on CPC

```
>TRAVER MS 7654321 LAC 1 CID 1 cpc category28 647799 b

*************

*** VLR TRANSLATION FOR CPC ***

TABLE GCPCXLA
28 PX NWSIMXLA

TABLE PXHEAD
NWSIMXLA SDFLT DFOP NOCON STD
TABLE PXCODE
NWSIMXLA 64 64 DMOD (DEL 2) (INSRT 214684) $

VLR TRANSFORMED CALLED NUMBER IS: 2146847799

*** MSC TRANSLATION ***

TABLE LAC
1 1 GSMRTESET1 0 0 $
TABLE XLAENTRY
0 PX GSMOBILE

TABLE PXHEAD
GSMOBILE DFLT DMOD (XLT OFC GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799

TABLE PXCODE
GSMOBILE 21 21 CONT ( XLT OFC GSMOBILE)$

TABLE OFCHEAD
GSMOBILE SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799

TABLE OFCCODE
GSMOBILE 21 21 RTE ( DEST 2)$
TABLE: OFCRTE
KEY: GSMOBILE 2
  . T OFRT 3
  . . TABLE OFRT
  . . 3 DN 214 684
  . . EXIT TABLE OFRT
EXIT TABLE OFCRTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Figure 3-61

TRAVER for route characteristic translations based on CPC

```plaintext
>traver ms 61411216030 lac 301 cid 1 614103150 cpc category28 b
Warning: Routing characteristics are present.
    Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
TUPLE NOT FOUND
TABLE GSMCHAR
  . HOTL (CPC CATEGORY28 $)

*** MSC TRANSLATION ***

TABLE LAC
301 1 BSSPI CP EXNATL 0 0 0 ( 31)$ 61 41 0 ( AOC 1 ZONE5) (PREXLIDX 118)$
TABLE XLAENTRY
31 PX LAC31XLA

TABLE UXLAMAP
  . PX LAC31XLA HOTL PX HOTLINE
TABLE PXHEAD
HOTLINE SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                     614103150
TABLE PXCODE
HOTLINE 61410315 61410315 CONT ( CONSUME 7) ( XLT OFC ETSIISUP)$
TABLE OFCHEAD
ETSIISUP SDFLT NODFOP NOCON F
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                            50
TABLE OFCCODE
ETSIISUP 50 50 RTE ( DEST 1)$
TABLE: OFCRTE
KEY: ETSIISUP    1
  . S ETSIISUPP
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ETSIISUPP 614103150 ST
   BILL 61411216030 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
TRAVER with RC SVC video input

The traver command allows for RC SVC VIDEO input to display any new datafilled RC selector set SVC VIDEO in table GSMCHAR2.

Figure 3-62 shows TRAVER ITU-T ISUP V3 to ITU-T ISUP V3 tandem (transit) call.

Figure 3-63 shows Traver for a 3GPP RANAP to ITU-T ISUP V3 call.

Figure 3-64 shows Traver for a ITU-T PRI to ITU-T ISUP V3 call.

Figure 3-62
TRAVER ITU-T ISUP V3 to ITU-T ISUP V3 tandem (transit) call

```
> traver tr TRKGRP1 215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
  . UDIVID ( BC 64KDATA SVC VIDEO (CPC ALL)$)$  3
TABLE TRKGRP
TRKGRP1 PET 0 STDTK NCRT 0 CNTLEVN PX TRKGRP1_name NILLATA OTHER N 0 0 0 0 CONT
  NEVER ALWAYS N 43664 $
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
TRKGRP1_name SDFLT NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                      215780220
TABLE PXCODE
TRKGRP1_name 21 21 CONT ( XLT OFC TRKGRP1_name)$
TABLE OFCHEAD
TRKGRP1_name SDFLT DFOP ( CDN NATL N)$ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                      215780220
TABLE OFCCODE
TRKGRP1_name 21 21 RTE ( MM 6 18) ( DEST 1) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
  . OFC TRKGRP1_name 1 UDIVID OFC TRKGRP1_vid_name 10
TABLE OFCRCRT
KEY:  TRKGRP1_vid_name  10
  . S TRKGRP_og_video
EXIT TABLE FARTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Figure 3-63
Traver for a 3GPP RANAP to ITU-T ISUP V3 call

```
>traver ms 436642021011 lac 7 cid 701 0215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
  . UDIVID ( BC 64KDATA Svc VIDEO (CPC ALL)$)2

*** MSC TRANSLATION ***

TABLE LAC
  7 701 RSBSS1G UNRSTRCT 0 0 0 ( 701)$ $ $ $ ( AOC 10 $)$2
TABLE XLAENTRY
  701 PX PXIDX40

TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
PXIDX40 DFLT CONT ( XLT PX PXBSCG)$ NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
PXBSCG SDFLT NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXCODE
PXBSCG 02 02 CONT ( PF 1) ( XLT FA FAMOC0G)$
TABLE FAHEAD
FAMOC0G SDFLT DFOP ( CDN NATL N)$ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 215780220
TABLE FACODE
FAMOC0G 21 21 RTE ( MM 6 18) ( DEST 21) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
  . FA FAMOC0G 21 UDIVID FA FAMOC0G 22
TABLE: FARTE
KEY: FAMOC0G 22
  . S TRKPSTN1G
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```
Figure 3-64
Traver for a ITU-T PRI to ITU-T ISUP V3 call

> traver tr prapbx1g 0215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
  UDICALL ( BC 64KDATA SVC VIDEO (CPC ALL)) $ 2
TABLE TRKGRP
PRAPBX1G PET 0 PRAC NCRT 0 LIDL PX PXPRAG NILLATA MSC N 0 0 2 0 CONT NEVER
  ALWAYS N 43664 (LTID PRAATPBX 500) (RLT ) $
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
PXPRAG SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXCODE
PXPRAG 02 02 CONT ( PF 1) ( XLT FA FAMOC0G)$
TABLE FAHEAD
FAMOC0G SDFLT DFOP ( CDN NATL N) $ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 215780220
TABLE FACODE
FAMOC0G 21 21 RTE ( MM 6 18) ( DEST 21) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
. FA FAMOC0G 21 UDIVID FA FAMOC0G 22

TABLE: FARTE
KEY: FAMOC0G 22
. S TRKPSTN1G
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
### Error messages

Table 3-39 identifies the error messages that are produced by the TRAVER command.

**Table 3-39**

**TRAVER error messages**

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO NOT ENTER LAC, CID, CUSTGRP OR NCOS WITH MSRN/CFN/HON OPTIONS. PLEASE USE THE FOLLOWING SYNTAX WITH MSRN/CFN/HON OPTIONS: TRAVER MS &lt;MSISDN&gt; MSRN/CFN/HON [PIC XXXX] &lt;CALLED DIGITS&gt; &lt;TRACE&gt;</td>
<td>The MSRN, CFN and HON options are not allowed together with LAC, CID, CUSTGRP and NCOS options. Reenter the TRAVER command with proper syntax.</td>
</tr>
<tr>
<td>RESTART TRAVER</td>
<td>The software to access table LAC is not loaded. Initiate a service report.</td>
</tr>
<tr>
<td>LAC TABLE TRAVER SOFTWARE NOT LOADED</td>
<td>Index '0' of table XLAENTRY is not datafilled. Either use the optional source directed routing parameters or datafill index '0' of table XLAENTRY.</td>
</tr>
<tr>
<td>INDEX 0 NOT DATAFILLED IN TABLE XLAENTRY.TRANSLATION CANNOT START AS THERE ARE NO DEFAULT ENTRY DATA.</td>
<td>Since no source directed routing information is available when using CFN, HON, MSRN option; originating LATA is not known. Index 0 of table PCSATTR is used to get the originating LATA, when these options are used. If index 0 is not datafilled in the table PCSATTR this response is displayed. Datafill index 0 of table PCSATTR to have an originating LATA name. Reenter the TRAVER command.</td>
</tr>
<tr>
<td>INDEX 0 NOT DATAFILLED IN TABLE PCSATTR. TRANSLATION CANNOT START</td>
<td>Characters or symbols other than digits were entered for the MSISDN. Check the MSISDN and re-enter command.</td>
</tr>
<tr>
<td>INVALID MSISDN DIGITS</td>
<td>The MSISDN entered was either a nil string or too many digits were entered. Re-enter command with at least one and no more than 18 digits in the MSISDN.</td>
</tr>
<tr>
<td>MSISDN MUST BE BETWEEN 1 AND 18 DIGITS</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3-39
**TRAVER error messages (continued)**

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONLY LAC AND CID TOGETHER ARE ACCEPTABLE. RESTART TRAVER WITH: LAC &lt;X&gt; CID &lt;X&gt;.</td>
<td>The source directed routing parameters must be used in conjunction with each other. You cannot enter the LAC parameter without the CID parameter. If both were entered, make sure you used the keyword and the integer part of both parameters. Re-enter command using both source directed routing parameter or neither LAC nor CID parameter.</td>
</tr>
<tr>
<td>OPTIONAL PARAMETER ENTERED IGNORED FOR MS SELECTOR</td>
<td>An optional parameter was entered that is not supported. This feature does not support any optional parameters. Re-enter command without any parameters after the trace parameter or after the digit parameter and before the trace parameter.</td>
</tr>
<tr>
<td>TABLE LAC TUPLE NOT FOUND LAC AND CID NOT KNOWN IN TABLE LAC</td>
<td>The source directed routing parameters were entered but could not be found in table LAC. Check command to be sure source directed routing are correct. If they are, check your datafill in table LAC.</td>
</tr>
<tr>
<td>WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.</td>
<td>The optional source directed routing parameters were not entered. No action is necessary if you want to use the default translation entry data found in index ‘0’ of table XLAENTRY. This is a warning message to ensure you want to use the default entry and not Source Directed Routing (SDR).</td>
</tr>
<tr>
<td>XLAENTRY TABLE TRAVER SOFTWARE NOT LOADED.</td>
<td>The software to access table XLAENTRY is not loaded. Initiate a service report.</td>
</tr>
</tbody>
</table>
VLR_AUDIT

About VLR_AUDIT

The VLR_AUDIT command allows the MSC operator to manually start a VLR mobile audit. When the command has successfully executed, a confirmation message is given to the operator. The command is ignored and a warning message is displayed if one of the following situations occur:

- the VLR-Data Integrity (VLR-DI) is auditing the VLR database
- the VLR-DI is in restoration mode
- the ATTACHED_MOBILE_AUDIT and the DETACHED_MOBILE_AUDIT are turned off when the CI command is issued.

Accessing VLR_AUDIT

To manually start the VLR audit, enter the VLR_AUDIT command at the CI prompt. See Figure 3-65.

Figure 3-65

VLR_AUDIT execution

CI:
> VLR_AUDIT
THE VLR MOBILE AUDIT STARTED.

Error messages

Table 3-40 identifies the error messages produced by the VLR_AUDIT command.

Table 3-40
VLR_AUDIT error messages

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command is ignored. The VLR is currently in restoration.</td>
<td>The VLR_AUDIT command was entered and the VLR-DI was currently in VLR restoration mode.</td>
</tr>
<tr>
<td>Command is ignored. The ATTACHED_MOBILE_AUDIT and DETACHED_MOBILE_AUDIT office parms are turned off.</td>
<td>The VLR_AUDIT command was entered and the ATTACHED_MOBILE_AUDIT and the DETACHED_MOBILE_AUDIT office parameters were turned OFF. Turn ON the appropriate office parameters.</td>
</tr>
<tr>
<td>Command is ignored. An unexpected error occurs. Please try again.</td>
<td>The VLR_AUDIT command was entered and an error occurred on the system. Enter the VLR_AUDIT command again.</td>
</tr>
</tbody>
</table>
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