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Nortel Communication Server 1000 Element Manager System Reference - Administration

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www.nortel.com



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New in This Release

Deployment changes

Element Manager (EM) for Communication Server 1000 Release 6.0 is available on Commercial Off The Shelf (COTS) and Linux based CP PM servers. The VxWorks based ISP1100 hardware is not supported in this release.

The move to COTS and Linux CP PM allows more flexibility to deploy only the applications you want on that hardware. This includes Element Manager.

Unified Communication Management

Prior to this release, Element Manager (EM) could be deployed on VxWorks or on Linux based server with Enterprise Common Manager (ECM). In CS 1000 Release 6.0, ECM has been overhauled to provide a more comprehensive management solution. ECM is now Unified Communication Management (UCM) and provides the management for a number of elements. Element Manager, Networking Routing System Management, and Subscriber Manager all operate under UCM umbrella. With this release, Element Manager is only deployed as part of UCM.

For more information, see *Unified Communication Management* (NN43001-116).

Phone Provisioning

Prior to this release Phone Provisioning was not available on a VxWorks system. With CS 1000 Release 6.0, Element Manager is only deployed on UCM, which provides all users access to Phone Provisioning. The following functional enhancements are additions to Phone Provisioning for this release:

- Graphical interface for Phone Key Programming.
- Terminal Number (TN) enhancements to provide the ability to span TNs beyond a single card.
- Support for employee reference in import/export of telephones.

- Ability to create a new telephone template from an existing telephone configuration.
- Export and Import for telephone templates.
- Ability to migrate phone data from Element Manager to Subscriber Manager.
- Publish additional telephone attributes in Subscriber Manager.
- Un-Marp DN of an account in Subscriber Manager

For more information about Subscriber Manager, refer to Subscriber Manager Fundamentals (NN43001-120).

Dialing Plan

Element Manager provides a user interface for new commands and prompts for Zone Based Dialing and Zone Based Parameters. Two links are added in the existing Zones page of Element Manager. These two links lead to two new pages to configure a number of parameters using overlay LD 117. EM also provides options for every customer to enable the Dialing Plan feature. For more information refer to *Dialing Plans Reference* (NN43001-283).

CLID-C: Enhance Override CLID Presentation Restriction

In CS 1000 Release 6.0, you can configure currently existing PII (Privacy Indicator Ignore) prompt for all the ISDN interfaces on the Route page of EM. A new AUXP (Auxiliary Application) prompt is introduced in overlay 16 (RDB) to enhance the ability of the system to honor or ignore the Privacy indicator for a Calling Party Privacy call for each incoming route.

FAXS Modem Pass Through

The FAXS/Modem Pass Through adds support to existing telephone provisioning architecture with the introduction of new Class of Service Modem Pass Through on CS 1000 Release 6.0.

Patching enhancements

Enhancements to the patching mechanism handles obsolete patches and provides a way to deliver special instructions for a patch during installation as part of the patch.

The technician is alerted that a patch has special instructions (for example INI required; other patch requirements; hardware specific requirements).

Some patches may depend on other patches to be in service before the most recent patch is activated.

Fault Management (SNMP)

The concept of SNMP profiles is introduced with Communication Server 1000 Release 6.0. The SNMP Profile Manager page in Unified Communications Manager (UCM) provides a common interface for configuring SNMP parameters on all Communication Server 1000 Network Elements.

CS 1000 Release 6.0 introduces the following enhancements to SNMP:

- New commands in LD 117 and Element Manager for enabling or disabling the sending of traps for any network element
- Suppression of traps for network elements based on severity
- Ability to configure trap destination ports is extended to all elements

Configuration of SNMP by Element Manager at the system level propagates upward to the SNMP Profile Manager. Changes made in Element Manager apply to all CS 1000 elements.

MALT and VNR Enhancement

The MALT (Meridian ALTernate Routing) and Vacant Number Routing (VNR) Enhancement feature provides call clearing treatment for vacant number calls over IP domain. VNR is a default route used to route untranslated, invalid, or unassigned called numbers (dialed numbers, DN's).

With this feature, you can perform MALT on the Call Server for an additional 10 causes other than the existing six, when the call is routed by VNR to the IP network. You can configure these extra MALT causes in Element Manager. If the call is determined to be a VNR call which is tried at least once to route over an IP route, then the call receives vacant number treatment.

Access Restriction

CS 1000 Access Restrictions prevents port-based attacks and user customizable IP filtering, starting with CS 1000 Release 6.0. The platforms that this feature applies to are MGC, MC32S, CPP4 and CP PM. The Signaling Server platform runs on Linux which has its own firewall, thus this feature is not relevant for that platform.

Port blocking is required by customers who need the capability to close off access to applications and other unused ports. Examples include closing down rlogin on the TLAN interface. A port blocker is required because the call server cannot close applications.

For information about Access Restriction in Element Manager, see *Security Management Fundamentals*(NN43001-604).

TLS and SRTP Enhancements

Transport Layer Security (TLS) and SIP Real-Time Transport Protocol (SRTP) were implemented in CS 1000 release 5.0. CS 1000 Release 6.0 enhances the implementation to better meet the requirements of security conscious customers, and to better interoperate with third parties.

A new prompt **Enable Secure Media** is introduced under the Microsoft Unified Messaging section in EM.

Unicode Name Directory

Unicode Name Directory is a server application storing the database of user names translated to various languages. This feature delivers a CPND capability in Unicode and can hold multiple Unicode names for each DN for a large enterprise customer. You can select a Unicode language preference to match the Unicode Name and Personal Directories. Subscriber Manager and Element Manager are both required when using Unicode Name Directory.

Other

Revision History

May 2009	Standard 03.16. This document is up-issued to support Communication Server 1000 Release 6.0. This NTP may contain information on or refer to products and naming conventions that are not supported in this release. This information is included for legacy purposes and convenience only. This includes but is not limited to items, such as: SSC; ISP 1100; ITG Pentium cards; and Media Cards running certain IP Line applications.
July 2008	Standard 02.15. This document is up-issued to update the Station Fast Sync feature section.
April 2008	Standard 02.14. This document is up-issued to add patching information.
March 2008	Standard 02.12. This document is up-issued to add information about Zone 0 and CR Q01834961.
February 2008	Standard 02.11. This document is up-issued to reflect changes in technical content.
January 2007	Standard 02.10. This document is up-issued to reflect changes in technical content.
December 2007	Standard 02.09. This document is up-issued to support Communication Server 1000 Release 5.5.
August 2007	Standard 01.05. This document is up-issued to support Microsoft Exchange Server 2007 Unified Messaging.

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June 2007	Standard 01.03. This document is up-issued for: (1) to specify that PDT access is required to access the Element Manager patching feature. (2) to indicate that the rows in the Excel spreadsheet must be completed sequentially. (3) to correct the graphic Digit Conversion Tree Configuration Web page. (4) to provide more information about QoS threshold values. (5) to correct the graphic Clock Controller Basic Properties Web page.
May 2007	Standard 01.01. This document is up-issued to support Communication Server 1000 Release 5.0. This document contains information previously contained in the following legacy document, now retired: Element Manager System Administration (553-3001-332).
August 2005	Standard 3.00. This document is up-issued to support Communication Server 1000 Release 4.5.
September 2004	Standard 2.00. This document is up-issued for Communication Server 1000 Release 4.0.
October 2003	Standard 1.00. This document is a new NTP for Succession 3.0. It was created to support a restructuring of the Documentation Library. This document contains information previously contained in the following legacy document, now retired: Element Management (553-3023-222). Some content from Element Management (553-3023-222) also appears in Succession 1000 Element Manager: Installation and Configuration (553-3001-232).

How to get help

Contents

This section contains information about the following topics:

- "Getting help from the Nortel Web site" (page 15)
- "Getting help over the telephone from a Nortel Solutions Center" (page 15)
- "Getting help from a specialist by using an Express Routing Code" (page 16)
- "Getting help through a Nortel distributor or reseller" (page 16)

Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the telephone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support Web site, and you have a Nortel support contract, you can also get help over the telephone from a Nortel Solutions Center. In North America, call 1-800-4NORTEL (1-800-466-7835).

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 Outside North America, go to the following Web site to obtain the telephone number for your region: <u>www.nortel.com/callus</u>

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Introduction

This document is a global document. Contact your system supplier or your Nortel representative to verify that the hardware and software described are supported in your area.

Subject

This document describes the Element Manager interface.

Applicable Systems

This document applies to the following systems:

- Communication Server 1000M Single Group (CS 1000M SG)
- Communication Server 1000M Multi Group (CS 1000M MG)
- Communication Server 1000E (CS 1000E)

Intended Audience

This document is intended for individuals responsible for administering CS 1000 and Meridian 1 systems.

Conventions

Terminology

In this document, the following systems are referred to generically as system:

- Communication Server 1000E (CS 1000E)
- Communication Server 1000M (CS 1000M)
- Meridian 1

Related information

This section lists information sources that relate to this document.

Technical Documentation

The following technical documents are referenced in this document:

- Unified Communications Management Common Services Fundamentals (NN43001-116)
- Signaling Server IP Line Applications Fundamentals (NN43001-125)
- Network Routing Service Fundamentals (NN43001-130)
- SIP Line Fundamentals (NN43001-508)
- CP PM Co-resident Call Server and Signaling Server Fundamentals (NN43001-509)
- Subscriber Manager Fundamentals (NN43001-120)
- Transmission Parameters Reference (NN43001-282)
- Dialing Plans Reference (NN43001-283)
- Security Management Fundamentals (NN43001-604).
- Linux Platform Base and Applications Installation and Commissioning (NN43001-315)
- System Management Reference (NN43001-600)
- Communication Server 1000 Fault Management SNMP (NN43001-719)
- Software Input Output Reference Maintenance (NN43001-711)
- Branch Office Installation and Commissioning (NN43001-314)
- System Redundancy Fundamentals (NN43001-507)
- Software Input Output Administration (NN43001-611)

Overview

Contents

This section contains information about the following topics:

"Element Manager overview" (page 19)

"Key features" (page 20)

"Signaling Server" (page 21)

"Call Server and Media Gateway" (page 22)

"IP Line and Voice Gateway" (page 22)

Element Manager overview

Element Manager is a Web-based user interface used to configure and maintain CS 1000 components.

Element Manager is deployed with the Nortel Unified Communications Management solution on a Linux based operating system. UCM provides logon and security features for Element Manager.

For more information about UCM, see *Unified Communication Management* (NN43001-116).

For more information about installing the Linux operating system, see *Linux Platform Base and Applications Installation and Commissioning* (NN43001-315).

With Subscriber Manager, an administrator can create an account, publish/display phone attributes, and add and configure phone services for subscribers with available Templates in Element Manager. A template contains attributes common to a CS 1000 phone type. Once a template is created, you can use it to apply these common attributes to a group of phones, without having to repetitively define the same value for each phone. In general, using a template is a more efficient method of adding large numbers of phones than maintaining each phone individually.

Element Manager is a simple and user-friendly Web-based interface that supports a broad range of system management tasks, including:

- configuration and maintenance of IP Peer and IP Telephony features
- configuration and maintenance of traditional routes and trunks
- configuration and maintenance of numbering plans
- configuration of Call Server data blocks
- maintenance commands, system status inquiries, backup and restore functions
- patch upload, patch activation, firmware download

Element Manager has many features to help administrators manage systems with greater efficiency. Examples are as follows:

- Web pages provide a single point-of-access to parameters that were traditionally available through multiple overlays.
- Parameters are presented in logical groups to increase ease-of-use and speed-of-access.
- The *hide or show information* option enables administrators to see information that relates directly to the task at hand.
- Full-text descriptions of parameters help administrators reduce configuration errors.
- To simplify response selection, configuration screens offer preselected defaults, lists, checkboxes, and range values.
- To simplify the importing of phones to the database a Comma Separated Value (CSV) file can be used.

Note 1: All screen captures in this chapter are applicable to CS 1000E and CS 1000M systems. Where there is no indicator, the screen and commands are available on both.

Note 2: Option 81C and 61C must be upgraded to a CS 1000 M (SG or MG) in order to deploy it with UCM.

Key features

The following functional areas can be accessed using Element Manager:

- Links Provides access to Virtual Terminal sessions.
- **IP Network** Helps the user access all functions related to managing IP Networks. These functions include data and physical

structure configuration, high-profile operational activities, and administrative/maintenance functions.

- **System** Provides access to system-wide configuration and basic hardware/software management, including supported maintenance overlays and configuration.
- Customers Allows the user to view and edit customer properties.
- **Routes and Trunks** Provides access to all functions required to create and manage trunks.
- Dialing and Numbering Plans Provides a way to configure all Electronic Switched Network (ESN) data blocks for the Call Server. Network Routing Service cannot be launched from inside EM from CS 1000 Release 6.0 onwards. To access configuration for the Network Routing Service (NRS), you must log on through UCM.
- **Phones** Enables users to import and configure phones for the Call Server.
- **Tools** Provides general administrative tools, features and functions, and allows the user to find and access task-related pages, including Reports.
- **Security** Allows the user to perform Security functions, including IP Security.

Signaling Server

Element Manager enables administrators to perform the following activities on the Signaling Server:

- reset
- access the maintenance window
- download new IP Phone firmware
- upgrade IP Phone firmware
- view report log
- view Operational Measurements (OM) data
- Telnet
- patching
- increase Virtual Trunk capacity and perform configuration tasks on Virtual Trunks
- configure and manage the Web-based services for Personal Directory, Redial List, and Callers List
- add, delete, view, and edit Signaling Server information

Call Server and Media Gateway

For Call Server and Media Gateway, Element Manager enables administrators to configure and manage the following data:

- Configuration Record
- Customer Data Block
- Route Data Blocks
- Trunks
- ESN Data Block
- Patching

To learn more about parameters that can be configured and managed in Element Manager, see *System Management Reference (NN43001-600)*.

IP Line and Voice Gateway

Element Manager enables administrators to perform the following activities on the IP Line and Voice Gateway Media Cards:

- View and configure Simple Network Management Protocol (SNMP) parameters and add IP addresses for forwarding SNMP traps.
- View and configure Voice Gateway profile data.
- View and edit Quality of Service (QoS) parameters.
- Use Local Area Network (LAN) configuration to configure the Management LAN (ELAN) subnet, Telephony LAN (TLAN) subnet, and Routes.
- View and edit Simple Network Time Protocol (SNTP) Server and Client information.
- View and configure file server access for downloading firmware for IP Phones.
- View and select the Loss and Level Plan for the country. For more information about selecting the Loss and Level Plan for the country, see *Transmission Parameters Reference (NN43001-282)*.
- Add, remove, view, and edit card properties of Voice Gateway Media Cards.

To learn more about IP Line and Voice Gateway Media Card parameters that can be configured and managed in Element Manager, see *IP Line Application Fundamentals (NN43001-125)*.

The following maintenance activities are supported when using Element Manager for IP Line and Voice Gateway Media Card:

- reset Voice Gateway Media Card
- enable/disable Voice Gateway Media Card
- access the maintenance window to the Voice Gateway Media Card
- download new loadware/firmware for upgrades
- run Syslog reports
- obtain Operational Measurement (OM) data
- Telnet to the card
- patching

To learn more about the IP Line and Voice Gateway maintenance activities that are supported by Element Manager, see "IP Network" (page 129).

24 Overview

How to use Element Manager

Contents

This section contains information about the following topics:

"Launching Element Manager" (page 25)
"Timeout after a period of inactivity" (page 26)
"Navigation" (page 26)
"Configuring data" (page 29)
"Logging off" (page 29)

Launching Element Manager

Element Manager is installed with the Nortel Unified Communications Management (UCM) solution on a Nortel CP PM server or on one of the Commercial off the shelf (COTS) servers:

Start Element Manager from the UCM solution. This solution supports Single Sign-on so that you can access multiple systems. Users access UCM Common Services through Microsoft Internet Explorer 6.02600 or later. For information about how to log on to UCM Common Services, configure the UCM Common Services, and log on to Element Manager, see *Unified Communications Management* (NN43001-116).

Figure 1 Element Manager System Overview Web page

stem Overview		
	IP Address: 172.16.100.2	
	Type: Nortel Communication Server 1000E CPPM	
	Version: 4021	
	Release: 592 L	
Active Sessions		

Timeout after a period of inactivity

Element Manager times out after a period of inactivity. Users are logged off without warning in all Element Manager Web pages. The exception is the **Edit** Web pages. When a user is works on this Web page, a message appears that warns of the impending timeout action. Click OK (on the warning message) within the remaining timeout period (5 minutes) to reset the timer. If no response occurs within the five-minute warning period, the session is cancelled, and the user must log in again. Data modifications made on screen, but not submitted to the system, are lost.

Navigation

The Element Manager navigator is on the left side of the Web page as shown in Figure 2 "Element Manager navigator" (page 27).

Т

Figure 2 Element Manager navigator

UCM Network Services	Navigation continued
Home	5
Links	- Customers
– Virtual Terminals	- Routes and Trunks
System	– Routes and Trunks
– Alarms	– D-Channels
- Events	– Digital Trunk Interface
– SNMP	- Dialing and Numbering Plans
– Maintenance	- Electronic Switched Network
- Core Equipment	- Flexible Code Restriction
-Loops	 Incoming Digit Translation
- Superloops	- Phones
- MSDL/MISP Cards	- Templates
 Conference/TDS/Multifrequency Cards 	- Reports
- Tone Senders and Detectors	- Properties
- Peripheral Equipment	- Migration
- IP Network	- Tools
– Nodes: Servers, Media Cards – Maintenance and Reports	 Backup and Restore
– Maintenance and Reports – Media Gateways	- Call Server
- Zones	 Personal Directories
- Host and Route Tables	 Call Server Initialization
- Network Address Translation (NAT)	– Date and Time
- QoS Thresholds	 Logs and reports
- Personal Directories	– IP Telephony Nodes
- Unicode Name Directory	– IP Phone Location
- Interfaces	– Equipped Feature Packages
 Application Module Link 	 Peripheral Software Version Data
- Value Added Server	 System License Parameters
 Property Management System 	 Operational Measurements
- Engineered Values	- Security
- Emergency Services	– Passwords
– Service Parameters	 System Passwords
 Access Numbers and Routing 	- Customer Passwords
 Emergency Response Location 	- Policies
– Subnet Information	- Media
– Dynamic ELIN	- System Keys
– Virtual Office Phone	- File Transfer
 Geographic Redundancy 	- Port Access Restrictions
 Database Replication Control 	- Login Options
- State Control	- Shell Login
- Software	– Access Warning
- File Upload	
- IP Phone Firmware	
- Voice Gateway Media Card	
- Media Cards PEPs	

Links in the Element Manager navigator are structured as follows:

- Home
- Links
 - Virtual Terminals
- System
 - Alarms
 - Maintenance
 - Core Equipment
 - Peripheral Equipment
 - IP Network
 - Interfaces

- Engineered Values
- Emergency Services
- Geographic Redundancy
- Software
- Customers
- Routes and Trunks
 - Routes and Trunks
 - D-Channels
 - Digital Trunk Interface

• Dialing and Numbering Plans

- Electronic Switched Network
- Flexible Code Restriction
- Incoming Digit Conversion
- Phones
 - Templates
 - Report
 - Properties
 - Migration
- Tools
 - Backup and Restore
 - Call Server Initialization
 - Date and Time
 - Logs and Reports
- Security
 - Passwords
 - Policies
 - Login Options

During periods of high call volume, Element Manager Web pages load slowly.

Configuring data

In many cases, users can edit data using configuration Web pages. At the bottom of the configuration Web pages, the following four buttons appear:

- **Submit** Transmits changes to the Call Server.
- **Refresh** Refreshes data from the Call Server. Refresh overwrites any changes not yet submitted.
- **Delete** Deletes the item being edited or configured.
- **Cancel** Discards the changes and returns to the appropriate configuration page.

Logging off

To log off Element Manager and UCM, click the **Logout** link in the top right corner of the Web page.

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Links

Contents

This section contains information about the following topics:

"Introduction" (page 31)

"Virtual Terminals" (page 31)

Introduction

The features available under the **Links** branch of the Element Manager navigator enable Element Manager to be the single point of management access to Web pages and character-based interfaces.

Use the Virtual Terminal feature to access any IP-based elements on the network. On the Call Server, users can access context-sensitive online help, which provides detailed information about system prompts and error messages.

Virtual Terminals

Click the **Virtual Terminals** link to open the **Virtual Terminal Sessions** Web page as shown in Figure 3 "Virtual Terminal Sessions Web page" (page 31).

Figure 3

Virtual	Terminal	Sessions	Web	page	

irtual Terminal Sessi	ons		
Add Edit Delete			Refresh
			(telles)
Name +	IP Address	Type	
1 C Call Server	192.167.100.3	Call Server	

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 The **Virtual Terminal Sessions** Web page enables users to bookmark the connection details to any IP-based element on the network. Virtual Terminal can be used to connect to an element which supports Telnet, Rlogin or SSH2.

Virtual Terminal (VT) sessions are secured using SSL and SSH. If the element doesn't support SSH then normal TCP fallback is also provided (either to the Telnet or Rlogin server) to connect to the elements.

ATTENTION

Java Runtime Environment (JRE) version 1.5 must be installed for the Virtual Terminal Emulator to run properly.

Follow the steps in Procedure 1 "Adding a Virtual Terminal session" (page 32) to add a Virtual Terminal Session .

Procedure 1

Adding a Virtual Terminal session

	Step	Action				
--	------	--------	--	--	--	--

1 On the Virtual Terminal Sessions Web page, click Add. The Add Virtual Terminal Session Web page appears, as shown in Figure 4 "Add Virtual Terminal Session Web page" (page 32).

Figure 4

Add Virtual Terminal Session Web page

dd Virtual Termi	nal Session			
	Name:	<u> </u>		
	IP Address:	<u> </u>		
	Type: Signalin	g Server 💌		
			Save	Canc

- 2 Enter a Name and IP Address for the session.
- 3 Select the **Type** from the list.
- 4 Click **Save** to save.
- 5 To cancel the session, click **Cancel**.

--End--

To access a Virtual Terminal Session that is already created, click the name of the Virtual Terminal Session on the **Virtual Terminal Sessions** Web page. A **Virtual Terminal** window appears in a separate browser window.

Note 1: Virtual terminal prompts for pdt2 password, but you can press Enter and give the admin1 or admin2 password to get connected, and pdt2 password is not mandatory if you start Virtual Terminal through UCM.

Note 2: Upon initial launch of Virtual terminal, the user is prompted for the PDT2 level password. Entering this password will navigate user to the PDT2 shell of the Call Server. The user can also carriage return past the PDT2 password prompt. This action will prompt the user for a new username for other accounts on the Call Server. The user can provide admin1 or admin2 login credentials allowing overlay access to the Call Server.

The Virtual Terminal window provides a menu with the following items:

- Current Overlay
- Current Prompt
- Search M1 Help Files
- About Terminal Client

When the user enters an overlay, the Current Overlay and Current Prompt menu items are enabled.

Click the **Help -> Current Overlay** link to open a Help window containing help for that particular overlay.

Click the **Help -> Current Prompt** link to open a Help window explaining the definition of the prompt, along with acceptable responses.

Follow the steps in Procedure 2 "Editing an existing Virtual Terminal session" (page 33) to edit an existing Virtual Terminal session.

Procedure 2 Editing an existing Virtual Terminal session

Step	Action
1	Select the radio button beside the appropriate Virtual Terminal name on the Virtual Terminal Sessions Web page.
2	Click Edit .
	The information about the Virtual Terminal Session selected is

The information about the Virtual Terminal Session selected is displayed in the fields.

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- 3 Edit the Name and IP Address values as necessary.
- 4 To change this session so that it logs into a Call Server, select the **Call Server** check box.
- 5 Click **Save** to save the changes.
- 6 Click **Cancel** to undo any changes made.

--End--

Procedure 3 Deleting an existing Virtual Terminal Session

Step	Action
1	Select the radio button beside the appropriate Virtual Terminal name on the Virtual Terminal Sessions Web page.
2	Click Delete to remove the Virtual Terminal Session information completely.
	F ad

--End--

System

Contents

This section contains information about the following topics:

"Introduction" (page 36) "Maintenance" (page 42) "Application Module Link Diagnostics" (page 46) "Background Signaling and Switching Diagnostics" (page 49) "Call Trace Diagnostics" (page 50) "Clock Controller Diagnostics" (page 56) "Core Common Equipment Diagnostics" (page 57) "Core Input/Output Diagnostics" (page 61) "D-channel Diagnostics" (page 63) "D-Channel Expansion Diagnostics" (page 66) "Digital Trunk Diagnostics" (page 69) "Digital Trunk Maintenance Diagnostics" (page 72) "Emergency Services Diagnostics" (page 75) "Ethernet Diagnostics" (page 77) "Ethernet Quality of Service Diagnostics" (page 82) "Input/Output Diagnostics" (page 84) "Intergroup Switch and System Clock Generator Diagnostics" (page 87) "MSDL Diagnostics" (page 91) "Multifrequency Sender Diagnostics" (page 93) "Multifrequency Signaling Diagnostics" (page 96) "Network and Peripheral Equipment Diagnostics" (page 98) "Network and Signaling Diagnostics" (page 103) "TMDI Diagnostics" (page 105) "Tone and Digit Switch Diagnostics" (page 106)

"Trunk Diagnostics" (page 108)

"Zone Diagnostics" (page 111)

"Loops (Common Equipment)" (page 113)

"Superloops" (page 115)

"MSDL/MSIP Cards" (page 116)

"Conference/TDS/Multifrequency Cards" (page 118)

"Tone Senders and Detectors" (page 118)

Introduction

The **System** branch of the Element Manager navigator provides access to diagnostic tools that enable users to issue a variety of commands to the components of the CS 1000 system.

The following buttons appear on some or all of the System Web pages:

- **Submit** Transmits changes to the Call Server.
- Refresh Refreshes data from the Call Server. Refresh overwrites any changes not yet submitted.
- **Cancel** Discards the changes and returns to the appropriate configuration Web page.

Events

To configure or edit Events information, click the **Alarms > Events** link in the **System** branch of the Element Manager navigator. The **Events** Web page appears as shown in Figure 5 "Events Web page" (page 36).

Figure 5 Events Web page

Managing: 192.167.102.3 System » Alarms » Events Event Defaults and Preferences Associates events with a default severity. Contains site-specific preferences for event severities as well as criteria for severity escalation and alarm suppression. System Events Captures and maintains a list of all processor-based system events.

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To display event default severity, event thresholds and site-specific event preferences, click the **Event Defaults and Preferences** link to open the **Event Defaults and Preferences** Web page as shown in Figure 6 "Event Defaults and Preferences Web page" (page 37).

Figure 6 Event Defaults and Preferences Web page

vent Defaults and Preferences			
hresholds			
Edit			
Global Window Timer Length: 1 minute			
Suppression Threshold Value: 15			
Search for Event Defaults			Hide
Criteria:		Search	n
🔿 Severity: 🛛 Info 💌			
O Event Category: Look	19 °		
	<u>R</u>		
vent Defaults			
Edit			Refresh
vent Preference Table			
Add Import Export Delete All	Delete		Refresh
	Delete		
Event Key Severity		Escalation Value	Hits

To edit the Suppression Threshold Value and Global Window Timer Length that are common to all events, in the **Thresholds** section click **Edit**. The **Edit Thresholds** Web page appears as shown in Figure 7 "Edit Thresholds Web page" (page 38).

Figure 7 Edit Thresholds Web page

dit Thresholds	Global Window Timer Length Suppression Theshold Value	Time used to measure both the escalation and suppression the	
			Save Cancel

Enter the desired changes and click Save.

Search for event defaults by clicking either the **Severity** or **Event Category** radio buttons. Enter the Search criteria and click **Search**. The results appear in the **Event Defaults** section.

To maintain a list of system events, from the **Events** Web page click the **System Events** link. The **System Events** Web page appears as shown in Figure 8 "System Events Web page" (page 39).

Figure 8 System Events Web page

System Events	
collection Limits	
Edit	
System Event List Size: 500	
# of Events: 500	Refres
Printing [100%] (500 of 500) most recent events	<u>^</u>
AUD000	
AUDOOO	
4	

The System Event List Size in the **Collection Limit** section is the upper limit to the number of events collected in the System Event List. To edit this limit, click **Edit**.

All events collected in the system event list are displayed in the text area at the bottom of the page.

Use this page to import an Event Preference Table from a user specified location to the switch.

Import Event Preference Table (EPT)

Use this page to import an Event Preference Table from a user specified location to the switch.

To display this page, choose **System>Alarms>Events>Event Defaults and Preferences**. In the Event Preference Table Section, click **Import**. The Event Preference Table page appears.

Note: The user needs to change the Security settings in Microsoft Internet Explorer while doing Import EPT. This file is residing at the user PC which uses ActiveX FileSystemObject to do the validations. This provides access to the local file system of the PC using even JavaScript code. Microsoft IE has a field called "Initialize and script ActiveX controls not marked as safe" under IE -> Tools -> Security -> Custom Level. This field needs to be either set to "Prompt" or "Enable". When this field is set to Disabled it doesn't allow IE to create ActiveX object and we find an error called "Automation server can not create object" and our validation for the file fails. If the IE Security level setting is set to High then no ActiveX controls is allowed, hence it should be set to Medium with the specified field to set to either "Prompt" or "Enable".

Procedure 4 Import Event Preference Table

Step	Action
1	Click Browse , to browse for the Event Preference Table.
2	Click Import & Activate to import the Event Preference Table to the switch.
3	Click Cancel to return to the Event Defaults and Preferences without importing a Event Preference Table to the switch.
	End

SNMP

The SNMP Profile Manager provides a common interface for configuring SNMP parameters on all CS 1000 Network Elements. You can use SNMP Profile Manager which is part of the UCM solution, to add, modify and delete SNMP profiles. Profiles can be configured and assigned to the following types of UCM managed elements:

- Element Manager
- Call Server (configuration settings are migrated to the SS, VGMC, and MGC)
- NRSM (configuration settings are migrated to NRS)

Fault management is implemented in Element Manager.

To configure or edit SNMP information, click the **Alarms > SNMP** link in the System branch of the Element Manager navigator. The **SNMP Configuration** Web page appears as shown in Figure 9 "SNMP Configuration Web page" (page 41).

Figure 9 SNMP Configuration Web page

MP Configuration		
System Info		
System name:	System Name	
System contact:	System Contact	
System location:	System Location	
Navigation site name:	Navigation Site Na	
Navigation system name:	Navigation System	
Management Information Base Access		
Adminstrator group 1:	admingroup1	*
Adminstrator group 2:	admingroup2	*
Adminstrator group 3:	admingroup3	*
System management read:	otm123	*
System management read/write:	otm321	*
Alarm		
Trap community:	public	
Alarm threshold:	None 💌	
0	Alarms below this threshold will	be supressed
Uptions: Trap Destination:	🗖 Enable trap sending	
	IP address 1:	Port 1:
	IP address 2:	Port 2:
	IP address 3:	Port 3:

The information entered on this Web page corresponds to the SNMP data traditionally configured using LD 117 - Ethernet and Alarm Management.

The SNMP parameters are grouped in three logical groups in the SNMP Configuration Web page:

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- System Info
- Management Information Base Access
- Alarm

Configuration of SNMP by Element Manager at the system level propagates upward to the SNMP Profile Manager. Changes made in Element Manager apply to all CS 1000 elements.

For detailed information about SNMP, see *Communication Server 1000 Fault Management - SNMP* (NN43001-719).

Maintenance

When the user clicks the **Maintenance** link in the **System** branch of the Element Manager navigator, the **Maintenance** Web page appears. The user can choose how the options are presented. If the user chooses **Select by Functionality**, the diagnostic tool options are presented by functionality as shown in Figure 10 "Maintenance diagnostic tools presented by functionality" (page 42).

Figure 10						
Maintenance	diagnostic [•]	tools	presented	by i	functionality	1

Maintenance					
C Select	by Overlay	, in the second s	⊙ Select b	by Functionalit	У
	Select by Functionality AML Diagnostics Background Signaling Call Trace Diagnostic Centralized Software U Clock Controller Diagnostic Dechannel Diagnostic Dechannel Diagnostic Dechannel Expansion Digital Trunk Maintena Emergency Services D Ethernet Diagnostics Ethernet Diagnostics Ethernet Quality of Sei Geographic Redundai Input/Output Diagnost InterGroup Switch and MSDL Diagnostics Multifrequency Sender Multifrequency Sender Multifrequency Signali Network and Peripher Network and Peripher Network and Signaling TMDI Diagnostics	and Switching S Jpgrade hostics ment Diagnostics gnostics S Diagnostics tics Diagnostics wice Diagnostics ncy Diagnostics IS System Clock Diagnostics al Equipment Dia			

The following tool options are available from this Web page:

- AML Diagnostics
- Background Signaling and Switching
- Call Trace Diagnostics
- Centralized Software Upgrade
- Clock Controller Diagnostics
- Core Common Equipment Diagnostics
- Core Input/Output Diagnostics
- D-Channel Diagnostics
- D-Channel Expansion Diagnostics
- Digital Trunk Diagnostics
- Digital Trunk Maintenance Diagnostics
- Emergency Services Diagnostics
- Ethernet Diagnostics
- Ethernet Quality of Service Diagnostics
- Geographic Redundancy Diagnostics
- Input/Output Diagnostics
- InterGroup Switch & System Clock
- MSDL Diagnostics
- Multifrequency Sender Diagnostics
- Multifrequency Signaling Diagnostics
- Network and Peripheral Equipment Diagnostics
- Network and Signaling Diagnostics
- TMDI Diagnostics
- Tone and Digit Switch Diagnostics
- Trunk Diagnostics
- Zone Diagnostics

Note: Depending on the type of system being accessed, not all options may be available.

If the user chooses **Select by Overlay**, the following options are presented by LD numbers, as shown in Figure 11 "Call Server diagnostic tools presented by overlay" (page 45):

- LD 30 Network and Signaling
- LD 32 Network and Peripheral Equipment
- LD 34 Tone and Digit Switch
- LD 36 Trunk
- LD 37 Input/Output
- LD 39 Intergroup Switch and System Clock
- LD 45 Background Signaling and Switching
- LD 46 Multifrequency Sender
- LD 48 Link
- LD 54 Multifrequency Signaling
- LD 60 Digital Trunk Interface and Primary Rate Interface
- LD 75 Digital Trunk
- LD 80 Call Trace
- LD 96 D-Channel
- LD 117 Ethernet and Alarm Management
- LD 135 Core Common Equipment
- LD 137 Core Input/Output
- LD 143 Centralized Software Upgrade

Figure 11 Call Server diagnostic tools presented by overlay

aintenance	
Select by Overlay	O Select by Functionality
<select by="" overlay=""> LD 30 - Network and Sig LD 32 - Network and Per LD 34 - Tone and Digit S LD 36 - Trunk LD 37 - Input/Output LD 39 - Intergroup Switch LD 45 - Background Sig LD 46 - Multifrequency Si LD 48 - Link LD 48 - Link LD 45 - Multifrequency Si LD 64 - Multifrequency Si LD 65 - Digital Trunk Inter LD 75 - Digital Trunk LD 80 - Call Trace LD 93 - Core Common f LD 137 - Core Input/Output LD 143 - Centralized Soft</select>	ipheral Equipment witch alling and Switching ender gnaling rface and Primary Rate Interface rrm Management Equipment ut

If selecting an overlay that corresponds to more than one functionality, choose the desired functionality in the **Select Group** list, as shown in Figure 12 "Select Group list" (page 46).

Figure 12 Select Group list

Select by Overlay	O Select by Functionality
Select by Overlay> D 30 - Network and Signaling D 32 - Network and Peripheral Equipment D 34 - Tone and Digit Switch D 36 - Trunk D 37 - Input/Output D 39 - Intergroup Switch and System Clock D 45 - Background Signaling and Switching D 46 - Multifrequency Sender D 48 - Link D 54 - Multifrequency Signaling D 64 - Multifrequency Signaling D 64 - Suffrequency Signaling D 64 - Call Trunk Interface and Primary Rate Interface D 75 - Digital Trunk Interface and Primary Rate Interface D 76 - Call Trunk D 80 - Call Trunk D 96 - D-Channel D 117 - Ethernet and Alarm Management D 135 - Core Common Equipment D 137 - Core Input/Output D 142 - Centralized Software Upgrade	<select group=""> AML Diagnostics D-Channel Expansion Diagnostics TMDI Diagnostics</select>

This document presents the options by functionality, with cross-references to the appropriate overlay.

The following sections provide information about each functionality.

Application Module Link Diagnostics

Click the **AML Diagnostics** link in the list of **Maintenance** functionalities to open the **Link: AML Diagnostics** Web page as shown in Figure 13 "AML Diagnostics Web page" (page 47).

Figure 13 AML Diagnostics Web page

STAT AML - Get AML status DIS AML - Disable AML ENL AML - Enable AML		(device #)	Submit
		(device #)	Ruhmit
ENL AML - Enable AML		Contraction of the second s	Commu
	~	(device #)	Submit

The commands available from this Web page correspond to the AML diagnostics traditionally performed by using LD 48.

To perform AML commands using this Web page, follow the steps in Procedure 5 "Performing AML commands" (page 47).

Procedure 5

Performing AML commands

Step	Action
1	Select one of the following commands from the first Commands list:
	a STAT AML - Get AML status
	b STAT ELAN - Check status of all specified / all configured ELANs
	c EST AML - Establish layer 2 on AML
	d MAP AML - Get card information of one or all AMLs
	e RLS AML - Release layer 2 on AML
	f SLFT AML - Perform self-test on AML

- g UPLD AML Upload parameter table 1 to 4 from AML
- 2 (Optional) Enter the device number in the **Command Parameters** text box.
- 3 Click Submit.

To disable AML using this Web page, follow the steps in Procedure 6 "Disabling AML " (page 48).

Procedure 6 Disabling AML

Step	Action
1	Select one of the following commands from the second Commands list:
	a DIS AML - Disable AML
	b DIS AML - Disable AUTO recovery on AML
	c DIS AML - Disable layer 2 on AML
	d DIS AML - Disable layer 7 on AML
	e DIS AML - Disable MDL error reporting on AML
	f DIS ELAN - Disable ELAN (server/client task)
2	(Optional) Enter the device number in the Command Parameters text box.
3	Click Submit.

--End--

To enable AML using this Web page, follow the steps in Procedure 7 "Enabling AML" (page 48).

Procedure 7 Enabling AML

Action
Select one of the following commands from the third Commands list:
a ENL AML - Enable AML
b ENL AML - Enable Automatic set-up on AML
c ENL AML - Enable AUTO recovery on AML
_

- d ENL AML Enable Layer 2 on AML
- e ENL AML Enable Layer 7 on AML
- f ENL AML Enable MDL error reporting on AML
- g ENL ELAN- Enable ELAN (server task)
- 2 (Optional) Enter the device number in the **Command Parameters** text box.
- 3 Click Submit.

Background Signaling and Switching Diagnostics

The **Background Signaling and Switching diagnostics** Web page is applicable only to Large Systems.

Click the **Background Signaling and Switching** link in the list of **Call Server** functionalities to open the **Background Signaling and Switching Diagnostics** Web page, as shown in Figure 14 "Background Signaling and Switching Diagnostics Web page" (page 49).

Figure 14 Background Signaling and Switching Diagnostics Web page

Diagnostic Commands	Command Parameters	Action
TEST - Perform continuity test for specified (all) loops	(loop/none)	Subm
Instruction: Select command, add value and click on [Submit]		

The commands available from this Web page correspond to the Background Signaling and Switching command traditionally performed using LD 45 - Background Signaling and Switching Diagnostics.

This Web page is used to perform the TEST command. This command performs a continuity test for specified loops.

Procedure 8 Performing the TEST command

Step	Action
1	Select the Diagnostic Command from the list.
2	Enter the loop number in the Command Parameters box.
	<i>Note:</i> To run the TEST command on all loops, leave the Command Parameters box empty.
3	Click Submit .
	End

Call Trace Diagnostics

Click the **Call Trace Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Call Trace Diagnostics** Web page, as shown in Figure 15 "Call Trace Diagnostics Web page" (page 51).

Figure 15 Call Trace Diagnostics Web page

Diagnostic Commands	C	ommand Parameters	Actio
TRAC - List Route, type and status of trunks for a Customer	~	(cust# acod#)	DEV Subm
TRAD - Trace DTI/DLI calls on a channel of a loop	~	(loop# ch#)	Subm
TRAT - Trace calls for an attendant of a customer	~	(cust# attnd#)	DEV Subm
TRIP - Trace Calls for IP Phone	~	ap. ())	Coutors
Instruction: Select command, add value and clic		(IP Address)) Subm
Instruction: Select command, add value and clic		(IP Address)	

The commands available from this Web page correspond to the Call Trace diagnostics traditionally performed by using LD 80 - Call Trace Diagnostics.

This Web page is used to perform the following Call Trace functions:

- TRAC commands
- TRAD commands
- TRAT commands
- TRIP commands

To perform TRAC commands, follow the steps in Procedure 9 "Performing TRAC commands" (page 52).

Note: To issue a detailed call trace select the **DEV** checkbox.

Procedure 9
Performing TRAC commands

Step	Action
1	Select one of the following commands from the first Commands list:
	a TRAC - List Route, type and status of trunks for a Customer
	b TRAC - Trace calls for specified customer and DN/LSC DN
	c TRAC - Trace calls for specified customer, route and member
	d TRAC - Trace calls on specified Digital Subscriber Loop (0-7)
	e TRAC - Trace calls associated with the specified unit
	f TRAC - Trace calls on specified key for specified unit
2	Enter the customer number and the acod number in the Command Parameters text box.
3	Click Submit.
	End

To perform TRAD commands, follow the steps in Procedure 10 "Performing TRAD commands" (page 52).

Procedure 10 Performing TRAD commands

Step	Action
1	Select the following command from the second Commands list:
	a TRAD - Trace DTI/DLI calls on a channel of a loop
2	Enter the loop number and channel number in the Command Parameters text box.
3	Click Submit.
	End

To perform TRAT commands, follow the steps in Procedure 11 "Performing TRAT commands" (page 53).

Note: To issue a detailed call trace select the **DEV** checkbox.

Procedure 11 Performing TRAT commands

Step	Action
1	Select one of the following commands from the third Commands list:
	a TRAT - Trace calls for an attendant for a customer
	b TRAT - Trace calls on a key of an attendant of a customer
	c TRAT - Trace attendant calls for a unit
	d TRAT - Trace attendant calls on specified key of a unit
2	Enter the customer number and attendant number in the Command Parameters text box.
3	Click Submit.
	End

To perform TRIP commands, follow the steps in Procedure 12 "Performing TRIP commands" (page 53).

Procedure 12 Performing TRIP commands

Step	Action
1	Select the following command from the fourth Commands list:
	a TRIP - Trace calls for IP Phone
2	Enter the required parameters in the Command Parameters tex box.
3	Click Submit .
	End

Centralized Software Upgrade

Click the **Centralized Software Upgrade** link in the list of **Maintenance** diagnostic tools to open the **Centralized Software Upgrade** Web page, as shown in Figure 16 "Centralized Software Upgrade Web page" (page 54).

Figure 16 Centralized Software Upgrade Web page

Upgrade Commands Enabling and Disabling Commands Status Commands nstruction: Select command, add value and click on [Submit]	 <		Submi
Status Commands			10 million and a second
	~		Submi
nstruction: Select command, add value and click on [Submit]			Submi
		>	

To perform Upgrade commands, follow the steps in Procedure 13 "Performing Upgrade commands" (page 54).

Procedure 13 Performing Upgrade commands

Step	Action
1	Select the following commands from the first Commands list:
	a UPGMG - Upgrade IPMG
	b UPGMG ALL - Upgrade ALL IPMGs
	c UPGMGCOMMIT - Initiate Reboot of the IPMG after upgrade
	d UPGMGCOMMI ALL - Initiate Reboot of all the IPMG after upgrade
	e UPGMGBOOT - Upgrade the bootrom of the IPMG
2	Enter the required parameters in the Command Parameters text box.

3 Click Submit.

--End--

To perform Enabling and Disabling commands, follow the steps in Procedure 14 "Performing Enabling and Disabling commands" (page 55).

Procedure 14 Performing Enabling and Disabling commands

Step	Action
1	Select the following commands from the second Commands list:
	a ENL AUTOUPGMG - Enable Automatic Software Upgrade
	b DIS AUTOUPGMG - Disable Automatic Software Upgrade
2	If ENL AUTOUPGMG is used, select either SEQ or SIM from the menu.
3	Click Submit.

--End--

To perform Status commands, follow the steps in Procedure 15 "Performing Status commands" (page 55).

Procedure 15
Performing Status commands

Step	Action
1	Select the following commands from the third Commands list:
	a PRT AUTOUPGMG - Displays settings of Automatic Software Upgrade feature
	 b UPGMG STAT - Provides display details of the specified IPMG upgrade status
	c UPGMGSETUP - Display the current CSU Setting
	 d UPGMGABORT - Abort and display centralized software upgrades
	e HELP - Provides a list of all supported commands
2	If UPGMG STAT is used, enter the Superloop # and Shelf # in the Command Parameters text box.
3	Click Submit.

--End--

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Clock Controller Diagnostics

Click the **Clock Controller Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Digital Trunk Interface and Primary Rate Interface: Clock Controller Diagnostics** Web page as shown in Figure 17 "Digital Trunk Interface and Primary Rate Interface: Clock Controller Diagnostics Web page" (page 56).

Figure 17

Digital Trunk Interface and Primary Rate Interface: Clock Controller Diagnostics Web page

DP TYPE IPMG					
IPMG					
IPMG					
10 M. 10 M.					
ck Clock e Controller Gro	up Side Primary Reference				Error/l
		in a share of the second			
Status					
: Select command.	add value and c	lick on [Submit	1	~	
5	ck Clock e Controller Gro Status	ck Clock Group Side Primary e Controller Side Reference	ck Clock Group Side Primary Secondary e Controller Group Side Reference Reference	ck Clock Group Side Primary Secondary Auto Switch e Controller Group Side Reference Reference Clock	ck Clock Group Side Primary Secondary Auto Switch Cabinet Clock e Controller Group Side Reference Reference Clock Source Status

This Web page is used to maintain the digital trunk interface and the primary rate interface clock controllers.

The commands available from this Web page correspond to the Clock Controller data traditionally maintained by using LD 60 - Digital Trunk Interface and Primary Rate Interface Clock Controller.

This Web page shows the status of the Clock Controller card.

To perform Clock Controller maintenance activities using this Web page follow the steps in Procedure 16 "Performing Clock Controller maintenance activities" (page 57).

Procedure 16 Performing Clock Controller maintenance activities

Step	Α	ction
1	Se	elect one of the following commands from the Action list:
	а	SSCK - Get Status of the Clock
	b	ENL CC - Enable the Clock
	С	DIS CC - Disable the Clock
	d	TRCK - Set the Clock Controller
	е	DSCK - Disable the clock for loop
	f	ENCK - Enable the secondary clock reference for card
	g	EREF - Enable auto switchover of reference clocks
	h	IDC - Get card ID of Clock Controller Card
	i	MREF - Disable switchover of system clocks
	j	SEFT CC - Execute self test
2	Se	elect a Cabinet number from the In Side list.
3	Se	elect the appropriate sub-parameters.
4	CI	ick Submit .
		End

Core Common Equipment Diagnostics

Click the **Core Common Equipment Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Core Common Equipment Diagnostics** Web page, as shown in Figure 18 "Core Common Equipment Diagnostic Web page" (page 58).

Figure 18 Core Common Equipment Diagnostic Web page

Command	Parameters (none) (c# s#/c# s# p#) (none) (none) (none) (none)	Action Subm Subm Subm
	(c# s#/c# s# p#) (none) (none)	Subm Subm Subm
•	(none) (none)	Subm
	(none)	Subm
	(none)	(n.)
		Subm
 Image: A set of the set of the	(none)	Subm
		8

The commands available from this Web page correspond to the Core Common Equipment data traditionally maintained by using LD 135 - Core Common Equipment.

To execute status commands using this Web page, follow the steps in Procedure 17 "Performing Core Common Equipment Status commands" (page 58).

Procedure 17 Performing Core Common Equipment Status commands

Select one of the following commands from the first Commands list:
a STAT CPU - Core status for both CPUs
b STAT CNI - Status of configured CNI (c=side, s=slot, p=port)
c STAT MEM - Status of SIMMs on both CPs
d STAT EXT - Status of all Extender pair designations
e STAT SUTL - Status of system utility

- 2 Enter appropriate **Command Parameters** wherever applicable.
- 3 Click Submit.

To execute CNI commands using this Web page, follow the steps in Procedure 18 "Performing Core Common Equipment CNI commands" (page 59).

Procedure 18 Performing Core Common Equipment CNI commands

Step	Action
1	Select one of the following commands from the second Commands list:
	a ENL CNI - Enable CNI card/port (c=side, s=side, p=port)
	b DIS CNI - Disable CNI all, card or port
	c DSPL - Display active core contents
	d DSPL ALL - Display active core contents for all
	e IDC CPU - Print card ID for active core
	f IDC CNI - Print card ID for CNI on active side
	g ENL EXT - Enable specified Extender pair
2	Enter the required parameters in the Commands Parameters text box.
3	Click Submit

3 Click Submit.

--End--

To execute test commands using this Web page, follow the steps in Procedure 19 "Performing Core Common Equipment test commands" (page 59).

Procedure 19 Performing Core Common Equipment test commands

d Commands
p=port)
processor Bus
•

- d TEST LCD Test the LCD display on the active CP card
- e TEST LED Test LEDs
- f TEST SUTL Test system utility
- 2 Enter appropriate **Command Parameters** wherever applicable.
- 3 Click Submit.

To execute miscellaneous commands using this Web page, follow the steps in Procedure 20 "Performing Core Common Equipment miscellaneous commands" (page 60).

Procedure 20 Performing Core Common Equipment miscellaneous commands

the following commands from the fourth list:
witch cores
ut a redundant system into single mode
lear maintenance displays
lear major alarm and reset power fail transfer
ear the minor alarm for all customers
- Transfer call processing from active to standby
nchronize the memory and drives

--End--

To execute status health commands using this Web page, follow the steps in Procedure 21 "Performing Core Common Equipment status health commands" (page 60).

Procedure 21 Performing Core Common Equipment status health commands

Step	Action
1	Select one of the following commands from the fifth Commands list:

a STAT HEALTH HELP - Help for health commands

- **b** STAT HEALTH Overall health status
- c STAT HEALTH AML AML health status
- **d** STAT HEALTH DSPDB DSP Daughterboard health status (applicable only to systems with Media Gateway Controllers containing DSP Daughterboards)
- e STAT HEALTH IPL IPL health status
- f STAT HEALTH ELAN ELAN health status
- g STAT HEALTH HW Hardware health status

2 Click Submit.

--End--

To execute Geographic Redundancy commands using this Web page, do the following:

Procedure 22 Performing Core Common Equipment Geographic Redundancy commands

Select one of the following commands from the sixth Commands list:
a STAT GR - Status of Geographic Redundancy
b TEST GR - Test Geographic Redundancy
c CLR GR - Clear operation for the secondary CS
Enter appropriate Command Parameters wherever applicable.
Click Submit.

--End--

Core Input/Output Diagnostics

Click the **Core Input/Output Diagnostics** link in the list of **Maintenance** tools to open the **Core Input/Output Diagnostics** Web page as shown in Figure 19 "Core Input/Output Diagnostics Web page" (page 62).

This Web page is used to obtain the status of PPP and Ethernet links. The commands available from this Web page correspond to the tools traditionally maintained using LD 137 - Core Input/Output Diagnostics.

Figure 19 Core Input/Output Diagnostics Web page

Diagnostic Commands	Comma	nd Parameters	Action
STAT - Status of both IOPs and ethernet link	~	(none)	ELNK Subm
DATA RDUN - Sector level check on both hard disks	~	(none)	Subm
IDC - Print ID of active IOP	~	(none)	Subm

To perform diagnostic commands using this Web page, follow the steps in Procedure 23 "Performing Core Input/Output diagnostic commands" (page 62).

Procedure 23 Performing Core Input/Output diagnostic commands

Step	Action
1	Use the first Commands list to perform the following diagnostic activities:
	a STAT - Status of both IOPs and CMDUs and ethernet link
	b STAT RDUN - Status of both disks
	c STAT FMD - Status of active Fixed Media Devices
	d STAT RMD - Status of active Removable Media Devices
2	Click Submit.
3	Use the second Commands list to perform the following diagnostic activities:
	a DATA RDUN - Sector level check on both hard disks

- b TEST RDUN Test file level check on both hard disks
- 4 Click Submit.
- 5 Use the third **Commands** list to perform the following diagnostic activities:
 - a IDC Print IDs of both CMDUs and active IOP
 - **b** SDID Display security device information
- 6 Click Submit.

D-channel Diagnostics

Click the **D-channel Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **D-Channel Diagnostics** Web page as shown in Figure 20 "D-channel Diagnostics Web page" (page 63).

Figure 20 D-channel Diagnostics Web page

Diagnostic Commands		
Obtue for D. Obernel (OTIT DOLI)	Command Parameters	Action
Status for D-Channel (STAT DCH)	M	Submit
Disable Automatic Recovery (DIS AUTO)		Submit
Enable Automatic Recovery (ENL AUTO)		Submit
Test Interrupt Generation (TEST 100)	~	Submit
Establish D-Channel (EST DCH)	~	Submit
	ula au Effekuital	
Instruction: Select command, add value and clic	ek on [Submit]	

This Web page is used to test and maintain D-channel links and D-channel Interface (DCHI) cards. The commands available from this Web page correspond to the D-channel data traditionally maintained using the following overlays:

- LD 37 Input/Output Diagnostic
- LD 48 Link Diagnostic
- LD 96 D-channel Diagnostic

To execute status commands using this Web page, follow the steps in Procedure 24 "Performing D-channel status commands" (page 64).

Procedure 24 Performing D-channel status commands

Step	Action
1	Select one of the following commands from the first Commands list:
	a Status for D-Channel (STAT DCH)
	b Status for Service Message (STAT SERV)
2	Click Submit.
	End

To execute disable commands using this Web page, follow the steps in Procedure 25 "Performing D-channel disable commands" (page 64).

Procedure 25 Performing D-channel disable commands

Step	Action
1	Select one of the following commands from the second Commands list:
	a Disable Automatic Recovery (DIS AUTO)
	b Disable D-Channel (DIS DCH). Select the ALL check box to disable all D-Channels.
	c Disable Local Loop Back (DIS LLB)
	d Disable Remote Loop Back (DIS RLB)
	e Disable Test Mode (DIS TEST)
2	Click Submit.
	End

To execute enable commands using this Web page, follow the steps in Procedure 26 "Performing D-channel enable commands" (page 65).

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Procedure 26 Performing D-channel enable commands

Step	Α	ction
1	Se lis	elect one of the following commands from the third Commands t:
	а	Enable Automatic Recovery (ENL AUTO)
	b	Enable D-Channel (ENL DCH). To force a loadware download at the same time, select the FDL check box.
	С	Enable Local Loop Back (ENL LLB)
	d	Enable Remote Loop Back (ENL RLB)
	е	Enable Test Mode (ENL TEST)
2	CI	ick Submit .
		End

To execute test commands using this Web page, follow the steps in Procedure 27 "Performing D-channel test commands" (page 65).

Procedure 27 Performing D-channel test commands

Step	Action
1	Select one of the following commands from the fourth Commands list:
	a Test interrupt Generation (TEST 100)
	b Test Loop Back (Test 101)
	c Test Interrupt Handler (TEST 200)
	d Test Interrupt Handler-to-link (TEST 201)
2	Click Submit.
	End

To execute D-Channel commands using this Web page, follow the steps in Procedure 28 "Performing D-channel commands" (page 66).

Procedure 28 Performing D-channel commands

list a b	Lect one of the following commands from the fifth Commands EEstablish D-Channel (EST DCH) Get Physical Address and switch settings (MAP DCH) Reset DCH and Inhibit Signaling (RST DCH)
b	Get Physical Address and switch settings (MAP DCH)
	,
С	Reset DCH and Inhibit Signaling (RST DCH)
d	Release D-Channel (RLS DCH)
е	Switch to Standby D-Channel (SDCH DCH)
Cli	ck Submit .
	End

D-Channel Expansion Diagnostics

Click the **D-Channel Expansion Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Link: D-Channel Expansion Diagnostics** Web page as shown in Figure 21 "Link: D-Channel Expansion Diagnostics Web page" (page 67).

Figure 21 Link: D-Channel Expansion Diagnostics Web page

	ion Diagnostics				
Diagnostic	Commands	Command	Parameters	Action	
STAT MSDL - Status of MSDL card		~	(none)	Submit	
DIS MSDL - Disable the given MSD	. card	~	(none)	Submit	
ENL MSDL - Enable the given MSDI	. card	*	(none)	Submit	

This Web page is used to test and maintain Multipurpose Serial Data Link (MSDL) cards. The commands available from this Web page correspond to the MSDL data traditionally configured by using LD 48 - Link Diagnostic.

To perform MSDL diagnostic activities using this Web page, follow the steps in Procedure 29 "Performing D-channel Expansion MSDL diagnostic commands" (page 67).

Procedure 29

Performing D-channel Expansion MSDL diagnostic commands

Step	Α	ction
1	Se lis	elect one of the following commands from the first Commands t:
	а	STAT MSDL - Status of MSDL card
	b	STAT MSDL full - Status MSDL card and available RAM
	С	SLFT MSDL - Self test on the given MSDL card
	d	RST MSDL - Power-On rest the given MSDL card

2 Click Submit.

--End--

To execute disable commands using this Web page, follow the steps in Procedure 30 "Performing D-channel Expansion disable commands" (page 68).

Procedure 30 Performing D-channel Expansion disable commands

Step	Action
1	Select one of the following commands from the second Commands list:
	a DIS MSDL all - Disable the given MSDL card
	b DIS MSDL ALL - Disable all ports and then the MSDL card
	c DIS MSDL AUDM - Disable MSDL auditing for the MSDL card
	d DIS MSDL DBG - Disable debugger option for the MSDL card
2	Click Submit.
	End

To execute enable commands using this Web page, follow the steps in Procedure 31 "Performing D-channel Expansion enable commands" (page 68).

Procedure 31 Performing D-channel Expansion enable commands

Step	Α	ction
1	Se lis	elect one of the following commands from the third Commands t:
	а	ENL MSDL - Enable the given MSDL card
	b	ENL MSDL all - Enable all ports and then the MSDL card
	С	ENL MSDL AUDM - Enable MSDL auditing for the MSDL card
	d	ENL MSDL FDL - Force download loadware to the MSDL card

2 Click Submit.

--End--

Digital Trunk Diagnostics

Click the **Digital Trunk Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Digital Trunk Interface and Primary Rate Interface: Digital Trunk Diagnostics** Web page as shown in Figure 22 "Digital Trunk Interface and Primary Rate Interface: Digital Trunk Diagnostics Web page" (page 69).

Figure 22

Digital Trunk Interface and Primary Rate Interface: Digital Trunk Diagnostics Web page

STAT - Get Status of loop(s) Image: constraint of loop (s) Image: constraint of loop (s) Submit STAT - Get Status of the Channel Image: constraint of loop (s) Submit LOVF - List Threshold Overflows for Route Image: constraint of loop (s) Submit LOVF - List Threshold Overflows for Route Image: constraint of loop (s) Submit ATLP - Daily routine auto loop test Image: constraint of loop (s) Submit Instruction: Select command, add value and click on [Submit] Image: constraint of loop (s)	Diagnostic Commands	Com	mand Parameters Action	1
OVF - List Threshold Overflows for Route (cust# route#) Submit TLP - Daily routine auto loop test (0 or 1) Submit	TAT - Get Status of loop(s)	~	(loop#) Submi	it
TLP - Daily routine auto loop test (0 or 1) Submit	TAT - Get Status of the Channel	~	(l# ch#) Submi	it
	OVF - List Threshold Overflows for Route	~	(cust# route#) Submi	it
nstruction: Select command, add value and click on [Submit]	TLP - Daily routine auto loop test	~	(0 or 1) Submi	it
	struction: Select command, add value and	click on [Suk	omit]	^

This Web page is used to test and maintain Digital Trunk Cards. The commands available from this Web page correspond to the DTI/PRI data traditionally maintained by using LD 60 - Digital Trunk Interface and Primary Rate Interface Diagnostics.

Use this Web page to issue maintenance commands on cards, channels, or routes by using the appropriate command list and parameter text box.

To perform maintenance activities on a Digital Trunk Card using this Web page, follow the steps in Procedure 32 "Performing maintenance activities on a Digital Trunk Card" (page 70).

Procedure 32 Performing maintenance activities on a Digital Trunk Card

Step	Ac	ction
1		lect one of the following commands from the first Commands op-down list:
	а	STAT - Get Status of loop(s)
	b	DISL - Disable network and DTI/PRI cards of loop
	С	DISI - Disable loop (when all channels are idle
	d	ENCH - Enable all channels on 2.0 Mb/s DTRI/PRI
	е	ENLL - Enable network and DTI/PRI cards of loop
	f	LCNT - List contents of alarm counters on loop(s)
	g	RCNT - Reset alarm counters of all DTI/PRI loops
	h	SLFT - Self Test on the loop)
	i	DSYL - Disable yellow alarm processing for loop
	j	ENYL - Enable yellow alarm processing for loop
	k	DLBK - Disable remote loop back test
	Ι	RLBK - Close loop at carrier interface point for testing
	m	RMST - Perform remote loop back test on loop
2	En	ter the Loop number in the Command Parameters text box.
3	Cli	ck Submit.

--End--

To perform maintenance activities on a Channel belonging to a Digital Trunk Card using this Web page, follow the steps in Procedure 33 "Performing maintenance activities on a Channel" (page 70).

Procedure 33 Performing maintenance activities on a Channel

Step	Action		
1	Select one of the following commands from the second Commands drop-down list:		
	a STAT - Get Status of the channel		

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- **b** DSCH Disable the channel
- c ENCH Enable the channel
- d SLFT Self Test on the channel
- e DLBK Disable remote loop back test on channel
- f RLBK Close channel at carrier interface point
- g RMST Perform far end loop test on Channel
- h RSET Reset thresholds for channel on loop
- 2 Enter the Loop number and the Channel number, separated by a space, in the **Command Parameters** text box.
- 3 Click Submit.

To perform maintenance activities on a Digital Trunk Route using this Web page, follow the steps in Procedure 34 "Performing maintenance activities on a Digital Trunk Route" (page 71).

Procedure 34 Performing maintenance activities on a Digital Trunk Route

Step	Action
1	Select one of the following commands from the third Commands drop-down list:
	a LOVF - List Thresholds Overflows for the Route
	b CMIN - Clear minor alarm indication for customer
2	Enter the Customer number and the Route number, separated by a space, in the Command Parameters text box.
3	Click Submit .

To perform maintenance activities on a card using this Web page, follow the steps in Procedure 35 "Performing maintenance activities on a card" (page 71).

Procedure 35 Performing maintenance activities on a card

Step	Action
1	Select one of the following commands from the fourth Commands drop-down list:

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- a ATLP Daily routine automatic card test
- **b** CDSP Clear maintenance display
- 2 Enter the 0 or 1 in the **Command Parameters** text box.
- 3 Click Submit.

Digital Trunk Maintenance Diagnostics

Click the **Digital Trunk Maintenance Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Digital Trunk Diagnostics** Web page as shown in Figure 23 "Digital Trunk Diagnostics Web page" (page 72).

Figure 23 Digital Trunk Diagnostics Web page

Diagnostic Commands	Comma	nd Parameters Acti
STAT DDCS - Status for All DDCS loops or loop	¥	((loop)) Sub
DIS DDCS - Disable DDCS number	~	(number) Sub
ENL DDCS - Enable DDCS number	~	(number) Sub
CDSP - Clear Display on active CPU	~	(none) Sub

The commands available from this Web page correspond to the digital trunk diagnostics traditionally performed by using LD 75 - Digital Trunk Diagnostics.

To get status information about a digital trunk using this Web page, follow the steps in Procedure 36 "Performing status commands on a digital trunk" (page 73).

Procedure 36 Performing status commands on a digital trunk

Step	Action			
1	Select one of the following status commands from the first Commands drop-down list:			
	a STAT DDCS - Status for all DDCS loops or loop			
	b STAT DDSL - Status for all DDSLs or DDSL number			
	c STAT DTCS - Status for all DTCS loops or DTCS loop			
	d STAT DTRC - Status of RDC on loop			
	e STAT DTSL - Status of all DTSLs or DTSL number			
	f STAT DTVC - Status of VDC on loop			
	g STAT LSSL - Status of LSSL number for APNSS			
	h STAT LSRC - Status of RDC on Signaling Link number			
	i STAT LSVC - Status of VDC on Signaling Link number			
2	Enter the Loop number in the Command Parameters text box.			
3	Click Submit.			
	End			

To disable an entity on a digital trunk using this Web page, follow the steps in Procedure 37 "Performing disable commands on a digital trunk" (page 73).

Procedure 37 Performing disable commands on a digital trunk

Step	Action			
1	Select one of the following disable commands from the second Commands drop-down list:			
	a DIS DDSC - Disable DDSC number			
	b DIS DDSL - Disable DDSL number			
	c DIS DTCS - Disable DTCS loop			
	d DIS DTRC - Disable RDC on Loop			
	e DIS DTSL - Disable DTSL number			

- f DIS DTVC Disable VDC on loop
- g DIS LSSL Disable LSSL number for APNSS
- h DISI DDCS Disable all Channels on Loop as idle
- i DISI DTCS Disable DTCS loop
- 2 Enter the appropriate number in the **Command Parameters** text box.
- 3 Click Submit.

To enable an entity on a digital trunk using this Web page, follow the steps in Procedure 38 "Performing enable commands on a digital trunk" (page 74).

Procedure 38 Performing enable commands on a digital trunk

Step	Action	
1	Select one of the following enable commands from the third Commands drop-down list:	
	a ENL DDSC - Enable DDSC number	
	b ENL DDSL - Enable DDSL number	
	c ENL DTCS - Enable DTCS loop	
	d ENL DTRC - Enable RDC on Loop	
	e ENL DTSL - Enable DTSL number	
	f ENL DTVC - Enable VDC on loop	
	g ENL LSSL - Enable LSSL number for APNSS	
2	Enter the appropriate number in the Command Parameters text box.	
3	Click Submit.	
	End	

To perform miscellaneous commands on a digital trunk using this Web page, follow the steps in Procedure 39 "Performing miscellaneous commands on a digital trunk" (page 75).

Procedure 39 Performing miscellaneous commands on a digital trunk

Step	Action
1	Select one of the following enable commands from the fourth Commands drop-down list:
	a CDSP - Clear display on active CPU
	b CMIN - Clear minor alarm for all customers
	c STRT - Start DDSL number
2	Enter the necessary parameters.
3	Click Submit .
	End

Emergency Services Diagnostics

Click the **Emergency Services Diagnostics** link in the list of Maintenance diagnostic tools to open the **Emergency Services Diagnostics** Web page as shown in Figure 24 "Emergency Services Diagnostics Web page" (page 75).

Figure 24 Emergency Services Diagnostics Web page

nergency Services Diagnostics			
Diagnostic Commands	Comman	nd Parameters	Action
Emergency Response Location Commands	~		Submi
Subnet Information Commands	*		Submi
Dynamic Location Identification Commands	¥		Submi

To perform Emergency Response Location commands using this Web page, follow the steps in Procedure 40 "Performing Emergency Response Location commands" (page 76).

Procedure 40 Performing Emergency Response Location commands

Step	Action			
1	Select one of the following commands from the first Commands drop-down list:			
	a PRT ERL - Print Emergency Response Location			
	b ENL ERL - Enable ERL			
	c DIS ERL - Disable ERL			
2	Enter the required parameters in the Command Parameters text box.			
3	Click Submit.			
	End			

To perform Subnet Information commands using this Web page, follow the steps in Procedure 41 "Performing Subnet Information commands" (page 76).

Procedure 41 Performing Subnet Information commands

Step	o Action				
1		Select one of the following commands from the second Commands drop-down list:			
	а	PRT SUBNET - Print Subnet Location			
	b	PRT SUBNET NTH - Print Subnet Locations Starting from Index #			
	С	PRT SUBNET ERL - Print All Subnet Locations for ERL			
	d	PRT SUBNET ECL - Print All Subnet Locations for ECL			
	е	EST SUBNETLIS - Test Subnet Location			
2	Enter the required parameters in the Command Parameters tex box.				
3 Click Submit.		ick Submit.			
		End			

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 To perform Dynamic Location Identification commands using this Web page, follow the steps in Procedure 42 "Performing Dynamic Location Identification commands" (page 77).

Procedure 42 Performing Dynamic Location Identification commands

Step	Action	
1	Select one of the following commands from the third Commands drop-down list:	
	a PRT ELIN - Print Dynamic ELIN	
	b STAT ELIN - Get Status of Dynamic ELIN	
	c STAT ELIN ACTIVE - Get Status of active Dynamic ELIN	
2	Enter the required parameters in the Command Parameters tex box.	
3	Click Submit.	
	End	

Ethernet Diagnostics

Click the **Ethernet Diagnostics** link in the list of Maintenance diagnostic tools to open the **Ethernet Diagnostics** Web page as shown in Figure 25 "Ethernet Diagnostics Web page" (page 78).

Figure 25 Ethernet Diagnostics Web page

Status Commands [Filters]		Command Parameters
STAT LINK IP - Link status IP	~	Submit
STAT SERV - Server status	~	Submit
STIP TN - IP Status TN	~	Submit
PRT IPDN - Print DNs with a given IP address	~	Submit
ECNT FW - Etherset Count FWID MajorVer MinorVer Filter	~	Submit
RST ZONE - Reset IP Phone Zone START/STOP HH:MM	~	Submit
STAT IPMG - Print status of the given or all IPMGs	~	Submit
STAT RFC2833 - RFC2833 Status TN	~	Submit
Instruction: Select command, add value and click on	[Submit]	

This Web page is used to maintain Ethernet elements. The commands available from this Web page correspond to the data traditionally maintained by using LD 117- Ethernet Quality of Service Diagnostics.

To execute Link status commands, follow the steps in Procedure 43 "Performing Link status commands" (page 78).

Procedure 43

Performing Link status commands

Step	Action	
1	Select one of the following commands from the first Comm drop-down list:	
	а	STAT LINK IP - Link Status IP
	b	STAT LINK SRV - Link Status Server
	С	STAT LINK NAME - Link Status Host Name
	d	STAT LINK NODE - Link Status Node ID

- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

To execute server status commands, follow the steps in Procedure 44 "Performing server status commands" (page 79).

Procedure 44 Performing server status commands

Step	Action				
1	Select one of the following commands from the second Commands drop-down list:				
	a STAT SERV - Server Status				
	b STAT SERV IP - Server StatusIP				
	c STAT SERV TYPE - Server Status Type				
	d STAT SERV APP - Server Status Application				
	e STAT SERV NAME - Server Status Name				
	f STAT SERV NODE - Server Status Node ID				
2	Enter the required command parameters in the Command Parameters text box.				
3	Click Submit				

3 Click Submit.

--End--

To execute IP status commands, follow the steps in Procedure 45 "Performing IP status commands" (page 79).

Procedure 45 Performing IP status commands

Step	Α	ction		
1	Select one of the following commands from the third Commands drop-down list:			
	а	STIP TN - IP Status TN		
	b	STIP TYPE - IP Status Type		
	С	STIP ZONE - IP Status Zone		
	d	STIP NODE - IP Status Node ID		

- e STIP HOSTIP IP Status -- Host IP
- f STIP ACF IP Status -- Active Call Failover
- g STIP TERMIP IP Status -- Term IP
- h STIP FW IP Status -- FWID MajorVer MinorVer Filter
- i STIP MODL IP Status -- ModelName
- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

To execute print commands, follow the steps in Procedure 46 "Performing print commands" (page 80).

Procedure 46 Performing print commands

Step	Α	ction	
1	Select one of the following commands from the fourth Commands drop-down list:		
	а	PRT IPDN - Print DNs with a given IP address	
	b	PRT DNIP Print IP address(es) with a given DN	
	С	PRT IPR - Print information for the given IPMG	
	d	PRT IPMG - Print information for the given IPMG	
2		nter the required command parameters in the Command arameters text box.	
3	CI	ick Submit .	

--End--

To execute Etherset Count commands, follow the steps in Procedure 47 "Performing Etherset Count commands" (page 80).

Procedure 47 Performing Etherset Count commands

Step	Action
1	Select one of the following commands from the fifth Commands drop-down list:
	a ECNT FW - Etherset Count FWID MajorVer MinorVer Filter

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- b ECNT MODL Etherset Count -- Model
- c ECNT PEC Etherset Count -- PEC
- d ECNT ZONE Etherset Count -- Zone Customer #
- e ECNT CARD Etherset Count -- Loop Shelf Card Customer#
- f ECNT NODE Etherset Count -- Node ID
- g ECNT SS Etherset Count -- HostName
- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

To execute Reset IP Phone commands, follow the steps in Procedure 48 "Performing Reset IP Phone commands" (page 81).

Procedure 48 Performing Reset IP Phone commands

Step	Action
1	Select one of the following commands from the sixth Commands drop-down list:
	a RST ZONE - Reset IP Phone Zone START/STOP HH:MM
	b RST FW - Reset IP Phone FWID START/STOP HH:MM
2	Enter the required command parameters in the Command Parameters text box.
3	Click Submit.
	End

To execute IPMG commands, follow the steps in Procedure 49 "Performing IPMG commands" (page 81).

Procedure 49 Performing IPMG commands

Step	Α	Action	
1		elect one of the following commands from the seventh commands drop-down list:	
	а	STAT IPMG - Print status of the given or all IPMGs	
	b	b STAT IPMG SUMMARY - Print status of all IPMGs	

- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

To execute RFC2833 commands, follow the steps in Procedure 50 "Performing RFC2833 commands" (page 82).

Procedure 50 Performing RFC2833 commands

Step	Action
1	Select one of the following commands from the eighth Commands drop-down list:
	a STAT RFC2833 - RFC2833 Status - TN
	b ENL RFC2833PRT - Enable the info Message Printing
	c DIS RFC2833PRT - Disable the info Message Printing
2	Enter the required command parameters in the Command Parameters text box.
3	Click Submit.
	End

Ethernet Quality of Service Diagnostics

Click the **Ethernet Quality of Service Diagnostic** link in the list of **Maintenance**diagnostic tools to open the **Ethernet Quality of Service Diagnostics** Web page as shown in Figure 26 "Ethernet Quality of Service Diagnostics Web page" (page 83).

Figure 26 Ethernet Quality of Service Diagnostics Web page

	Print QoS Attribute for Zone (PRT AQOS) 👻 Zone Number Attribute Submit
Action	Change Zone Notification Level (CHG ZQNL) 🗹 Zone Number Level Submit
	uction: Select command, add value and click on [Submit]
<	×
Cance	

This Web page is used to issue commands on elements by using the appropriate **Action** drop-down list and the corresponding Zone Number and Attribute or Level text boxes.

The commands that are available from this Web page correspond to data traditionally maintained by using LD 117 - Zone Configuration and Diagnostic.

To perform maintenance activities for Zone Attributes, follow the steps in Procedure 51 "Performing maintenance activities for Zone Attributes" (page 83).

Procedure 51 Performing maintenance activities for Zone Attributes

Step	A	ction
1		elect one of the following commands from the Action op-down list:
	а	Print QoS attribute for Zone (PRT AQOS)
	b	Print Zone IP statistics (PRT ZQOS)
		(

- 2 Enter the appropriate value in the corresponding **Zone Number** and **Attribute** text box.
- 3 Click Submit.

To perform maintenance activities for Zone Levels, follow the steps in Procedure 52 "Performing maintenance activities for Zone Levels" (page 84).

Procedure 52 Performing maintenance activities for Zone Levels

Step	Action
1	Select one of the following commands from the Action drop-down list:
	a Change Zone Notification Level (CHG ZQNL)
	b Print Zone Notification Level (PRT ZQNL)
2	Enter the appropriate value in the corresponding Zone Number and Level text box.
3	Click Submit .
	End

Input/Output Diagnostics

Click the **Input/Output Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Input Output Diagnostics** Web page as shown in Figure 27 "Input/Output Diagnostics Web page" (page 85).

Figure 27 Input/Output Diagnostics Web page

ut Output Diagnostics		
Diagnostic Commands	Command	Parameters Action
TTY Commands	~	Submi
Printer Commands	~	Submi
MSDL Commands	~	Submi
Miscellaneous Commands	~	Subm
No MSDL STATUS		
No MSDL STATUS		
No MSDL devices are configured in the system		
No MSDL devices are configured in the system		

The commands available from this Web page correspond to the Input/Output diagnostics traditionally performed using LD 37 - Input/Output.

To execute TTY commands, follow the steps in Procedure 53 "Performing Input/Output TTY commands" (page 85).

Procedure 53

Performing Input/Output TTY commands

Step	Action
1	Select one of the following commands from the first Commands drop-down list:
	a STAT TTY - Get status of TTY device(s)
	b ENL TTY - Enable TTY
	c DIS TTY - Disable TTY
2	Enter the required command parameters in the Command Parameters text box.

3 Click Submit.

--End--

To execute Printer commands, follow the steps in Procedure 54 "Performing Input/Output Printer commands" (page 86).

Procedure 54 Performing Input/Output Printer commands

Step	Action	
1	Select one of the following commands from the second Commands drop-down list:	
	a STAT PRT - Get status of Printer(s)	
	b ENL PRT - Enable Printer	
	c DIS PRT - Disable Printer	
2	Enter the required command parameters in the Command Parameters text box.	
3	Click Submit .	

--End--

To execute MDSL commands, follow the steps in Procedure 55 "Performing Input/Output MDSL commands" (page 86).

Procedure 55 Performing Input/Output MDSL commands

Step	Α	ction
1		elect one of the following commands from the third Commands op-down list:
	а	STAT MSDL - Get status of MSDL card(s)
	b	ENL MSDL - Enable MSDL device
	С	DIS MSDL - Disable MSDL device
	d	SLFT MSDL - Self test MSDL device
	е	RST MSDL - Reset MSDL device
2		nter the required command parameters in the Command arameters text box.

3 Click Submit.

--End--

To use the miscellaneous commands, do the following:

Step	Action			
1	Select one of the following commands from the fourth Commands drop-down list:			
	a STAT - Get status of all I/O devices in system			
	b STAT XSM - Get status of the system monitor			
	c STAT LINK - Get status of CDR data Link(s)			
	d CMIN - Clear minor alarm for all customers			
	e CDSP - Clear maintenance display on active CPU			
2	Enter the required command parameters in the Command Parameters text box.			
3	Click Submit.			
	End			

Intergroup Switch and System Clock Generator Diagnostics

Click the Intergroup Switch and System Clock Generator Diagnostics link in the list of Call Server functionalities to open the Intergroup Switch and System Clock Generator Diagnostics Web page as shown in Figure 28 "Intergroup Switch and System Clock Generator Diagnostics Web page" (page 88).

Figure 28 Intergroup Switch and System Clock Generator Diagnostics Web page

ntergroup Switch and System Clock Gener	ator Diagnostics	
Diagnostic Commands	Command Parameters	
STAT FIJI - Status of FIJI in specified Grp, Side	(grp#side#)	
DIS ALRM - Disable specified Alarm (or all) for FIJI	(grp# side# (alarm#)	
ENL ALRM - Enable specified Alarm (or all) for FIJI	(grp# side# (alarm#)	
FEST 360 - Perform 360 test on FIJI card	(grp# side# (time#))	
CDSP - Clear Maintenance Display on active CPU	(none)	C
	~	

The commands available from this Web page correspond to the Intergroup Switch and System Clock Generator diagnostics traditionally performed using LD 39.

To use status commands, follow the steps in Procedure 56 "Performing Intergroup status commands" (page 88).

Procedure 56

Performing Intergroup status commands

Step	Α	ction
1		elect one of the following commands from the first Commands op-down list:
	а	STAT FIJI - Status of FIJI on specified Grp, Side
	b	STAT PER - Status of specified PS card
	С	STAT SCG - Status of specified SCG card (0 or 1)
	d	STAT RING - Status of all FIJI cards on specified Ring

- 2 Enter the group number and side number in the **Command Parameters** text box.
- 3 Click Submit.

To use the disable commands, follow the steps in Procedure 57 "Performing Intergroup disable commands" (page 89).

Procedure 57 Performing Intergroup disable commands

Step	Action			
1	Select one of the following commands from the second Commands drop-down list:			
	a DIS ALRM - Disable specified Alarm (or all) for FIJI			
	b DIS FIJI - Disable FIJI in specified Group and Side			
	c DSPS - Disable specified PS card			
	d DIS SCG - Disable specified SCG card (0 or 1)			
	e DIS RING - Disable all FIJI cards on specified Ring			
	f DIS RALM - Disable all alarms for all RIJI cards in Ring			
2	Enter the required command parameters in the Command Parameters text box.			
3	Click Submit.			

--End--

To use the enable commands, follow the steps in Procedure 58 "Performing Intergroup enable commands" (page 89).

Procedure 58 Performing Intergroup enable commands

Step	Α	ction
1		elect one of the following commands from the third Commands op-down list:
	а	ENL ALRM - Enable specified Alarm (or all) for FIJI
	b	ENL FIJI - Enable FIJI in specified Group and Side
	С	ENPS - Enable specified PS card
	d	ENL SCG - Enable specified SCG card (0 or 1)

- e ENL RING Enable all FIJI cards on specified Ring
- ENL RALM Enable all alarms for all FIJI cards in Ring f
- 2 Enter the required command parameters in the Command Parameters text box.
- 3 Click Submit.

To use the test commands, follow the steps in Procedure 59 "Performing Intergroup test commands" (page 90).

Procedure 59

Performing Intergroup test commands

Step	Action			
1	Select one of the following commands from the fourth Commands drop-down list:			
	a TEST 360 - Perform 360 test on FIJI card			
	b TEST FIJI - Self Test FIJI Card			
	c TEST BKPL - Test backplane			
	d TEST CMEM - Test connection memory			
	e TEST LINK - Perform Link test to identify hardware faults			
	f TEST ALL - Perform FIJI diagnostic test			
2	Enter the required command parameters in the Command Parameters text box.			
3	Click Submit .			

--End--

To use the miscellaneous commands, follow the steps in Procedure 60 "Performing Intergroup miscellaneous commands" (page 90).

Procedure 60 Performing Intergroup miscellaneous commands

Step	Action
1	Select one of the following commands from the fifth Commands drop-down list:
	a CDSP - Clear Maintenance Display on active CPU
	b CMIN - Clear minor alarm for all customers

- c ARCV ON Set auto-recovery operation for ring
- d ARCV OFF Reset auto-recovery operation for ring
- e ALRD ON Turn on alarm display for all FIJI cards
- f ALRD OFF Turn off alarm display for all FIJI cards
- g RSET Reset thresholds for switchover functionality
- **h** RSTR Restore Ring(s)
- i SCLK Switchover to the other SCG
- j SLCK FRCE Force clock to switch to other SCG
- k SWRG Switch Call Processing to specified ring
- 2 If SWRG is selected, enter appropriate **Command Parameter**.
- 3 Click Submit.

MSDL Diagnostics

Click the **MSDL Diagnostics** link in the list of Maintenance diagnostic tools to open the **Multipurpose Serial Data Link (MSDL) Diagnostics** Web page as shown in Figure 29 "MSDL Diagnostics Web page" (page 92).

Figure 29 MSDL Diagnostics Web page

Diagnostic Comman	ds	Command Parameters	Action
Disable MSDL Device (DIS)	~	FDL FULL ALL	Submit
MSDL STATUS o MSDL devices are configured in the	system		
			2

The commands available from this Web page correspond to the MSDL diagnostics traditionally performed by using LD 96 - D-channel.

This Web page is used to perform the following MSDL diagnostic functions:

- Disable MSDL Device (DIS)
- Enable MSDL Device (ENL)
- Self Test (SLFT)
- Get Status of MSDL Device (STAT)
- Causes Power-On Reset of MSDL Device (RST)

To perform diagnostic activities using this Web page, follow the steps in Procedure 61 "Performing MSDL diagnostic activities" (page 93).

Procedure 61 Performing MSDL diagnostic activities

Step	Action
1	Select the required Diagnostic Command from the Commands drop-down list.
2	To update the loadware, select the FDL (Force Download) check box when the Enable MSDL Device command is selected.
3	To check the status of all MDSL devices, select the Full check box when the Get Status of MSDL Device command is selected.
4	Enter the required command parameters in the Command Parameters text box.
5	Click Submit.
	End

Multifrequency Sender Diagnostics

The **Multifrequency Sender Diagnostics** Web page is available only on Large Systems.

Click the **Multifrequency Sender Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Multifrequency Sender Diagnostics** Web page as shown in Figure 30 "Multifrequency Sender Diagnostics Web page" (page 94).

Figure 30 Multifrequency Sender Diagnostics Web page

Diagnostic Commands	Command	Parameters Action
Loop Commands	~	Submit
Card Commands	¥	Submit
Alarm Commands	*	Submit

The commands available from this Web page correspond to the Multifrequency Sender diagnostics traditionally performed by using LD 46.

To use the loop commands, follow the steps in Procedure 62 "Performing Multifrequency Sender loop commands" (page 94).

Procedure 62

Performing Multifrequency Sender loop commands

Step	Action
1	Select one of the following commands from the first Commands drop-down list:
	a STAT - Get Status of MFS loop
	b ENLL - Enable loop
	c DISL - Disable loop
	d MFS - Test and enable MFS loop
2	Enter the required command parameters in the Command Parameters text box.

3 Click Submit.

--End--

To use the card commands, follow the steps in Procedure 63 "Performing Multifrequency Sender card commands" (page 95).

Procedure 63 Performing Multifrequency Sender card commands

Step	Action
1	Select one of the following commands from the second Commands drop-down list:
	a ENLX - Enable Conf/TDS/MFS card on loop
	b DISX - Disable Conf/TDS/MFS card on loop
2	Enter the required command parameters in the Command Parameters text box.
3	Click Submit button.

--End--

To use the alarm commands, follow the steps in Procedure 64 "Performing Multifrequency Sender alarm commands" (page 95).

Procedure 64 Performing Multifrequency Sender alarm commands

Select one of the following commands from the third Commands drop-down list:
a CMAJ - Clear major alarm and reset power fail
b CDSP - Clear Maint display on active CPU
c CMIN - Clear minor alarm for all customers
Enter the required command parameters in the Command Parameters text box.
Click Submit.

--End--

Multifrequency Signaling Diagnostics

Click the **Multifrequency Signaling Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Multifrequency Signaling Diagnostics** Web page as shown in Figure 31 "Multifrequency Signaling Diagnostics Web page" (page 96).

Figure 31				
Multifrequency	Signaling	Diagnostics	Web	page

Diagnostic Commands		and Parameters	Action
Card Commands	*		Submi
Unit Commands	×		Submi
Miscellaneous Commands	*		Submi
Instruction: Select command, add value and cli		×	

The commands available from this Web page correspond to the Multifrequency Signaling diagnostics traditionally performed by using LD 54 - Multifrequency Signaling.

To use the card commands, follow the steps in Procedure 65 "Performing Multifrequency Signaling card commands" (page 96).

Procedure 65 Performing Multifrequency Signaling card commands

Step	Action
1	Select one of the following commands from the first Commands drop-down list:
	a STAT - Get status of MFC or MFE card

- **b** DISC Disable MFC/MFE card
- c ENLC Enable MFC or MFE card
- d MIDN Reset/Initialize all idle MFC or MFE cards
- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

To use the unit commands, follow the steps in Procedure 66 "Performing Multifrequency Signaling unit commands" (page 97).

Procedure 66 Performing Multifrequency Signaling unit commands

Step	Action
1	Select one of the following commands from the second Commands drop-down list:
	a STAT - Get status of specified MFC or MFE unit
	b DISU - Disable XMFC/XMFE channel
	c ENLU - Enable MFC/MFE channel
	d MTST - Invoke loop around test on unit with digit and level
	e ATST - Invoke automatic loop test for unit
2	Enter the required command parameters in the Command Parameters text box.
3	Click Submit.
	End

To use the miscellaneous commands, follow the steps in Procedure 67 "Performing Multifrequency Signaling miscellaneous commands" (page 97).

Procedure 67 Performing Multifrequency Signaling miscellaneous commands

Step	Action
1	Select one of the following commands from the third Commands drop-down list:
	a STAT - List all disabled MFC channels in system
	b CMIN - Clear minor alarm for all customers

- c CDSP Clear the mtc display on active CPU
- d CMAJ Clear major alarm and reset power fail transfer
- 2 Enter the required command parameters in the **Command Parameters** text box.
- 3 Click Submit.

Network and Peripheral Equipment Diagnostics

Click the **Network and Peripheral Equipment Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Network & Peripheral Diagnostics** Web page as shown in Figure 32 "Network and Peripheral Diagnostics Web page" (page 98).

Figure 32 Network and Peripheral Diagnostics Web page

Diagnostic Commands		Command Parameters	Action
Loop Commands	~		Submi
Shelf Commands	~		Submi
Card Commands	~		Submi
Unit Commands	~		Submi
M39XX Unit Commands	~		Submi
DSL Commands	~		Submi
Application Commands	~		Submi
Instruction: Select command, add value and clic	ou [ammun]		

This Web page is used to test and maintain network and peripheral equipment. The commands available from this Web page correspond to the data traditionally maintained by using the LD 32 - Network and Peripheral Equipment Diagnostic.

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 These commands are split among separate drop-down lists, grouped by equipment type.

The command lists are as follows:

- Loop Commands
 - Network Loop
 - ENLL Enable network loop
 - DISL Disable network loop
 - Super Loop
 - STAT Get status of Superloop
 - SUPL Print data for one or all Superloops
 - IDC Print Card ID for Superloop and associated Controller
 - XNTT Do self-test of Network card for specified Superloop
 - ENLL Enable specified Superloop
 - XRST Reset the specified Superloop
- Shelf Commands
 - DISS Disable the shelf
 - ENLS Enable specified shelf
 - LBSY List TNs of all busy units
 - LDIS List TNs of all disabled units
 - LIDL List TNs of all idle units
 - LMNT List TNs of all maint. busy units
- Card Commands
 - General Card Commands
 - STAT Get card status
 - ENLC Enable and reset card
 - DISC Disable peripheral card
 - IDC Print card ID for PE card
 - MISP Card Commands
 - STAT Print status of MISP appl/card
 - ENLL Enable MISL loop
 - ENLL BRIL Enable BRIL application on MISP loop
 - ENLL BRIT Enable BRIT application on MISP loop
 - IDC Print MISP card ID

- DISL Disable MISP loop
- DISL BRIL Disable BRIL application on MISP loop (Large System)
- DISL BRIT Disable BRIT application on MISP loop
- DISL BRIE Disable BRIE application on MISP loop
- BRI BRSC Card Commands
 - STAT Get status of BRI card
 - IDC Print BRSC card and LW version
 - DISC BRI Disable the BRSC BRI application
 - DISC Disable specified card
 - ENLC BRI Enable the BRSC BRI application
 - ENLC Enable specified card
- PS Card Commands
 - STAT PER Get status of PS card
 - ENPS Enable PS card and associated loops
 - DSPS Disable Peripheral Signaling card
- Network Card Commands
 - STAT NWK Check status of N/W card with specified loop
 - ENLN Enable network card with specified loop
 - DISN Disable network card with specified loop
- XPEC Controller Commands
 - XPEC Print data for all or specified Controller(s)
 - ENXP Enable Controller and associated cards
 - ENXP XPC Enable Controller, not the associated cards
 - DSXP Disable Controller and all connected cards
 - XPCT Self-test on Controller
 - IDCS Print card ID for cards
- Unit Commands
 - General Unit Commands
 - STAT Get unit status
 - ENLU Enable unit
 - IDU Print set ID
 - DISU Disable unit
 - STAT VTRM Display virtual trunk unit status

- M39XX Unit Commands
 - FDLC Cancel/stop flash download for M39xx
 - FDLU Conditional download to one M39xx
 - FWVU Print firmware versions on M39xx
 - FSUM Print firmware versions on M39xx
- DSL Commands
 - STAT Get status of SILC or UILC
 - ENL AUTO Enable automatic link recovery
 - ENRB Enable Remote Loop Back for DSL
 - DIS AUTO Disable automatic link recovery
 - DISU Disable the DSL
 - DSRB Disable Remote Loop Back for DSL
 - IDC Print SILC/UILC card ID
 - PERR Print protocol log for the card
 - DISC Disable SILC/UILC card
 - FDIS NCAL Force disconnect the connection
 - STAT NCAL List all current connections DSL
 - PCON Print configuration and LAPD parameters for specified DSL
 - DISI Disable the card when idle
 - DSTS Disable Disable Remote Loop Back test mode
 - ENLC Enable SILC/UILC card
 - EISI Enable the card when idle
 - EISU Enable specified DSL
 - ESRB Enable Remote Loop Back
 - ESTS Enable Remote Loop Back test mode
 - ESTU Establish D Channel Link
 - PLOG Print protocol log
 - PMES Print Layer 3 message log
 - PTAB Upload and Print Layer 3 message configuration
 - PTRF Print traffic data
 - RLBT Perform Remote Loop Back test
 - RLSU Release D Channel Link
- Application Commands

- DISL BRIL Disable and remove BRIL application from MISP card
- DISL BRIT Disable and remove BRIT application from MISP card
- DISL BRIE Disable and remove BRIE application from MISP card
- ENLL BRIL Enable BRI application on MISP Card and force download of the loadware
- ENLL BRIT Enable BRIT application on MISP card and force download of the loadware
- ENLL BRIE Enable BRIE application on MISP card and force download of the loadware
- DIS BRIL Disable BRIL application on MISP Card
- DIS BRIT Disable BRIT application on MISP Card
- DIS BRIE Disable BRIE application on MISP Card
- PERR BRIL Upload error log for BRIL application on MISP Card
- PERR BRIT Upload error log for BRIT application on MISP Card
- PERR BRIE Upload error log for BRIE application on MISP Card
- PERR BRIL Print protocol log for BRIL application on MISP Card
- PERR BRIT Print protocol log for BRIT application on MISP Card
- PERR BRIE Print protocol log for BRIE application on MISP card
- STAT BRIL Get status of MISP card and BRIL application
- STAT BRIT Get status of MISP card and BRIT application
- STAT BRIE Get status of MISP card and BRIE application

Use this Web page to issue diagnostic commands on the network and peripheral equipment by using the appropriate **Diagnostic Commands** drop-down list and the corresponding **Command Parameters** text box. The required parameters for the selected command are indicated to the right of the **Command Parameters** text box after the command is selected.

To perform maintenance activities using this Web page, follow the steps in Procedure 68 "Performing Network and Peripheral maintenance activities" (page 102).

Procedure 68 Performing Network and Peripheral maintenance activities

Step	Action
1	Select a command from one of the Diagnostic Commands drop-down lists.

- 2 Enter the appropriate value in the corresponding **Command Parameters** text box. The required parameters for the selected command are indicated to the right of the **Command Parameters** box once the command is selected.
- 3 Click the corresponding **Submit** button.

Network and Signaling Diagnostics

Click the **Network and Signaling Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Network & Signaling Diagnostics** Web page as shown in Figure 33 "Network and Signaling Diagnostics Web page" (page 103).

Figure 33 Network and Signaling Diagnostics Web page

	Comman	d Parameters Action
Loop Commands	×	Submit
Shelf/Card/Unit Commands	~	Submit
BRI Commands	~	Submit
Superloop Commands	~	Submit
Alarm Commands	~	Submit

The commands available from this Web page correspond to the Network and Signaling diagnostics traditionally performed by using LD 30 - Network and Signaling.

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 This Web page is used to perform the following Network and Signaling diagnostic functions:

- Loop Commands
 - ENLL Enable network loop
 - DISL Disable loop
 - LDIS List disabled loops
 - LENL List enabled loops
 - LOOP Test network memory on loop(s)
 - STAT Get status of all/specified N/W loops
 - TTSM Test TSM of a loop
- Shelf/Card/Unit Commands
 - UNTT Signaling test on specified card or unit
 - SHLF Test loop I, shelf s (Large System)
 - CPED Clear contents of ctrlr maint display (Large System)
 - RPED Read contents of ctrlr maint display (Large System)
 - TTWI Test TSM of the N/W card (Large System)
- BRI Commands
 - SLFT Selftest on ISDN BRI line card
 - SLFT Selftest ISDN BRI line card (Large System)
 - SLFT Selftest on MISP card
 - STEI Query Term Edpt Identifiers and USIDs (Large System)
 - TEIT Perform TEI check on DSL
- Superloop Commands
 - ENLL Enable specified Superloop
 - DISL Disable specified Superloop
 - ENLL Enable sl, download periph s/w ver
- Alarm Commands
 - CMAJ Clear major alarm and reset power fail
 - CDSP Clear Maint display on active CPU
 - CMIN Clear minor alarm for all customers

To perform diagnostic activities using this Web page, follow the steps in Procedure 69 "Performing Network and Signaling diagnostic activities" (page 105).

Procedure 69 Performing Network and Signaling diagnostic activities

Step	Action
1	Select the required Diagnostic Command from the drop-down list.
2	Enter any required Command Parameters . The required parameters for the selected command are indicated to the right of the Command Parameters text box once the command is selected.
3	Click Submit.
	End

TMDI Diagnostics

T1 Multipurpose Digital Interface (TMDI) cards are used only in CS 1000MSmall Systems. Click the **TMDI Diagnostics** link in the list of Call Server diagnostic tools to open the **TMDI Diagnostics** Web page as shown in Figure 34 "TMDI Diagnostics Web page" (page 105).

Figure 34 TMDI Diagnostics Web page

Diagnostic Commands nable TMDI Card (ENL)	Command Parameters	Action
		Comme
nstruction: Select command, add v	alue and click on [Submit]	8
		>

This Web page is used to test and maintain TMDI (DTI/PRI/DCH) cards. The commands available from this Web page correspond to the TMDI data traditionally configured by using LD 96 - D-channel.

To perform diagnostic activities using this Web page, follow the steps in Procedure 70 "Performing TMDI diagnostic activities" (page 106).

Procedure 70 Performing TMDI diagnostic activities

Step	A	ction
l		elect one of the following Actions from the Commands op-down list:
	а	Enable TMDI Card (ENL)
	b	Disable TMDI card (DIS)
	С	Reset TMDI card (RST)
	d	Self Test on TMDI Card (SLFT)
	е	Get TMDI Status (STAT)
	Se	lect one of the following Command Parameters:
	а	FDL
	b	FULL
	С	ALL
	Cli	ck Submit.

--End--

Tone and Digit Switch Diagnostics

Click the **Tone and Digit Switch Diagnostics** link in the list of Maintenance diagnostic tools to open the **Tone and Digit Switch and Digitone Receiver Diagnostics** Web page as shown in Figure 35 "Tone and Digit Switch and Digitone Receiver Diagnostics Web page" (page 107).

Figure 35 Tone and Digit Switch and Digitone Receiver Diagnostics Web page

Loop Commands Card and Unit Commands		Sub
	×	Sub
Miscellaneous Commands	*	Sub
<		×

This Web page is used to execute tone, digit switch, and digitone receiver diagnostics. The commands available from this Web page correspond to the TMDI data traditionally configured by using LD 34 - Tone and Digital Switch.

To perform diagnostic activities using this Web page, follow the steps in Procedure 71 "Performing Tone and Digit diagnostic activities" (page 107).

Procedure 71 Performing Tone and Digit diagnostic activities

Step	Action	
1	Select one of the following commands from the Diagnostic Commands drop-down lists:	
	Loop Commands	
	 — STAT - Get status TDS loop 	
	 DISL - Disable tone and digit loop 	
	 DISX - Disable Conf/TDS/MFS card on loop I and I + 1 	

- ENLX Enable Conf/TDS/MFS card on loop I and I + 1
- ENLL Enable tone and digit loop
- MFR Test ANI Feature Group D Multifrequency receiver units
- TDS Test outpulsers and channels on loop
- Card and Unit Commands
 - SDTR Get status of DTR/MFR or XDT card/unit
 - DISR Disable specified TDS/MFS card/unit
 - ENLR Enable the DTR/MFR card/unit
 - DTR Test specified Digitone receiver card/unit
 - MFR Test ANI Multifrequency Card/Unit
- Miscellaneous Commands
 - ENLM Enable all the TDS loops of the given IPMG
 - DISM Disable all the TDS loops of the given IPMG
 - CMIN Clear the minor alarm for all customers
 - CDSP Clear the mtc display on active CPU
 - CMAJ Clear major alarm and reset power fail transfer
 - MFR Test all ANI Feature Group D MFR receiver units
- 2 Enter any required **Command Parameters**. The required parameters for the selected command are indicated to the right of the **Command Parameters** text box once the command is selected.
- 3 Click the corresponding **Submit** button.

Trunk Diagnostics

Click the **Trunk Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Trunk Diagnostics** Web page as shown in Figure 36 "Trunk Diagnostics Web page" (page 109).

Figure 36 Trunk Diagnostics Web page

Diagnostic Commands	Comma	nd Parameters	Action
Card Commands	~		Submit
Unit Commands	~		Submit
Customer Route Commands	~		Submit
Miscellaneous Commands	~		Submit
Instruction: Select command, add value and click	on [Submit]	~	

This Web page is used to test and maintain trunk cards. The commands available from this Web page correspond to the data traditionally maintained by using LD 36 - Trunk Diagnostic.

To use the card commands, follow the steps in Procedure 72 "Performing Trunk card commands" (page 109).

Procedure 72 Performing Trunk card commands

Step	Action					
1	Select one of the following commands from the first Commands drop-down list:					
	a STAT - Get card status					
	b ENLC - Enable and reset card					
	c DISC - Disable card					
2	Enter the required command parameters in the Command Parameters text box.					

3 Click Submit.

--End--

To use the unit commands, follow the steps in Procedure 73 "Performing Trunk unit commands" (page 110).

Procedure 73 Performing Trunk unit commands

Step	Action				
1	Select one of the following commands from the second Commands drop-down list:				
	a ENLU - Enable unit				
	b LDIC - Number of days since last inc. call				
	c DISU - Disable unit				
	d RSET - Reset thresholds for the trunk				
	e TPPM - Test the specified PPM trunk				
2	Enter the required command parameters in the Command Parameters text box.				
3	Click Submit .				
	End				

To use the customer route commands, follow the steps in Procedure 74 "Performing Trunk customer route commands" (page 110).

Procedure 74 Performing Trunk customer route commands

Step	Action				
1		elect one of the following commands from the third Commands op-down list:			
	а	LDIC - List days since last incoming call for customer			
	b	LMAX - List trunk with max idle days for customer			
	С	LNDS - List trunks with no disconnect sup. for customer			
	d	LOVF - List threshold overflows for customer			
	е	RAN - Test recorded announcement device			
2		nter the required command parameters in the Command			

3 Click Submit.

--End--

To use the miscellaneous commands, follow the steps in Procedure 75 "Performing Trunk miscellaneous commands" (page 111).

Procedure 75 Performing Trunk miscellaneous commands

1	Select one of the following commands from the fourth Commands drop-down list:
	a CMIN - Clear minor alarm for all customers
	b CDSP - Clear the mtc display on active CPU
2	Enter the required command parameters in the Command Parameters text box.
3	Click Submit .

Zone Diagnostics

Click the **Zone Diagnostics** link in the list of **Maintenance** diagnostic tools to open the **Maintenance Commands for Zones** Web page as shown in Figure 37 "Maintenance Commands for Zones Web page" (page 112).

Figure 37

Maintenance Commands for Zones Web page

ne Number ALL	Cone Number State Resource Type Intrazone Strategy Zone Intent Bandwidth(Kbps) Usage(Kbps) Peak 0 ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0 0 ENABLED SHARED BQ VTRK 1000000 0 0	ategy Zone Intent Bandwidth(Kbps) Usage(Kbps) Peak(MO 1000000 0 0	
Bubmit Cancel ne Number State Resource Type Intrazone Strategy Zone Intent Bandwidth(Kbps) Usage(Kbps) Peak(%) ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ VTRK 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0	Submit Cancel Submit Cancel Sone Number State Resource Type Intrazone Strategy Zone Intent Bandwidth(Kbps) Usage(Kbps) Peak ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ VTRK 1000000 0 0	MO 1000000 0 0	
ne NumberStateResource TypeIntrazone StrategyZone IntentBandwidth(Kbps)Usage(Kbps)Peak(%)ENABLEDSHAREDBQMO100000000ENABLEDSHAREDBQMO100000000ENABLEDSHAREDBQVTRK100000000ENABLEDSHAREDBQMO100000000	one Number State Resource Type Intrazone Strategy Zone Intent Bandwidth(Kbps) Usage(Kbps) Peak ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0 ENABLED SHARED BQ VTRK 1000000 0 0	MO 1000000 0 0	
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ENABLED SHARED BQ VTRK 1000000 0 0 ENABLED SHARED BQ MO 1000000 0 0	P ENABLED SHARED BQ VTRK 1000000 0 0		
ENABLED SHARED BQ MO 1000000 0 0		VTRK 1000000 0 0	
Protocol de la construcción de l			
mber of Zones configured = 4			
	nber of Zones configured = 4		

This Web page is used to enable and disable zones and to view various parameters, properties, and behaviors associated with the configured zones. The commands available from this Web page correspond to the data traditionally maintained by using LD 117 - Ethernet and Alarm Management.

This Web page also includes a table that shows the status and settings for the configured zones.

To perform maintenance activities using this Web page, follow the steps in Procedure 76 "Performing Zone maintenance activities" (page 112).

Procedure 76 Performing Zone maintenance activities

Step 1	Action				
	Select one of the following commands from the Actions drop-down list:				
	- Drint Introduce Otatistics near Level Zane (DDT INTRAZONE)				

a Print Intrazone Statistics per Local Zone (PRT INTRAZONE)

- **b** Print Bandwidth Property (PRT ZBW)
- c Print Description (PRT ZDES)
- d Print Dialing Plan and Access Codes (PRT ZDP)
- e Print Time Change property (PRT ZTP)
- f Show Branch Office Behaviour (STAT ZBR)
- g Show Status (STAT ZONE)
- h Enable a Zone (ENL ZONE)
- i Disable a Zone (DIS ZONE)
- j Enable a Zone's Branch Office Behaviour (ENL ZBR)
- **k** Disable a Zone's Branch Office Behaviour (DIS ZBR)
- I Print Adaptive Network Bandwidth Management and CAC Parameters (PRT ZCAC)
- **m** Print Interzone Statistics (PRT INTERZONE)
- n Reset CAC Statistics (CLR CACR)
- o Print Zone Alternate Prefix Information (PRT ZALT)
- **p** Show Alternate Routing Status (STAT ZALT)
- **q** Print Alarm Suppression Time Period (PRT ZAST)
- 2 Select the **Zone Number** assigned to a configured zone from the drop-down list.
- 3 Click Submit.

--End--

Loops (Common Equipment)

To configure or edit Loops (Common Equipment) information, click the **Core Equipment > Loops** link of the **System** branch of the Element Manager navigator. The **Common Equipment** Web page appears (see Figure 38 "Common Equipment Web page" (page 114)).

Figure 38 Common Equipment Web page

Basic IP Configuration				
Change to Common Equipment parameters	CEQU	1		
Extended Conference/TDS/MFS	: 000 016	Edit		
TDS Loop Number	: 060 004 0 MGC	Edit		
TDS Loop Number	061 004 0 MGC	Edit	Add	
Conference Loop Numbers	: Add			
Digital Trunk Interface Loop Number	: Add			
Feature Packages				
+ Integrated Digital Access	Package: 122			
+ 2.0 Mb/s Digital Trunk Interface	Package: 129			
+ Dial Tone Detection	Package: 138			
+ 2.0 Mb/s Primary Rate Interface	Package: 154			
				Save Cancel

The **Common Equipment** Web page contains buttons that act as links to additional Web pages. The following functions can be performed from these pages:

- add and delete Tone and Digit Switch (TDS) numbers
- add and delete Digital Trunk Interface Loop (DLOP) numbers
- add and delete Conference loop (CONF) numbers
- configure parameters for the following Feature Packages:
 - Integrated Digital Access (Package 122)
 - 2 Mbit Digital Trunk Interface (Package 129)
 - Dial Tone Detection (Package 138)
 - 2.0 Mb/s Primary Rate Interface (Package 154)

The information entered in this section corresponds to CEQU (Common Equipment) data traditionally configured using LD 17 - Configuration Record 1.

To save changes made in this section, click **Submit** at the bottom of the **Common Equipment** Web page.

Superloops

To view, configure or edit Superloop information, click the Core Equipment > Superloop link of the System branch of the Element Manager navigator. The **Superloops** Web page appears as shown in Figure 39 "Superloops Web page" (page 115).

Figure 39		
Superloops	Web	page

e		Refresh
umber 🔺	Superloop Type	
	IPMG	
		umber Superloop Type

To view, configure, or edit a Superloop click on the corresponding Superloop Number. The **Superloops Details** Web page appears as shown in Figure 40 "Superloop Details Web page" (page 115)

Figure 40 Superloop Details Web page

Shelf 0	Shelf 1
Zone number: 001 (0 - 255)	Zone number: (0 - 255)
IP based media gateway 0: 0	IP based media gateway: 1
ELAN IP address: 172.16.100.7	ELAN IP address:
IPMG type: MGC	IPMG type: MGC
ELAN passthrough port CE	ELAN passthrough port CE
Faceplate ELAN port 1E	Faceplate ELAN port 1E
Backplane ELAN connection: 1ELAN	Backplane ELAN connection: 1ELAN
TLAN passthrough port	TLAN passthrough port
Faceplate TLAN port 2T	Faceplate TLAN port 2T
Backplane TLAN connection: 2TLAN	Backplane TLAN connection: 2TLAN

The information entered on this Web page corresponds to the Superloop (SUPL) command available in LD 97 - Configuration Record 2.

To save changes made in the **Superloop Details** Web page, click Save at the bottom.

To add a Superloop, click the Add button on the **Superloops** Web page. The **Add Superloop** Web page appears, as shown in Figure 41 "Add Superloop Web page" (page 116).

Figure 41 Add Superloop Web page

		erloops » Add Supe		
dd Supe	rloop			
	Superloop	c O 💌		
	Superloop type	:Carrier 🔽		
	Network	card slot: 💿 L	eft	
		O R	ight	
Evtondod	peripheral equipment	controller	× (1 · 95)	

Fill in the appropriate information and click Save to add the new Superloop.

MSDL/MSIP Cards

The Multipurpose Serial Data Link / Multi-Purpose ISDN Signaling Processor (MSDL/MSIP) Cards navigation link appears the **Fast Download Control Web** page, as shown in Figure 42 "Fast Download Control Web page" (page 117).

Figure 42 Fast Download Control Web page

as	st Download Control		
10000	Edit All		12.254
_	Edit Ali		Refresh
	Card Type *	Download Type	-
1	Application Module Link	Conditional	
2	Basic Rate Interface Trunk	Conditional	
3	Basic Rate Signaling Concentrator	Conditional	
4	Basic Rate Signaling Concentrator Application	Conditional	
5	BRI Line Cards	Conditional	
6	BRI Trunk Universal ISDN Protocol Engine	Conditional	
7	D-Channel Cards	Conditional	
8	DITI Application Loadware	Conditional	
9	Meridian Packet Handler	Conditional	
10	Multipurpose ISDN Signaling Link Cards	Conditional	
11	Multipurpose Serial Data Link Cards	Conditional	
12	Primary Rate Interface Universal ISDN Protocol Engine	Conditional	
13	Serial Data Interface Cards	Conditional	
14	T1E1 Application Loadware	Conditional	

The **Fast Download Control** Web page appears only for large systems. The page displays the table with the card type and the download type. The download type for any card can be changed.

To configure download type for a single card, follow the steps in Procedure 77 "Editing Fast Download Control (single card)" (page 117).

Procedure 77 Editing Fast Download Control (single card)

Step	Action
1	From the Fast Download Control Web page, click on the card you want to edit. The Edit Web page for the selected card appears.
2	Choose the Download type from the drop-down menu list.
3	Click Save or click Cancel to return to the Fast Download Control Web page.
	End

To configure download type for all cards, follow the steps in Procedure 78 "Editing Fast Download Control all cards" (page 117).

Procedure 78 Editing Fast Download Control all cards

Step	Action
1	From the Fast Download Control Web page, click Edit All to edit all the cards in the list. The Edit All Web page appears.
2	Choose the Download type from the drop-down menu list.
3	Click Save or click Cancel to return to the Fast Download Control Web page.
	End

Conference/TDS/Multifrequency Cards

Click on the **Conference/TDS/Multifrequency Cards** link of the Element Manager Navigator to open the **Conference/TDS/Multifrequency Cards** Web page, as shown in Figure 43 "Conference/TDS/Multifrequency Cards Web page" (page 118).

Figure 43	
Conference/TDS/Multifrequency Cards Web	page

nference	/TDS/Multifi	equency Ca	rds		
	Conf	erence Pad: 0 💌	(db)		
	Dual Tone Mu	Itifrequency: 014	* (0 - 255)		
				Save	Cancel

Select a **Conference Pad** from the list, enter a **Dual Tone Multifrequency** value and click **Save** or click **Cancel** to return to the **System Overview** Web page.

Tone Senders and Detectors

Element Manager supports the configuration of Digitone receivers, Tone Detectors, and Multi Frequency Senders and Receivers. Click the **Core Equipment > Tone Senders And Detectors** link in the **System** branch of the Element Manager navigator. The **Tone Senders And Detectors** Web page appears, as shown in Figure 44 "Tone Senders and Detectors Web page" (page 119).

Figure 44 Tone Senders and Detectors Web page

Managing: 192.167.102.3 System » Core Equipment » Tone Senders and Detectors **Tone Senders and Detectors** Digitone Receivers A type of DTMF detectors used for analog phones and trunks. Multi Frequency Receivers MFR1 Signaling used in North America. Class Modem Units Signaling used for Extended Class Modem Card. Extended Dial Tone Detectors Used for DTMF and Dial Tone Detection.

Digitone Receivers

To display details of and to configure Digitone Receivers, from the **Tone Senders And Detectors** Web page, click the **Digitone Receivers** link. The **Digitone Receivers** Web page appears, as shown in Figure 45 "Digitone Receivers Web page" (page 119).

Figure 45 Digitone Receivers Web page

gitone R	eceivers			
intenance Cor	nmands			
Add	Delete			<u>Refresh</u>
		Card Density	Last Modified Date	
Terminal	Number	our benoty		
C 008 0 00 0		8D	19 FEB 2007	

This Web page is used to display details of Digitone Receivers. Users can view, add, delete, and move Terminal Numbers.

To delete a Digitone Receiver, select the radio button beside the Terminal Number and click **Delete**.

To add a Digitone Receiver, click **Add**. The **Add Digitone Receiver** Web page appears, as shown in Figure 46 "Add Digitone Receiver Web page" (page 120).

Figure 46 Add Digitone Receiver Web page

d Digitone Receive	71			
	Terminal Number:		×	
		Upto 5 comma separated Terminal Num	ibers	
				Save Cancel

Enter the Terminal Number of the Digitone Receiver to be added and click **Save**.

To move a Digitone Receiver card from one terminal to another, from the **Digitone Receivers** Web page, select the radio button beside the Terminal Number and click **Move**. The **Move Digitone Receiver** Web page appears, as shown in Figure 47 "Move Digitone Receiver Web page" (page 121).

Figure 47 Move Digitone Receiver Web page

ove Digitone	Receiver			
	Source Terminal Numbe	r: 004 0 03 00		
	Destination Terminal Numbe	r: 4040 ·		
		Source and Destination Loop N	umber should be the same.	

Enter the Destination Terminal Number and click Save.

To delete a Digitone Receiver, select the radio button beside the Terminal Number and click **Delete**.

Multi Frequency Receivers

To display details of and to configure Multi Frequency Receivers, from the **Tone Senders And Detectors** Web page, click the **Multi Frequency Receivers** link. The **Multi Frequency Receivers** Web page appears, as shown in Figure 48 "Multi Frequency Receivers Web page" (page 121).

Figure 48 Multi Frequency Receivers Web page

ult	i Frequency Receiv	ers		
inte	nance Commands			
Add	d Move Delete			Refresh
	Terminal Number +	Card Density	Last Modified Date	
0	Terminal Number + 008 0 00 01	Card Density 8D	Last Modified Date 19 FEB 2007	

This Web page is used to display details of Multi Frequency Receivers. Users can view, add, delete, and move Terminal Numbers.

To delete a Multi Frequency Receiver, select the radio button beside the Terminal Number and click **Delete**.

To add a Multi Frequency Receiver, click **Add**. The **Add Multi Frequency Receiver** Web page appears, as shown in Figure 49 "Add Multi Frequency Receiver Web page" (page 122).

Figure 49 Add Multi Frequency Receiver Web page

d Multi Frequency Receive					
Ter	minal Number	:		×	
		Upto 5 comma se	parated Terminal	Numbers	
					Save

Enter the Terminal Number of the Multi Frequency Receiver to be added and click **Save**.

To move a Multi Frequency Receiver card from one terminal to another, from the **Multi Frequency Receivers** Web page, select the radio button beside the Terminal Number and click **Move**. The **Move Multi Frequency Receiver** Web page appears, as shown in Figure 50 "Move Multi Frequency Web page" (page 122).

Figure 50

Move Multi Frequency Web page

Source Terminal Number: 004 0 03 00 Destination Terminal Number:		love Multi Frequency Receiver		
Destination Terminal Number:		Source Terminal Numb	er: 004 0 03 00	
	Source and Destination Loop Number should be the same.	Destination Terminal Numb	er: -	
Source and Destination Loop Number should be the same.			Source and Destination Loop Number should be the same.	

Enter the Destination Terminal Number and click Save.

Class Modem Units

To display details of and to configure Class Modem Units, from the **Tone Senders And Detectors** Web page, click the **Class Modem Units** link. The **Class Modem Units** Web page appears, as shown in Figure 51 "Class Modem Units Web page" (page 123).

Figure 51 Class Modem Units Web page

ass Modem Units			
ntenance Commands			
Add Move Delete		Ē	Refrest
Terminal Number +	Card Density	Last Modified Date	
	8D	19 FEB 2007	
C 008 0 10 00	6D		

This Web page is used to display details of Class Modem Units. Users can view, add, delete, and move Terminal Numbers.

To delete a Class Modem Unit, select the radio button beside the Terminal Number and click **Delete**.

To add a Class Modem Unit, click **Add**. The **Add Class Modem Unit** Web page appears, as shown in Figure 52 "Add Class Modem Unit Web page" (page 124).

Figure 52 Add Class Modem Unit Web page

d Class Modem Unit						
	Terminal Number	:				
		Upto 5 comm.	a separated Ter	minal Numbers		
					Save	Cancel

Enter the Terminal Number of the Class Modem Unit to be added and click **Save**.

To move a Class Modem Unit card from one terminal to another, from the **Class Modem Unit** Web page, select the radio beside the Terminal Number to move and click **Move**. The **Move Class Modem Units** Web page appears, as shown in Figure 53 "Move Class Modem Units Web page" (page 124).

Figure 53 Move Class Modem Units Web page

love Class Modem Unit		
Source Terminal Num	per: 004 0 04 00	
Destination Terminal Numb	er	
	Source and Destination Loop Number should be the same.	
		Save Cance

Enter the Destination Terminal Number and click Save.

Extended Dial Tone Detectors

To display details of and to configure Extended Dial Tone Detectors, from the **Tone Senders And Detectors** Web page, click the **Extended Dial Tone Detectors** link. The **Extended Dial Tone Detectors** Web page appears, as shown in Figure 54 "Extended Dial Tone Detectors Web page" (page 125).

Figure 54 Extended Dial Tone Detectors Web page

Defend
Refrest
ate

This Web page is used to display details of Extended Dial Tone Detectors. Users can view, add, delete, and move Terminal Numbers.

To delete an Extended Dial Tone Detector, select the radio button beside the Terminal Number and click **Delete**.

To add an Extended Dial Tone Detector, click **Add**. The **Add Extended Dial Tone Detector** Web page appears, as shown in Figure 55 "Add Extended Dial Tone Detector Web page" (page 126).

Figure 55 Add Extended Dial Tone Detector Web page

Terminal Nur			
	nber:		
Extended Tone Detector T	able: 0 💌		
Dial Tone Deter	ction: 🔲		
			Save Cancel
		Extended Tone Detector Table: 0 💌 Dial Tone Detection: 🔲	

Procedure 79 Adding an Extended Dial Tone Detector

Step	Action
1	Enter the Terminal Number of the Extended Dial Tone Detector.
2	Select the Extended Tone Detector Table from the drop-down list.
3	Check the box beside Dial Tone Detection , if required.
4	Click Save.
	End

To move an Extended Dial Tone Detector card from one terminal to another, from the **Extended Dial Tone Detectors** Web page, select the radio button beside the Terminal Number to move and click **Move**. The **Move Extended Dial Tone Detectors** Web page appears, as shown in Figure 56 "Move Extended Dial Tone Detectors Web page" (page 127).

Figure 56 Move Extended Dial Tone Detectors Web page

ove Extended	Dial Tone Detector		
	Source Terminal Numb	ber: 004 0 02 00	
	Destination Terminal Numb	•	
		Source and Destination Loop Number should be the same.	

Enter the Destination Terminal Number and click Save.

Peripheral Equipment

The **Peripheral Equipment** Web page displays parameters such as Timers, Multi-Frequency levels, Make-Break ratio.

To view, configure, or edit Peripheral Equipment click the Peripheral Equipment link of the System branch of the Element Manager navigator. The **Peripheral Equipment** Web page appears as shown in Figure 57 "Peripheral Equipment Web page" (page 128).

Figure 57 Peripheral Equipment Web page

eripheral Equipment			
Compa	anding law: OAL	aw	
	⊙ Mu	Law	
G	Quiet Code: 0		
Allowable Contin	uity Faults: 4	* (1 - 32767 per time slice)	
Cyclic Redundancy Chec	k Failures: 4	* (1 - 32767 per input cable)
	Timers		
Minimum Switchh	ook Flash: 120	* (20 - 768 ms)	
Maximum Switchh	nook Flash: 896	* (120 - 1275 ms)	
Off Hook	Validation: 250	* (0 - 1275 ms)	
	Dial Pulse: 15	* (15 - 120 ms)	
	Interdigit: 150	* (0 - 1275 ms)	
Dia	I Pulse On: 150	* (15 - 1275 ms)	
F	Post Flash: 200	* (0 - 1275 ms)	
Multi F	requency		
Minimum Rec	eiver Level: 2 💌		
Transmit Level Code for	Identifier 0: 🛛 💌		
Transmit Level Code for	ldentifier 1: 🛛 💌		
Make-Br	eak Ratio		
	10 Pulse : 50 💌	(pulse per second)	
	12 Pulse : 70 💌	(pulse per second)	
	20 Pulse : 50 💌	(pulse per second)	
Fast Downlo	ad Control		

To configure or edit the Peripheral Equipment, enter the appropriate values and click **Save**. If you enter invalid values, the system displays an error message and the original values are retained. A link for Fast Download Control is provided.

IP Network

Contents

This section contains information about the following topics:

"Introduction" (page 129)

"IP Network" (page 129)

"IP Telephony Nodes" (page 129)

"Media Gateways" (page 146)

"32 Channel Secure Media Card (MC32S) commands" (page 150)

"Zones" (page 153)

"Network Address Translation (NAT)" (page 162)

"Quality of Service Thresholds (QoS)" (page 163)

"Personal Directories" (page 166)

"Unicode Name Directory" (page 166)

"Interfaces" (page 167)

"Engineered Values" (page 172)

"Emergency Services" (page 178)

"Geographic Redundancy" (page 192)

"Software" (page 195)

Introduction

The **IP Network** link of the **System** branch of the Element Manager navigator enables the user to view the version of software that is installed on the elements.

IP Network

IP Telephony Nodes

The Node management in Communication Server 1000 Release 6.0 introduces a new work flow on the User Interface (UI) with Add and Modify functions of the Node. This introduces the Cluster concept, where

a Cluster represents a group of physical servers that shares the same configuration properties. The same set of services are configured and enabled on all physical servers within a Cluster.

The Nodes also provide scalability (by deploying multiple Nodes) and optionally Load sharing (by distributing processing to other Node members.

Each Node belongs to a Call Server and has a one-to-many relationship with Call Server. The IP Nodes resides on two LAN subnets: ELAN and TLAN.

The Node must have minimum one signalling server as a Node element in order for that Node to be operational. The administrator can add as many servers to be part of the Node and all the Node elements will have the same set of application services enabled. However, only one physical server can be active at a time. This active server can run all the configured services on that physical server, for example, UNIStim LTPS, SIPGw, and H323Gw can all be configured and enabled on the same server. The LTPS application is one exception where several servers can run active instances of LTPS service. The LTPS application does support load sharing.

The SIP Line application in CS 1000 Release 6.0 cannot co-reside with LTPS or any other virtual trunk applications like SIPGw or H323Gw. The Node management interface does not allow the user to configure SIP Line service any other application services.

The gateway application services operate on a service IP address configured to be on the TLAN of the network and this IP address floats between active and standby servers. The standby server takes over this IP address when the active instance goes down. The active and standby roles are dynamically assigned through a service specific election process that runs on the servers.

In CS 1000 Release 6.0, the Centralized Deployment Manager (CDM), deploys software applications from Unified Communication Management (UCM).

The Node management interface adds servers in to a Node from the list of servers that UCM has learned. Before you add the servers to a Node, it is required that the CDM feature deploys the necessary software application to each of the Linux servers.

To view the **IP Telephony Nodes** Web page, select the Nodes: Servers, Media Cards link in the IP Network branch of the Element Manager navigator. The IP Telephony Node Web page appears as shown in, Figure 58 "IP Telephony Nodes Web page" (page 131).

Figure 58 IP Telephony Nodes Web page

P Telephony					
lick the Node ID to v	iew or edit its properties	8.			
Add Impo	rt] [Export] De	elete			Print Refresh
Node ID +	Components	Enabled Applications	ELAN IP	TLAN IP	Status
<u>13</u>	1	LTPS, PD, Gateway (SIPGw)	-	10.21.41.21	Synchronized
Show: V Nodes	Component Ser	vers and Cards			

The **IP Telephony Nodes** Web page appears showing the following information:

- Node ID the ID number for each node
- Components the number of components associated to each node
- Deployed Applications -- the applications deployed to each node
- ELAN IP the IP address for the ELAN
- TLAN IP the IP address for the TLAN
- Status the status of the node

The **IP Telephony Nodes** Web page also contains buttons that link to additional Web pages:

- Add add a new node
- Import Import a node files
- Export export a node file
- Delete delete a node

To view Component Servers and Cards check the Component Servers and Cards box at the bottom of the **IP Telephony Nodes** Web page.

Add a new IP Telephony Node

Click the Add button from the summary page to start the add work flow for creating a new Node to be part of the Call Server where Element Manager is hosted. The **New IP Telephony Node** Web page appears as shown in, Figure 59 "New IP Telephony Node Web page" (page 132). For information about adding a new IP Telephony node refer to *Signaling Server IP Line Applications Fundamentals* (NN43001-125).

Figure 59 New IP Telephony Node Web page

w IP Telephony No					
 Define the new Node and You will also require pre- 		/ith appropriate applic	ation software already deployed	to host the selected ser	vices.
	-				
Node ID:	1	* (1-9999)			
Call Server IP Address:	192,168.55.152	*			
Telephony LAN (TLAN)			Embedded LAN (EL	AN)	
Node IP Address:	0.0.0.0]•	Gateway IP addre	ss: 0.0.0.1	*
Subnet Mask:	255.255.255.0	•	Subnet Ma	sk: 255.255.255.0	
Applications	SIP Line				
Applications		Terminal Proxy S	erver (LTPS)		
	223	Gateway (SIPGw,			
	Personal Dire	ectory (PD)			

Import IP Telephony Nodes file

Use the import functionality to import a local configuration file from a local work station (XML format) or from a Linux signaling server.

In the case of configuration file imported from a local work station, you must enter the configuration parameters in the file in a standard template model. This template follows the same model as the existing config.ini file format. You can enter as much as information to a local file and then import, edit, and save, using the import UI page, on the Call Server just like any IP Telephony Node.

Click the Import button, the **IP Telephony Import** Web page appears as shown in, Figure 60 "Import IP Telephony Nodes Web page" (page 133). The options for the import operation are displayed in the **IP Telephony Import** Web page, the options are import from an XML file stored on local work station or import from a Leader server that is already part of a Node.

Figure 60 Import IP Telephony Nodes Web page

Import IP Te	lephony Nodes	
Step 1: Select a so	urce file.	
Source dat	a will be parsed and presented fo	r your review.
Data source:		
		Browse
	C VAL CITY	The file must contain a valid XML structure defining a single IP Telephony Node
	XML file:	and all its properties. For more information refer to the XML definition of IP
	C Existing server:	Telephony Nodes.
		0.0.0
	Click Proving to continue	You will be able to review and edit the imported IP Telephony Node before saving.
	Click Fleview to continue.	Tod will be able to review and edit the imported in Telephony Node before saving.

The selected XML file that is selected to import goes through two sets of validations before the file can be saved on to the system:

- An invalid XML file format is determined when you click the Preview button to preview the content, the UI will be displayed with a message indicating invalid XML file.
- If the file is valid, the next set of validations make sure that the content inside passes the filed and dependency validations. This validation is determined when you click the Save button to save the configuration to the Call Server.

Export IP Telephony Node file

You can export a previously configured IP Telephony Node to an XML file format and save it to a local desktop. The Export function is limited to one selected Node at a time. If you select more than one node, the Export button remains disabled.

To export a IP Telephony Node to an XML file select a Node on the **IP Telephony Nodes** Web page and click Export. The export saves the configuration files in an XML format file as shown in Figure 61 "Export IP Telephony Node file" (page 134).

Figure 61 Export IP Telephony Node file

	Nodes w or edit its properties	k.			
Add Import	Export De	elete			Print Refresh
Node ID +	Components	Enabled Applications	ELAN IP	TLAN IP	Status
13	1	LTPS, PD, Gateway (SIPGw)	-	10.21.41.21	Synchronized
		w want to open or save this file? Name: 13.xml Type: Safari Document			
		From: cores2.ca.nortel.com		ncel	

Delete an IP Telephony Node

To delete an IP Telephony Node select, the Node and click the **Delete** button. A confirmation window appears.

Node Details

Click the Node ID to view or edit the properties of the node. The **Node Details** Web page for the Node selected appears as shown in, Figure 62 "Node Details Web page" (page 135).

Figure 62 Node Details Web page

lode Details (it): 1400 - I	LTPS, Gate	way (H323Gw))			
N	ode ID: 1400	3	* (1-9999)			-
Call Server IP Ac	dress: 172.	.16.100.2				
Telephony LAN	(TLAN)			Embedded LAN (ELAN)		
Node IP Ad	ddress: 172.	.16.101.14	*	Gateway IP address: 172.16.	100.1 *	
Subnet	Mask: 255.	.255.255.0		Subnet Mask: 255.255	5.255.0 *	
 LAN Numbering 2 MCDN Aterr 		ig Treatment (MALT) Causes	 Personal Directories (PD) 		-
Required Value. ssociated Sig	naling Se	rvers & Ca	irds		Save	Cancel
ssociated Sig	-			y security server: (ss-st-alone-17		
ssociated Sig	-			y security server: (ss-st-alone-17	2.16.100.14-172.16	
ssociated Sig	Add	TLAN IP) is not	registered with primary		2.16.100.14-172.16	5.101.14)

The **Node Details** Web page is organized to list the IP Telephony common Node properties on the left side of the page and Application Service sections are on the right side. These appear as links that you can click to dispay in to the configuration parameter page. For example clicking the **Voice Gateway (VGW) and Codecs** link displays in to the **Voice Gateway (VGW) and Codecs** Web page as shown in, Figure 63 "Voice Gateway (VGW) and Codecs Web page" (page 136).

Figure 63 Voice Gateway (VGW) and Codecs Web page

	odecs
General Voice Codecs Fax	
General	
Echo Cancellation:	🕑 Use canceller, with tail delay: 128 💌
	Dynamic attenuation
Voice Activity Detection Threshold:	-17 (-20 - +10 DBM)
Idle Noise Level:	-65 (-327 - +327 DBM)
Signaling Options:	DTMF Tone Detection
	Low latency mode
	Remove DTMF delay (squelch DTMF from TDM to IP)
	Modem/Fax pass-through
	V.21 Fax Tone Detection
Voice Codecs	
Codec G711:	Enabled (required)
Voice paylo	pad size: 20 💌 (milliseconds per frame)
Voice Playout (jitter buffe	er) delay: 40 💌 80 💌 (milliseconds)
	Nominal Maximum
	nges made on this page will NOT be Save Cancel

Click the Save or Cancel to return you to the **Node Details** Web page. When you save on the **Voice Gateway (VGW) and Codecs** Web page saves only the codec parameters, you must click the Save button on the **Node Details** Web page to save the complete Node property.

You can configure the following IP Telephony Node Properties by clicking on the appropriate link on the **Node Details** Web page:

- Voice Gateway (VGW) and Codecs
- Quality of Service (QOS)
- LAN
- Numbering Zones
- MCDN Alternate Routing Treatment (MALT) Causes

You can configure the applications associated to the Node by clicking the appropriate link on the **Node Details** Web page. The applications associated to a Node appear on the left and can include applications such as the following:

- Terminal Proxy Server (TPS)
- Gateway (H323Gw or SIPGw)
- SIP Line

- LTPS
- Personal Directories (PD)

For complete information about IP Telephony Nodes configuration see, Signaling Server IP Line Applications Fundamentals (NN43001-125), SIP Line Fundamentals (NN43001-508), Dialing Plans Reference (NN43001-283), and IP Peer Networking Installation and Commissioning (NN43001-313).

Nodes: Servers, Media Cards

Click the **IP Network > Maintenance and Reports** link in the **System** branch of the Element Manager navigator to open the **Node Maintenance and Reports** Web page, as shown in Figure 64 "Node Maintenance and Reports Web page" (page 137).

Figure 64

Node Maintenance and Reports Web page

ac Ivia	intenance	and Re	eports	5	
Node ID: 1	12		Node IP:	192.168.55.40	Total elements: 2
Index	ELAN IP	Туре	TN		ELAN
hpss8	192.168.55.153	Signaling Server- HP	NO TN (GEN CMD SYS LOG OM RPT Reset	Virtual Terminal Status
MC3251		DL360G5 MC32S	72 0 5 (GEN CMD RPT LOG OM RPT Reset	Virtual Terminal Status

This Web page contains information about configured Signaling Servers and IP Telephony cards and is arranged by node. Click the **plus sign** (+) beside the Node ID number to view the elements assigned to the node.

For more information about IP Telephony, see *Signaling Server IP Line Application Fundamentals (NN43001-125).*

Six buttons are located to the right of the TN column for each IP Telephony element:

- GEN CMD Launches the General Commands Web page.
- **RPT LOG** Launches the **Report Utility** Web page.
- **SYS LOG** Launches the System log file Web page for Signaling Servers.
- **OM RPT** Launches the **Operational Management Report** Web page.

• **Reset** — Resets the element.

Note: When resetting the Signaling Server on which the Web server is located, wait approximately five minutes before logging in again.

- Virtual Terminal Opens a Telnet connection to the element over the Telephony Local Area Network (TLAN) subnet using the element's IP Address.
- **Status** Displays the status of the element.

General Commands

Click the **GEN CMD** button, located beside the information for an IP Telephony element as shown in Figure 64 "Node Maintenance and Reports Web page" (page 137), to open the **General Commands** Web page for that element. See Figure 65 "General Commands Web page" (page 138).

Figure 65 General Commands Web page

neral Co	mmand	s		
ent IP : 192.16	7.102.4 E	lement Type : Signali		
G	roup	~	Command Select A Group 💌	RUN
IP address	192.167.10	2.3	Number of Pings 3	PING
ck a butt	on to in	voke a command.		2

From this Web page, users can issue commands to selected groups.

To issue an IP Line application command:

Step	Action
1	Select a group from the left-hand Group drop-down list. The corresponding commands for that group display in the Command drop-down list.
2	Select a Command from the Command drop-down list.
3	Click Run .
	The results appear in the box at the bottom of the Web page.
	End

Detailed procedures for issuing General Commands can be found in *Signaling Server IP Line Application Fundamentals (NN43001-125).*

Commands related to the node password include:

- nodePwdDisable disables the node password
- nodePwdEnable enables the node password
- nodePwdShow displays the node password
- nodeTempPwdClear clears the temporary node password
- nodePwdSet sets the node password
- nodeTempPwdSet sets the temporary node password

Passwords must conform to certain compositional rules.

To set the node password:

Step	Action
1	Select nodePwd from the Group drop-down list.
2	Select nodePwdSet from the Command drop-down list.
3	Enter the password in the Node Password text box.
	The password must be 6 - 14 characters in length. Valid entries are digits 0 through 9, and special character *.
4	Click RUN .
	If a non-zero length password is configured, all IP Phones that attempt to register after the password is set display a prompt

requesting the node password before enabling the TN to be modified.

--End--

A temporary node password can be configured to give temporary user access to the TN for configuration. A temporary node password removes the need to distribute the node password and the requirement to change it afterwards. The temporary node password automatically deletes itself after it has been used the defined number of times or when the duration expires, whichever comes first.

To set a temporary node password:

Select nodePwd from the Group drop-down list.
Select nodeTempPwdSet from the Command drop-down list.
Enter the temporary password in the Node Password text box.
The password must be 6 - 14 characters in length. Valid entries are digits 0 through 9, and special character *.
Enter the number of times that you want to enable the temporary password to be used in the Uses text box (maximum is 1000 times).
Enter the duration, in hours, for the temporary password in the Timeout text box (maximum is 240 hours).
Click RUN.
End

From the **General Commands** Web page, any IP address can be pinged from this element. The default IP address is the address of the Call Server.

To ping an IP address:

Step	Action
1	Verify that the entry in the IP address text box is correct.
2	Enter the number of pings that to send in the Number of Pings text box.

3 Click Ping.

--End--

System Log

Click the **SYS LOG** button, located beside the information for the Signaling Server, to open the **Application Logs** Web page for the Signaling Server, as shown in Figure 66 "Application Web page" (page 141). The Application logs are part of the Base Manager.

Figure 66 Application Web page

anaging: 172.16.101.4 Tools >> Application	
Application Logs	
Local server OAM event, security event and Application logs	Hide
Enter criteria values and click View	
Log type: SS Common 💌	
Limit log entries to: Filter string:	
	View Export
Log Entries	
Log Entries Click on View to see the content of the logs. Click on Export to export the logs.	

Element Manager redirects you to Base Manager to run the System Log for the Signaling Server. For more information about Application Logs and accessing Base Manager refer to *Linux Platform Base and Applications Installation and Commissioning* (NN43001-315) and *Unified Communications Management Common Services Fundamentals* (NN43001-116).

Signaling Server commands

Element Manager provides support for executing Signaling Server command line interface (CLI) maintenance commands.

To run Signaling Server commands from Element Manager, select the **Maintenance and Reports** link in the IP Network branch of Element Manager navigator. The **Node Maintenance and Reports** Web page appears as shown in, Figure 64 "Node Maintenance and Reports Web page" (page 137).

Procedure 80 Running Signaling Server commands

Step	Action
1	Choose a Signaling Server and click GEN CMD . The General Commands Web page appears. See, Figure 67 "Signaling Server General Commands" (page 142).
2	Select the Signaling Server CLI command group that you want to access from the Group drop-down list.
3	Choose a command from the Command drop-down list.
4	Click Run to execute the command.

--End--

Figure 67 Signaling Server General Commands

ment IP : 172.16.100.14 Eler	ent Type : Signaling Server-HP DL320G4	
Group	Command Select A Group	▼ RUN
IP address 172.1 Election	Number of pings 3	PING
lick a button t ^{Mam} powLink GoS Sip SipLine SipCti System	command.	<u>_</u>

For a list of available Signaling Server commands that can be run using Element Manager, refer to *Software Input Output Reference — Maintenance* (NN43001-711).

Operational Measurement Reports

The **OM** (Operational Measurement Report) **RPT** button enables users to view OM information. Click the **OM RPT** button, located beside information for an IP Telephony element as shown in Figure 64 "Node Maintenance and Reports Web page" (page 137), to open the **OM Reports** Web page for that element, as shown in Figure 68 "OM Reports Web page" (page 143).

Figure 68 OM Reports Web page

	View OM File	
Select File	File Name	Create Time
•	/u/om/omreport.039	SAT FEB 10 00:00:00 2007
0	/u/om/omreport.040	SUN FEB 11 00:00:00 2007
0	/u/om/omreport.041	MON FEB 12 00:00:00 2007
0	/u/om/omreport.042	TUE FEB 13 00:00:00 2007
0	/u/om/omreport.043	WED FEB 14 00:57:18 2007
0	/u/om/omreport.044	THU FEB 15 00:00:00 2007
0	/u/om/omreport.045	FRI FEB 16 00:00:00 2007
-		
Click a button to invo	/u/om/omreport.046	FRI FEB 16 23:00:00 2007
0	/u/om/omreport.046	FRI FEB 16 23:00:00 2007

To view an OM Report file:

Step	Action
1	In the Select File column, click the option button beside the OM Report to be viewed.
	<i>Note:</i> The limit of OM Report files is eight. Only the eight most recent OM Report files are available on the system.
2	Click View OM File.
	End

The contents of the file appear in the box at the bottom of the Web page.

Virtual Terminal

The Virtual Terminal is an integral part of the enhanced navigation tools for Element Manager.

Click the **Virtual Terminal** button on the **Node Maintenance and Reports** Web page to open the **Virtual Terminal** window, as shown in Figure 69 "Virtual Terminal window" (page 144).

Figure 69 Virtual Terminal window

ferminal Edit View	Help					
						^
DVL111 000 IDLE 1001						
USERID? admin2						
PASS? SECOD29 SECURIT	V WARNING . THI	S SYSTEM C	DNTATNS .	INSSTURS	PASSND	RDS NDT
TTY #13 LOGGED :	TN NOWTHIN 13.4	1 4/1720				
	CA HORING ID:4	4/1/20				
>						¢
The software and or licensed to,						
to authorized u						
to any software punishable under						
user then logou						
operational purp	poses at any t	ime.				
SEPT4619 WARNING	3: Last Archiv	ve Procedur	e had fa:	ileđ		
No arci	hives were com	pleted sin	ce Jan O	1 01:00:	00 2008	
18 11						
SL1000						
MEM AVAIL: (U/P) DISK SPACE NEED		USED U P:	5163442	49985	TDT:	10426982
DISK SPACE NEED	10: 63 ABITES					
IDD040 01						
TNS	AVAIL	32609	USED:	158	TDT: 3	2767
RED:				1		N
<						>
					1	Disconnect

The Virtual Terminal is a Web-based window that enables access to the character-based interfaces supported by the components of the CS 1000system, including all overlays not supported by Element Manager Web pages. The Virtual Terminal can also be used to add new links to the system components or other Element Manager servers using the Bookmarks feature.

ATTENTION

Virtual Terminal requires the Java Runtime Environment (JRE).

To access the Virtual Terminal for a particular IP device:

Step Action

1 Choose the IP device you want to access on the **Node Maintenance and Reports** Web page.

- 2 Click the **Virtual Terminal** button beside that node.
- 3 Enter the user name and password.

--End--

For more information about accessing and using the Virtual Terminal, refer to "Virtual Terminals" (page 31).

Meridian Alternate Routing and Vacant Number Routing Causes

This feature deals with Vacant Number Routing (VNR) calls at the CS 1000 that is routed over H323/SIP. Assume that the call fails to route to the destination (for example, with reason: No entry present in the NRS/SPS or due to rejection from the destination side). With this development, the call gets disconnected with a cause which matches one of the Meridian Alternate Routing (MALT) cause codes, or disconnects with an indication to "use MALT". Based on this information, MALT is performed at the Call Server to retry the call using an alternate route. If MALT exhausts all the MALT routes in the VNR Route List Index then the treatment corresponding to the disconnect cause is provided.

If the call clearing message has the cause as 'unassigned number' or 'invalid Number format' in all the accessed entries of the VNR RLI, then vacant number treatment will be provided.

With the default MALT handling, there are six causes which perform MALT at the CS1K:

- 3 No route to destination
- 27 Destination is out of service
- 34 No circuit or channel available
- 38 Network out of service
- 41 Temporary failure
- 42 Switching equipment congestion

A configurable option is provided in Element Manager for the different vendors (subdivided into "all Nortel Component" and "third party", but potentially extensible, should the need be identified) in order to configure causes (other then MALT causes) to do MALT at CS 1000. The EM provisions the below causes to be configured to perform MALT. The unassigned number cause will be by default configured to perform MALT for Nortel and Third Party vendors.

- 01 unassigned number
- 20 subscriber absent

- 47 Resources unavailable
- 51 Call rejected; blocked by MBG
- 52 Outgoing call barred
- 53 Outgoing call barred in closed user group
- 54 Incoming call barred
- 55 Incoming call barred in closed user group
- 63 service or option not available
- 127 Interworking unspecified

To configure MALT, click the **IP Network > Nodes: Severs, Media Cards** link in the **System** branch of the Element Manager navigator. The **IP Telephony Nodes** Web page appears. Click the **Node ID** of the node you want to configure and select the **MCDN Aternative Routing Treatment** (MALT) Causes hyperlink, the **MCDN Aternative Routing Treatment** (MALT) Causes Web page appears as shown in Figure 70 "MCDN Aternative Routing Treatment (MALT) Causes Web page" (page 146).

Figure 70 MCDN Aternative Routing Treatment (MALT) Causes Web page

ode ID: 1200 - MCDN Alternative Routing Treatm	nent (MALT) Causes
Nortel Vendor Causes:	Third Party Vendor Causes:
UnassignedNumber	✓ UnassignedNumber
Subscriber absent	Subscriber absent
Resources unavailable	Resources unavailable
Service or option not available	Service or option not available
Internetworking unspecified	Internetworking unspecified
Call rejected; blocked by MGB	Call rejected; blocked by MGB
Outgoing call barred	Outgoing call barred
Outgoing call barred in closed user group	Outgoing call barred in closed user group
Incoming call barred	Incoming call barred
Incoming call barred in closed user group	Incoming call barred in closed user group
	n this page will NOT be Save Cancel

Media Gateways

To access Media Gateways in Element Manager select the **Media Gateways** link in the IP Network branch of Element Manager navigator. The **Media Gateways** Web page appears, as shown in Figure 71 "Media Gateways Web page" (page 147).

Figure 71 Media Gateways Web page

ula Ga	ateways					
Add	Digital Trunking	Reboot Delete	Virtual Terminal	More Actions	×	Echest
	IPMG		IP Address		Zone	Туре
0	000 01	192.1	57.100.20		001	MGC

Media Gateway configuration

To view or configure the current settings of a Media Gateway Controller, select the **Media Gateways** link in the IP Network branch of Element Manager navigator. For information about the configuration of the Media Gateway Controller, refer to *Communication Server 1000E Installation and Commissioning* (NN43041-310), *Communication Server 1000E - Upgrades* (NN43041-458), and *Communication Server 1000M and Meridian 1 Large System Installation and Commissioning* (NN43021-310).

Media Gateway Controller commands

Element Manager provides support for executing the Media Gateway Controller (MGC) command line interface (CLI) maintenance commands.

Note: Not all MGC commands are supported from Element Manager as they affect basic system configuration parameters and are used by the system administrator to closely monitor the system using serial connection.

The following MGC CLI command groups are supported from Element Manager:

- General General purpose commands
- System MGC platform administration and maintenance commands
- Voice Gateway —- Voice Gateway application administration and maintenance commands
- Special Special purpose PDT commands
- Security —- Intra-system and cryptographic key support commands

To run MGC commands from Element Manager, select the **Media Gateways** link in the IP Network branch of Element Manager navigator. The **Media Gateways** Web page appears. See, Figure 71 "Media Gateways Web page" (page 147).

Procedure 81 Running MGC commands

Step	Action
1	Choose an MGC and select General Commands from the More Actions drop-down list. The General Commands Web page appears. See, Figure 72 "General Commands" (page 148).
2	Select the MGC CLI command group that you want to access from the Group drop-down list.
3	Choose a command from the Command drop-down list.
4	Click Run to execute the command.

--End--

Figure 72 General Commands

eneral Co	7.100.20 Element Type:MOC		
Group	General	Command Select a command	RUN
IP address	Oeneral System	Number of Pings 3	PINO
	(Security		

For a list of available MGC commands that can be run using Element Manager, refer to *Software Input Output Reference — Maintenance* (NN43001-711).

MGC Report logs

To generate MGC report logs from Element Manager, select the **Media Gateways** link in the IP Network branch of Element Manager navigator. The **Media Gateways** Web page appears. Choose an MGC and select **Report Log** from the **More Actions** drop-down list. The **MGC Report Log** Web page appears, as shown in Figure 73 "MGC Report Logs Web page" (page 150). The following buttons at the top of this Web page provide one-click access to the following functions:

- RDSCONVERT Convert a report log file to text
- RDPREV Open the previous log file
- RDNEXT Open the next log file
- RDOPEN Open the latest report file
- RDSHOW Show a summary of the report file
- RDTAIL Show x records up to the newest record in the report file (where x is the configured display size).
- RDHEAD Show x records starting from the oldest record in the report file (where x is the configured display size).

To view selected detail data on records in the report file, use the text boxes, the drop-down lists, and the following buttons:

- RDGO Displays the record specified in the adjacent text box (where -1 is the oldest record and 1000 is the most recent).
- RD Browses the report records. Enter the number of records to skip and the number of records to display in the adjacent text boxes.
- RDS Browses the report records with (symbolic) memory dump. Enter the number of records to skip, and select the number of records to display using the adjacent text box and drop-down list.
- VIEW Views selected records. Enter a starting record number and select the number of records to view using the adjacent text box and drop-down list. Negative numbers indicate records previous to the starting record.

Figure 73 MGC Report Logs Web page

Report Log File Name with Path	RDSCONVERT RDPREV	RDNEXT
RDOPEN]	RDSHOW
RDTAIL		RDHEAD
Display Record Number 1000		RDGO
Skip Records 0	Display Records 1	RD
Skip Records 0	Display Records 📘 💌	RDS
Start Record Number 0	Display Records 1 💌	VIEW

For more information about Media Gateway commands see, *Software Input Output Reference — Maintenance* (NN43001-711).

32 Channel Secure Media Card (MC32S) commands

Element Manager provides support for executing MC32S command line interface (CLI) maintenance commands.

The following MC32S CLI command groups are supported from Element Manager:

- General General purpose commands
- System System commands
- Voice Gateway Voice Gateway application administration and maintenance commands
- Special Special purpose (PDT commands)
- Security Intra-system and cryptographic key support commands

Note: Not all MC32S commands are supported from Element Manager as they affect basic system configuration parameters and are used by the system administrator to closely monitor the system using serial connection.

To run MC32S commands from Element Manager, select the **Maintenance and Reports** link in the IP Network branch of Element Manager navigator. The **Node Maintenance and Reports** Web page

appears. Click **GEN CMD** for the MC32S card from the list. The **General Commands** Web page appears for the MC32S card, as shown in Figure 74 "MC32S General Commands Web page" (page 151).

Figure 74 MC32S General Commands Web page

ement	IP: 192.167.100.6	Element Type: MC32S Card	
Group:		Command: -	Select a group 💌 RUN
addre	General System Voice Gateway	Number Ping	of 3 PING
	Special Security		

Procedure 82 Running MC32S commands

Step	Action
1	Select the MC32S CLI command group that you want to access from the Group drop-down list.
2	Choose a command from the Command drop-down list.
3	Click Run to execute the command.

--End--

For a list of available MC32S commands that can be run using Element Manager, refer to *Software Input Output Reference — Maintenance* (NN43001-711).

Report logs

To generate MC32S report logs from Element Manager, select the **Maintenance and Reports** link in the IP Network branch of Element Manager navigator. The **Node Maintenance and Reports** Web page

appears. Choose an MC32S card and click **RPT Log**. The **Node Report Logs** Web page appears, as shown in Figure 75 "MC32S Node Report Logs Web page" (page 153).

The following buttons at the top of this Web page provide one-click access to the following functions:

- RDSCONVERT Convert a report log file to text
- RDPREV Open the previous log file
- RDNEXT Open the next log file
- RDOPEN Open the latest report file
- RDSHOW Show a summary of the report file
- RDTAIL Show x records up to the newest record in the report file (where x is the configured display size).
- RDHEAD Show x records starting from the oldest record in the report file (where x is the configured display size).

To view selected detail data on records in the report file, use the text boxes, the drop-down lists, and the following buttons:

- RDGO Displays the record specified in the adjacent text box (where -1 is the oldest record and 1000 is the most recent).
- RD Browses the report records. Enter the number of records to skip and the number of records to display in the adjacent text boxes.
- RDS Browses the report records with (symbolic) memory dump. Enter the number of records to skip, and select the number of records to display using the adjacent text box and drop-down list.
- VIEW Views selected records. Enter a starting record number and select the number of records to view using the adjacent text box and drop-down list. Negative numbers indicate records previous to the starting record.

Figure 75 MC32S Node Report Logs Web page

Report Log File Name with Path		RDSCONVERT	RDPREV	RDNEXT	
	RDOPEN			RDSHOW	
	RDTAIL			RDHEAD	
Display Record Number	1000			RDGO	
Skip Records	0	Display Rec	ords 1	RD	
Skip Records	0	Display Rec	ords 1 💌	RDS	
Start Record Number	0	Display Rec	ords 1 💌	VIEW	

For more information about MC32S commands see, *Software Input Output Reference - Maintenance* (NN43001-711).

Zones

To configure or edit Bandwidth Zone information or Numbering Zone information, click the **Zones** link in the **IP Network** branch of the Element Manager navigator. The **Zones** Web page appears as shown in Figure 76 "Zones Web page" (page 153).

Figure 76 Zones Web page

Zones		
Cones are used to	group related information for either bandwidth or dial plan numbering purposes.	
Bandwidth Zo	nes	
3andwidth Zones bandwidth mana <u>c</u>	are used for alternate routing of calls between IP stations.Bandwidth Zones are also ement.) used for
Numbering Zo	nes	
Numbering Zones	are used to route the calls through a centralized call server.	

Bandwidth Zones are used for alternate call routing between IP stations and for Bandwidth management. Numbering Zones are used to route calls through a centralized call server. To view, configure, or edit Bandwidth Zones click on the Bandwidth Zones link of **Zones** Web page. The **Bandwidth Zones** Web page appears as shown in the following figure.

Figure 77 Bandwidth Zones

3andwidth Zones	
Naintenance	
- Maintenance Commands for Zones (LD 117)	
Configuration	
Configuration Spreadsheet	
Browse Import	
lease Choose the Bandwidth Zones 3 💌 to Add	
Bandwidth Zones 1	
- Zone Basic Property and Bandwidth Management	
 Adaptive Network Bandwidth Management and CAC Alternate Routing for Calls between IP Stations 	
 Branch Office Dialing Plan and Access Codes Branch Office Time Difference and Daylight Saving Time Property 	
Bandwidth Zones 2	
Banuwidur Zones Z	

The user can view a spreadsheet with the configuration values of the Zone Basic Property and Bandwidth Management pages of all the configured zones in the Call Server. Click the **Configuration Spreadsheet** link. A Microsoft Excel spreadsheet appears, which can be saved to the user's local drive.

Note: Enter all rows sequentially in the Microsoft Excel spreadsheet. If a blank row is encountered further rows are ignored.

To add zones on the **Zones** Web page, select a Zone number from the list and click to Add.

This Web page contains links to the six categories of Zone configuration data for each Zone configured. Click the plus sign to the left of next to the Zone number to see the following information:

- Basic Property and Bandwidth Management
- Adaptive Network Bandwidth Management and CAC
- Alternate Routing for Calls between IP Stations
- Branch Office Dialing Plan and Access Codes
- Branch Office Time Difference and Daylight Saving Time Property

For information about configuring the MG 1000B, see *Branch Office Installation and Commissioning* (NN43001-314).

To edit basic properties, click the **Zone Basic Property and Bandwidth Management** link. The **Zone Basic Property and Bandwidth Management** Web page appears. See Figure 78 "Zone Basic Property and Bandwidth Management Web page" (page 155).

Figure 78 Zone Basic Property and Bandwidth Management Web page

Input Description Input Value Zone Number (ZONE): 0 Intrazone Bandwidth (INTRA_BW): 1000000 Intrazone Strategy (INTRA_STGY): Best Quality (BQ) v Interzone Bandwidth (INTER_BW): 1000000 Interzone Strategy (INTER_STGY): Best Quality (BQ) v Resource Type (RES_TYPE): Shared (SHARED) v Zone Intent (ZBRN): MO (MO) v
Intrazone Bandwidth (INTRA_BW): 1000000 Intrazone Strategy (INTRA_STGY): Best Quality (BQ) Interzone Bandwidth (INTER_BW): 1000000 Interzone Strategy (INTER_STGY): Best Quality (BQ) Resource Type (RES_TYPE): Shared (SHARED) Zone Intent (ZBRN): MO (MO)
Intrazone Strategy (INTRA_STGY): Best Quality (BQ) Interzone Bandwidth (INTER_BW): 1000000 Interzone Strategy (INTER_STGY): Best Quality (BQ) Resource Type (RES_TYPE): Shared (SHARED) Zone Intent (ZBRN): MO (MO)
Interzone Bandwidth (INTER_BW): 1000000 Interzone Strategy (INTER_STGY): Best Quality (BQ) Resource Type (RES_TYPE): Shared (SHARED) Zone Intent (ZBRN): MO (MO)
Resource Type (RES_TYPE): Shared (SHARED)
Zone Intent (ZBRN): MO (MO)
Description (ZDES):
Delete Cancel

The information entered on this Web page corresponds to the ZONE, ZBRN, and ZDES data traditionally configured using LD 117 - Ethernet and Alarm Management.

To save changes made in **Zone Basic Property and Bandwidth Management** parameters, click Submit at the bottom of the Web page.

To return to the **Zones** Web page, click the Zones link in the navigation path at the top of the Web page.

To configure the Adaptive Network Bandwidth Management feature, click the Adaptive Network Bandwidth Management and CAC link. The Adaptive Network Bandwidth Management and CAC Web page appears, as shown in Figure 79 "Adaptive Network Bandwidth Management and CAC Web page" (page 156).

Note: Do not configure ANBWM for Zone 0 or Virtual Trunk zones. ANBWM is not supported in Zone 0 or VTRK zone.

Figure 79 Adaptive Network Bandwidth Management and CAC Web page

Input Description	Input Value
Zone Number (ZONE):	E): 1
Enable Call Admission Conrol Feature (STATE):	E):
QoS Response Time Increase (ZQRT):	T): 10 (1 · 100 %)
QoS Response Time Interval (ZQRTI):	[]): 5 (1 · 120 min)
Warning Alarm Threshold (ZQWAT):	T): 85 (1-99%)
Unacceptable Alarm Threshold (ZQUAT):	T): 75 (1-99 %)
R Alarm Coefficient (CR):	R): 50 (1-100)
Packet Loss Alarm Coefficient (CPL):	L): 50 (1-100)
Delay Alarm Coefficient (CD):	D): 50 (1-100)
Jitter Alarm Coefficient (CJ):	J): 50 (1-100)
Coefficient for QoS (CQoS):	S): 50 (1 - 100)
Record Validity Time Interval (CACVT):	T): 48 (1 - 255 hours)
Submit Refresh Cancel	

- QoS Response Time Increase (ZQRT): Bandwidth limit increment, as a percentage of the QoS factor for the zone
- QoS Response Time Interval (ZQRTI): Time (in minutes) between bandwidth limit increments
- Warning Alarm Threshold (ZQWAT): A QoS value, which is lower than this value, but higher than the Critical (Unacceptable) Alarm Threshold, triggers a Major Alarm.

- Critical Alarm Threshold (ZQUAT): A QoS value, which is lower than this value, triggers an Unacceptable (Critical) Alarm.
- R Alarm Coefficient (CR): Value used to calculate the QoS value for the zone.
- Packet Loss Alarm Coefficient (CPL): Value used to calculate the QoS value for the zone.
- Delay Alarm Coefficient (CD): Value used to calculate the QoS value for the zone.
- Jitter Alarm Coefficient (CJ): Value used to calculate the QoS value for the zone.
- Coefficient of QoS (CQoS): Value used to calculate the overall QoS value for the zone.
- Recent Validity Time Interval (CACVT): Amount of time (in hours) for zone-to-zone record validity. When this interval expires, records for unused zones are purged from the tables.

To configure the Alternate Routing feature, click the Alternate Routing for Calls between IP Stations link. The Alternate Routing for Calls between IP Stations Web page appears, as shown in Figure 80 "Alternate Routing for Calls between IP Stations" (page 158).

Figure 80

Alternate	Routing	for	Calls	between	IP	Stations
-----------	---------	-----	-------	---------	----	----------

Input L	Description Zone Number (ZON	Input Value
Enable A	Iternate Routing Feature (ENL ZAL	
	te Routing Prefix Digits (ALT_PREFI	
	Re-route for All Calls (ALL_CALL	
Ala	arm Suppression Time Period (ZAS	T): 0 (0-3600 Sec)
		ndwidth Management (CAC) allows for maintaining QoS by rerouting ng (ALT) is based on bandwidth exhaustion.

- Select the **Enable Alternate Routing feature (ENL_ZALT)** check box to enable the Alternative Call Routing for NBWM feature.
- Enter a maximum of 7 digits in **Alternate Routing Prefix Digits** (ALTPrefix).
- Select the **Re-route for All Calls (ALL_CALLS)** check box to enable the feature for all calls.
- Enter an Alarm Suppression Time Period (ZAST).
- Click **Submit** to enter the data.

To edit dialing plan and access code parameters for a Zone's MG 1000B offices, click the **Branch Office Dialing Plan and Access Codes** link on the **Zones** Web page. The **Zone Dialing Plan and Access Codes** Web page appears. See Figure 81 "Zone Dialing Plan and Access Codes Web page" (page 159).

Figure 81 Zone Dialing Plan and Access Codes Web page

The information entered on this Web page corresponds to the Zone Dialing Plan and Access Codes (ZACB) command available in LD 117 - Ethernet and Alarm Management.

To save changes made in **Zone Dialing Plan and Access Code** parameters, click **Submit** at the bottom of the Web page.

To return to the **Zones** Web page, click the **Zones** link in the navigation path at the top of the page.

To access the time difference and daylight saving time properties for a Zone's MG 1000B Offices, click the **Branch Office Time Difference and Daylight Saving Time Property** link on the **Zone List** Web page. The **Time Difference and Daylight Saving Time Property** Web page appears (see Figure 82 "Time Difference and Daylight Saving Time Property Web page" (page 160)).

Figure 82 Time Difference and Daylight Saving Time Property Web page

ime Difference and Daylight Saving Ti	me
lime Difference Property	
Input Description	Input Value
Time Difference (TIME	E_DIFF): 0
Daylight Saving Time Property	
Input Description	Input Value
Zone Number (ZONE): 1
Use Daylight Saving Time (USE	_DST):
Active Status of Daylight Saving Time (DST	_ACT): No
Start Month (START_	_MON): January 🔽
Start Week (START_V	WEEK): 1 🛩
Start Day (START	_DAY): Sunday 💌
Start Hour (START_	HOUR): 1 💌
End Month (END_	_MON): January 🔽
End Week (END_V	WEEK): 1 💌
End Day (END	DAY): Sunday 💌
End Hour (END_H	HOUR): 1 🗸

The information entered on this Web page corresponds to the ZTDF and ZDST command data traditionally configured using LD 117 - Ethernet and Alarm Management.

To save changes made in Time Difference and Daylight Saving Time properties, click **Submit** at the bottom of the Web page.

To return to the **Zones** Web page, click the **Zones** link in the navigation path at the top of the page.

Numbering Zones

Numbering Zones provides you with an interface to configure various parameters for Zones-based Parameters, Flexible Dial Plan, and Direct Inward Dial number and provides an option for every customer to enable the Zone Based Dialing (ZBD) feature.

Element Manager provides the following capabilities to configure NUMZONE for the ZBD feature:

- adding a new Numbering Zone
- deleting a Numbering Zone
- editing the Zone Based Parameters
- flexible Dial Plan and Direct Inward Dial Number Configurations
- config.ini changes in Nodes page
- enabling Numbering Zones for every customer in Feature Options

To view, configure, or edit Numbering Zones click on the Numbering Zones link of **Zones** Web page. The **Numbering Zones** Web page appears as shown in the following figure.

Figure 83 Numbering Zones Web page

umb	bering Zo	ones									
umbe	ring zones	are used t	o route call:	s through	a centralised ca	Il server.					
Add.	Dial	ing Config	uration	Delete	1						Refresh
		Site	Country	Area	E164Location			International	-	Tone	Description
	Zones	prefix	code	code	<u>code</u>	code	code	code	display	table	

For information about configuring of ZBD in the **IP Telephony Nodes** Web page and configuration of a Numbering Zone, see *Dialing Plans Reference* (NN43001-283).

Host and Route Tables

Host and Route tables are located on the Ethernet LAN configuration page, that is used to configure and list the Ethernet LAN settings of the Call Server.

A host name can be up to 16 characters in length. The first character of a host name must be a letter of the alphabet. A character may be a letter, number or underscore (_). A period is used as a delimiter between domain names. Spaces and tabs are not permitted. No distinction is made between upper and lower case.

To access the Host and Route Tables click Host and Route Tables link of the IP Network branch of the Element Manager navigator. The **Host and Route Tables** Web page appears as shown in the following figure. For more information refer to *Signaling Server IP Line Applications Fundamentals* (NN43001-125).

Figure 84 Host and Route Tables Web page

tatus						
Edit Activate						
SUBNET MASK : 255.	255.255.0					
ost						
lost IP address configu	uration					
Add Enable	Disable Delete					Refrest
Host Identifier	Host Name	Host IP Address	Ethernet Link	Status	Status	Media Gatewar
101	SECONDARY_ENET	137.135.128.254	Inactive		Enabled	0
2 C 2	LOCAL_PPP_IF	137.135.192.4			Enabled	0
303	REMOTE_PPP_IF	100.1.1.1			Enabled	0
4 C 4	CPPM_CS	172.16.100.2	Active		Enabled	0
5 C NIL	localhost	127.0.0.1			-	0
oute						
onfigure and manage						D-f
Add Enable	Disable Delete					Refrest
Route Identifier	Network IP Address	Gateway IP Ad	idress	Status +	Med	ia Gateway
1 O NIL	127.0.0.1	127.0.0.1			0	
2 C NIL	172.16.100.0	172.16.100.2			0	
3 O NIL	127.0.0.0	127.2.0.1		22	0	
4 C 1	0.0.0.0	172.16.100.1		Enabled	0	

Network Address Translation (NAT)

To configure or edit Network Address Translation (NAT) information, click the **Network Address Translation** link in the **IP Network** branch of the Element Manager navigator. The **Network Address Translation (NAT)** Web page appears, as shown in Figure 85 "Network Address Translation (NAT) Web page" (page 163).

Figure 85 Network Address Translation (NAT) Web page

work Address Translation (NAT)		
Input Description		Input Value
Echo Server 1 IP Address	0.0.0	
Echo Server 1 Port	10000	Range: 1000 to 65535
Echo Server 2 IP Address	0.0.0.0	
Echo Server 2 Port	10000	Range: 1000 to 65535
NAT Session Timeout Value (seconds)	30	Range: 20 to 600
mit Refresh Cancel		

The information entered on this Web page corresponds to data traditionally configured using LD 117 - Ethernet and Alarm Management.

To configure the Echo Server 1 and 2 IP addresses and port numbers, enter the values in corresponding input fields.

Note: Echo Server 1 and 2 default IP addresses use the TLAN network interface IP address of the LTPS card.

Enter the NAT session timeout value. Click the **Submit** button to save the changes. For more information, see *Signaling Server IP Line Application Fundamentals (NN43001-125)*.

Quality of Service Thresholds (QoS)

The threshold values chosen provide accurate statistics without unnecessary network loading. If you increase your sample rate or your sample duration you will utilize/consume more of the bandwidth. Nortel recommends that you use the default values. You can change thresholds depending on the voice quality level you want to have without alarms reported. For example, Call Packet Loss Unacceptable Threshold (UPKL) - default is 7 percent (entered as 70).

The zone basis threshold parameters allow for an overall level of alerts based on aggregated data for the zone. QoS samples are collected from active sets in the zone periodically by polling or received asynchronously, depending on the set firmware. The statistics received are compared to the call basis thresholds and violations are counted. The zone basis threshold parameters define the level at which alarms are sent out. These indicate the percentage of the samples that may exceed the defined per call thresholds for the different QoS metrics. For example, if the zone threshold for a particular metric is set to 2 percent, then zone alarms are issued if over 2 percent of the samples for that metric exceed the per call unacceptable threshold set for that metric.

The zone defaults for the warning items are higher than those for the unacceptable items (20 percent compared to 2 percent). The assumption is that the per call warnings thresholds are set at levels such that several warning alarms are normally issued. However, an overall problem with the zone should only be indicated if there are a significant number of such violations. On the other hand, there should be almost no unacceptable alarms and it is appropriate that these be set to a far lower zone percentage threshold.

The per call thresholds should be first adjusted to a level appropriate for the installation. After that the zone thresholds should be set, taking into consideration the per call threshold settings. If the per call thresholds are set low then more violations are to be expected, and the zone thresholds should be set higher to compensate. The converse is true for high per call threshold settings.

To configure or edit Quality of Service Threshold information, click the **Quality of Service Thresholds (QoS)** link in the **IP Network** branch of the Element Manager navigator. The **Quality of Service (QoS) Thresholds** Web page appears (see Figure 86 "Quality of Service (QoS)) Thresholds Web page" (page 165)).

oS Zone Basis Threshold Parameters		7.11.02.000
Input Description		Input Value
Zone Latency Warning Threshold (ZLWT):	20	Range: 1 to 100 %
Zone Jitter Warning Threshold (Z.WYT):	20	Range: 1 to 100 %
Zone Packet Loss Warning Threshold (ZWPKL):	20	Range: 1 to 100 %
Zone R Factor Warning Threshold (ZWR):	20	Range: 1 to 100 %
Zone Latency Unacceptable Threshold (ZULAT):	2	Range: 1 to 100 %
Zone Jitter Unacceptable Threshold (ZUJIT):	2	Range: 1 to 100 %
Zone Packet Loss Unacceptable Threshold (ZUPKL):	2	Range: 1 to 100 %
Zone R Factor Unacceptable Threshold (ZUR):	2	Range: 1 to 100 %
Sample Rate Window (ZARW):	300	Range: 60 to 3600 s
Minimum Sample Count (MSZW):	100	Range: 50 to 1000
oS Call Basis Threshold Parameters		
Input Description		Input Value
Call Latency Warning Threshold (WLAT):	40	Range: 5 to 100 ms
Call Jitter Warning Threshold (WJIT):	20	Range: 5 to 200 ms
Call Packet Loss Warning Threshold (WPKL):	20	Range: 5 to 100 *
Call R Factor Warning Threshold (WR):	65	Range: 20 to 94
Call Latency Unacceptable Threshold (ULAT):	100	Range: 5 to 500 ms
Call Jitter Unacceptable Threshold (UJIT):	40	Range: 5 to 500 ms
Call Packet Loss Unacceptable Threshold (UPKL):	70	Range: 5 to 250 *
Call R Factor Unacceptable Threshold (UR):	60	Range: 20 to 94
Sampling Period (SAMP):	30	Range: 5 to 60 s

Figure 86 Quality of Service (QoS) Thresholds We

Quality of Service (QoS) Thresholds Web page

From this Web page, Quality of Service (QoS) Thresholds can be viewed and edited. Every node in the system has the same threshold values.

The information entered on this Web page corresponds to data traditionally configured using LD 117 - Ethernet and Alarm Management.

The threshold parameters are grouped as follows:

- QoS Zone Basis Threshold Parameters
- QoS Call Basis Threshold Parameters

To save changes made to the threshold parameters, click **Submit** at the bottom of the Web page.

For more information, see Software Input Output Reference - Maintenance (NN43001-711).

ATTENTION

Changes to Quality of Service parameters do not take effect until a Call Server data dump is performed.

Personal Directories

The Personal Directories Web page provides access to two links:

- Server Configuration: allows the administrator to enter the database backup and restore configuration details
- User Profile Configuration: allows the administrator to modify a user profile in the database

To access the **Personal Directories** Web Page click the IP Network > Personal Directories link in the System branch of the Element Manager navigator.

Figure 87 Personal Directories Web page

Managing: <u>172.16.100.2</u> System » IP Network » Personal Directories Personal Directories Server Configuration It allows the administrator to enter the database backup and restore configuration details. User Profile Configuration It allows the administrator to modify a particular user's profile in the database.

For more information about Personal Directories, Redial List, and Callers List, see *Signaling Server IP Line Application Fundamentals* (*NN43001-125*).

Unicode Name Directory

The Unicode Name Directory feature enables the displaying of called or caller party name in Unicode format and use languages other than English for name displaying. It enhances the functionality of Unicode display capable Unistim terminals

The Unicode Name Directory System Management Solution (SMS) provides a solution to provision localized names (up to seven different languages) on subscriber base and generate subscriber telephony account's calling line IDs/URIs (CLID/URI) in network level to serve Unicode Name Directory server.

To successfully configure Unicode Name Directory on the Call Server side, enable the Name Directory Application and configure Lightweight Directory Access Protocol (LDAP) synchronization parameters. Name Directory Application is enabled in the Call Server only if Personal Directory Application Server is configured.

Management of Unicode Name Directory is an integral part of Subscriber Manager, for more information on Unicode Name Directory and the role of Subscriber Manager refer to *Subscriber Manager Fundamentals* (NN43001-120).

For information about Unicode Name Directory and its configuration, see *Signaling Server IP Line Application Fundamentals (NN43001-125).*

Interfaces

Element Manager supports the Value Added Server and Property Management System data blocks traditionally configured in LD 17.

Application Module Link

To access Application Module Link click Interfaces > Application Module Link in the System branch of the Element Manager navigator. The **Application Module Link** Web page appears as shown in Figure 88 "Application Module Link Web page" (page 167).

Figure 88 Application Module Link Web page

	Iodule Link			
			r telephony functions. This allows inter on can be configured over a dedicated	
e ELAN	can server by excitalighting th	nessages. The MIL COMMUNICATO	in can be compared over a dedicated	MODE card of over
Add Delete				Refresh
Portnumber	•	Maximum octets	Description	
Port number	•	Maximum octets 512	Description	

To view or edit an Application Module Link click a port number. The **Application Module Link Details** Web page appears as shown in Figure 89 "Application Module Link Details Web page" (page 168).

Figure 89 Application Module Link Details Web page

Link Type: ELAN			
Description: AMLtest			
Maximum octets : 512 💌 🛛 (per HDLC frame))	

To edit the information, enter the appropriate values and click **Save**.

To Add a new Application Module Link click the Add button in the **Application Module Link** Web page. The **New Application Module Link** Web page appears as shown in Figure 90 "New Application Module Link Web page" (page 168).

Figure 90 New Application Module Link Web page

New Applicat	on Module Link
	Port number: × (16 - 127) AML over ELAN Description: Link control system parameters Maximum octets : 512 (per HDLC frame)

To create a new Application Module Link, enter the appropriate information and click Save.

Value Added Server

Click the **Interfaces > Value Added Server** link in the **System** branch of the Element Manager navigator. The **Value Added Server** Web page appears as shown in Figure 91 "Value Added Server Web page" (page 169).

Figure 91 Value Added Server Web page

Delete Port		Refresh
Port number	Port Type	
016	Ethernet Link	
017	Ethernet Link	
032	Ethernet Link	
	<u>Port number</u> 016 017	Port number Port Type 016 Ethernet Link 017 Ethernet Link

To add a Value Added Server, click **Add**. The **Add Value Added Server** Web page appears, as shown in Figure 92 "Add Value Added Server Web page" (page 170).

Figure 92 Add Value Added Server Web page

Managing: <u>192.167.104.53</u> System » Interfaces » <u>Value Added Server</u> » Add Value Added Server

Add Value Added Server

Application Module Link

Associate a Value Added Server with a configured Application Module Link.

Ethernet LAN Link Associate a Value Added Server with a configured Application Module Link over Ethernet.

To associate a Value Added Server with a configured Application Module Link, click **Application Module Link**. The **Application Module Link** Web page appears, as shown in Figure 93 "Application Module Link Web page" (page 170).

Figure 93 Application Module Link Web page

blication Module Link	
Value Added Server ID: 0	× .
Application Module Link:	
	oort configured in ADAN
Application Security:	
Interval:	
	Time interval for checking the link for overload in five second increments
Message Count Threshold:	9999 * (10 - 9999)
Link Configuration:	
	Save

Enter the parameters for the new Value Added Server and click Save.

To associate a Value Added Server with a configured Application Module Link over Ethernet, from the **Add Value Added Server** Web page click **Ethernet LAN Link**. The **Ethernet Link** Web page appears, as shown in Figure 94 "Ethernet Link Web page" (page 171).

Figure 94 Ethernet Link Web page

ernet Link		
Value	e Added Server ID:	* (16 - 127)
1	Ethernet LAN Link:	
	ELAN p	ort configured in ADAN
	Application Security :	
	Interval:	1 🖂
		Fime interval for checking the link for overload in five second increments
Mes	sage Count Threshold:	9999 (10 - 9999)
		Save

Enter the parameters for the new Value Added Server and click **Save**.

Property Management System

Click the Interfaces > Property Management System link in the System branch of the Element Manager navigator. The Property Management System Web page appears, as shown in Figure 95 "Property Management System Web page" (page 172).

Figure 95

Property Management System Web page

Interface: PMS1 💌	
Number of Call Registers used: 20 . (5 - 102	23)
Port Number:	
PMSI port configured	in ADAN
Acknowledgement Time: 0 🗸 (second	n ds)
Minor alarm when link is not responding:	
Number of Retransmissions per message: 1	
Polling Timer.	
1 only 10101 0 0	31 minutes)
	Save Car

Enter the parameters for the new Property Management System and click **Save**.

Engineered Values

The configuration of the system depends on the value of certain parameters. To configure and edit system parameters, click the **Engineered Values** link in the **System** branch of the Element Manager navigator. The **Engineered Values** Web page appears as shown in Figure 96 "Engineered Values Web page" (page 173).

Figure 96 Engineered Values Web page

Managing: <u>192.167.102.3</u>

System » Engineered Values

Engineered Values

The configuration of the system depends on the value of certain parameters. These parameters are configured and viewed under Engineered Values.

Buffer and Queue Management

View and edit the input output buffer and queue allocations for various device and application.

Call Register

View and edit the allocation of Call Registers for specific applications and configuring the parameters.

Idle Set Display

View and configure the idle set display information. User can also enable or disable the display of the information.

Call Detail Recording

Configure and view the Call Detail Recording parameters.

Miscellaneous Parameters

Configure and view other hardware and software configuration parameters.

To configure the input/output buffer and queue allocations for various devices and applications, click **Buffer and Queue Management**. The **Buffer and Queue Management** Web page appears as shown in Figure 97 "Buffer and Queue Management Web page" (page 174).

Figure 97 Buffer and Queue Management Web page

uffer And Queue	management			
uffer Management				
	Low Priority Input Buffers:	3500	* (96 - 5000)	
	High Priority Input Buffers:	3500	* (16 · 5000)	
	Output Buffers:	2000	* (16 - 2048)	
	SL1 Buffers:	255	* (16 - 2048)	
	Digital Trunk Input Buffers:	35	* (35 · 1000)	
	Digital Trunk Output Buffers:	4	* (4 - 100)	
ueue Management				
	Auxiliary Input Queue Size:	20	* (20 - 255)	
	Auxiliary Output Queue Size:	20	* (20 - 255)	

Enter the desired parameters within the ranges indicated and click **Save**.

To configure the allocation of Call Registers for specific applications, from the **Engineered Values** Web page click **Call Registers**. The **Call Registers** Web page appears as shown in Figure 98 "Call Register Web page" (page 175).

Figure 98 Call Register Web page

Maximum number of call registers for : Auxiliary Messaging: 25 * (0 - 20000) Command Status Link input queues: 255 * (20 - 5000) Command Status Link/AML output queues: 255 * (20 - 5000) Double message processing speed on AML: Save Cance	Number of Call Registers	20000	* (80 - 50000)	
Command Status Link input queues: 255 × (20 - 5000) Command Status Link/AML output queues: 255 × (20 - 5000) Double message processing speed on AML:	Maximum number of call registers for			
Command Status Link/AML output queues: 255 × (20 - 5000) Double message processing speed on AML:	Auxiliary Messaging	25	* (0 - 20000)	
Double message processing speed on AML:	Command Status Link input queues	255 ,	(20 - 5000)	
	Command Status Link/AML output queues	255 •	(20 - 5000)	
Save	Double message processing speed on AML			
				Save Cance

Enter the desired parameters within the ranges indicated and click Save.

To configure idle set display information, from the **Engineered Values** Web page click **Idle Set Display**. The **Idle Set Display** Web Page appears as shown in Figure 99 "Idle Set Display Web page" (page 176).

Figure 99 Idle Set Display Web page

dle Set Display			
	ldle Set Displa	CS1000E PIV Nod	
		The configurations will be saved only if the parameter is set to Terminal Text Broado	
			Save Cancel

Enter the desired display information and click Save.

To configure Call Detail Recording parameters, from the **Engineered Values** Web page click **Call Detail Recording**. The **Call Detail Recording** Web page appears as shown in Figure 100 "Call Detail Recording Web page" (page 177).

Figure 100 Call Detail Recording Web page

II Detail Recording				
	Format: OLD	*		
Priority ove	er Call Processing: 📃			
	Calling Line ID: 📃			
	Duration 0.5: 🔲			
		-	5 second duration accuracy for Ja	pan
Message Registration or Perio	dic Pulse Metering: Mess	age Registration 🛛 👻		
				Save Cancel

Enter the desired parameters and click Save.

To configure other hardware and software parameters, from the **Engineered Values** Web page click **Miscellaneous Parameters**. The **Miscellaneous Parameters** Web page appears as shown in Figure 101 "Miscellaneous Parameters Web page" (page 178).

Figure 101 Miscellaneous Parameters Web page

Number of CPU: 1 v Pulse Code Modulation Companding Law: MU Law v Minor Alarm on Attendant consoles: v Error Messages Monitor Hardware: v Monitor Software: v Software Audit: v Digitone Burst Time: 100 v (milliseconds) Call Forward Saved on Sysload: 1 16 button Dual Tone Multi-Frequency Operation: 2 Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: 1 Incoming Calls by Fully Restricted Station: Denied v Automatic Call Distribution - Auxiliary Data 0 v System Customers: 0 v (0-8191)	Pulse Code Modulation Companding Law: MU Law Minor Alarm on Attendant consoles: Error Messages Monitor Hardware: Monitor Software: Monitor Software Audit: Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied		
Minor Alarm on Attendant consoles: ♥ Error Messages Monitor Hardware: ♥ Monitor Software: ♥ Software Audit: ♥ Digitone Burst Time: 100 ♥ (milliseconds) Call Forward Saved on Sysload: □ 16 button Dual Tone Multi-Frequency Operation: □ Cadence increments: 128 ♥ (milliseconds) Multiple Loop Directory Number: □ Incoming Calls by Fully Restricted Station: Denied ♥ Automatic Call Distribution - Auxiliary Data System Customers: 0	Minor Alarm on Attendant consoles: Error Messages Monitor Hardware: Monitor Software: Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied	Number of CPU:	
Error Messages Monitor Hardware: Monitor Software: Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied Automatic Call Distribution - Auxiliary Data System Customers:	Error Messages Monitor Hardware: Monitor Software: Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: (16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied	Pulse Code Modulation Companding Law:	MU Law 💌
Monitor Hardware: Monitor Software: Software Audit: Digitone Burst Time: 100 v (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v Automatic Call Distribution - Auxiliary Data System Customers: Draed out Lists 0	Monitor Hardware: Monitor Software: Software Audit: Digitone Burst Time: 100 ♥ (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 ♥ (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied ♥	Minor Alarm on Attendant consoles:	
Monitor Software: Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied Automatic Call Distribution - Auxiliary Data System Customers: Denied Olivier Caller	Monitor Software: Software Audit: Digitone Burst Time: 100 v (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v	Error Messages	
Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied Automatic Call Distribution - Auxiliary Data System Customers: Denied Oliversity Denied System Customers: Denied Oliversity Denied Denied Oliversity Denied Denied Oliversity Denied Denied Oliversity Denied Denied Oliversity Denied Oliversity Denied Denied Oliversity Denied Oliversity	Software Audit: Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied	Monitor Hardwa	are: 🔽
Digitone Burst Time: 100 v (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v Automatic Call Distribution - Auxiliary Data System Customers:	Digitone Burst Time: 100 (milliseconds) Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied (Monitor Softwa	are: 🔽
Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v Automatic Call Distribution - Auxiliary Data System Customers: Denied v	Call Forward Saved on Sysload: 16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied	Software Au	idit: 🔽
16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 V (milliseconds) Multiple Loop Directory Number: C Incoming Calls by Fully Restricted Station: Denied V Automatic Call Distribution - Auxiliary Data V System Customers: C	16 button Dual Tone Multi-Frequency Operation: Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v	Digitone Burst Time:	100 🔽 (milliseconds)
Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied v Automatic Call Distribution - Auxiliary Data v System Customers:	Cadence increments: 128 v (milliseconds) Multiple Loop Directory Number:	Call Forward Saved on Sysload: [
Multiple Loop Directory Number: Incoming Calls by Fully Restricted Station: Denied Automatic Call Distribution - Auxiliary Data System Customers:	Multiple Loop Directory Number:	16 button Dual Tone Multi-Frequency Operation:	
Incoming Calls by Fully Restricted Station: Denied Automatic Call Distribution - Auxiliary Data System Customers:	Incoming Calls by Fully Restricted Station: Denied 🔜	Cadence increments:	128 🗸 (milliseconds)
Automatic Call Distribution - Auxiliary Data System Customers:		Multiple Loop Directory Number:	
System Castoliers.			
Speed Call Lists: 0 × (0.8191)	Automatic Call Distribution - Auxiliary Data System Customers:	Automatic Call Distribution - Auxiliary Data System Customers:	
	Speed Call Lists: 0 × (0 - 8191)	Speed Call Lists: (× (0-8191)

Enter the desired parameters and click Save.

Emergency Services

Element Manager supports the Emergency Services Client Mobility feature, which allows users to manage the location of phones, and to process emergency calls according to the caller's current data.

Service Parameters

The **Service Parameters** Web page allows users to modify system-wide configuration settings.

Click the **Emergency Services > Service Parameters** link in the **System** branch of the Element Manager navigator to open the **Service Parameters** Web page, as shown in Figure 102 "Service Parameters Web page" (page 179).

Figure 102 Service Parameters Web page

Service Parameters				
Input Description		Input Value		
Location Information Service (LIS):	None (None)		*	
Dynamic ELIN Timeout value (DYNAMIC_ELIN_TIMEOUT):	180 (5 - 1440 Minutes)			
Reuse oldest ELIN during overflow (DYNAMIC_ELIN_REUSE):				
Colorest Distances				
Submit Refresh				

- Choose a Location Information Service from the first drop-down list.
 - If Internal Subnet Location Information Service is selected, the Lookup Private Address for Subnet check box is displayed.
 - If External Discovery Manager is selected, the External Location Update Timeout text box is displayed.
- Enter a **Dynamic ELIN Timeout value**.
- Check Reuse oldest ELIN during overflow, if necessary.
- Click Submit.

Access Numbers and Routing

The **Access Numbers and Routing** Web page allows users to process Emergency Service information which are specific to each Customer.

Click the **Emergency Services > Access Numbers and Routing** link in the **System** branch of the Element Manager navigator to open the **Access Numbers and Routing** Web page, as shown in Figure 103 "Access Numbers and Routing Web page" (page 180).

Figure 103 Access Numbers and Routing Web page

mer	gency Services Acce	ss Data for Customer 0 💊	•		\mathbb{R}			
								Edit
		Default C	alling Numb	er: 967444	i.			
		On-Site Notifica	tion Station D	N :				
ldd.	Entry#	Directory Number	Routing	Route Value	Directing Digits	Misdial Prevention	Misdial Delay	Refresh Last ESDN Digit Repetition
		911	EQDT	1	4444	NO		repetition
)	1 2	911	ESRT	1	4444	NO NO		Tepetition

To add an Emergency Services Directory Number, click **Add**. The **Add Emergency Services Directory Number** Web page appears, as shown in Figure 104 "Add Emergency Services Directory Number Web page" (page 181).

Figure 104 Add Emergency Services Directory Number Web page

a customor o	Emergenc	y services	Director	y Number	
		ESDN Entr	y: 3 🗸		
		Directory Numbe			
		Directing Digits	B: *		
		Routing Method	3:		
		Ro	ute Number: 1	*	
		ORou	te List Index:	Y	
		Misdial Preventior	1: 🔲		
		M	lisdial Delay:	! 🖌 (seconds)	
		Last ESDN Dig	it Repetition:	2	
					Save Cance
					Jave Cance

To edit an existing Emergency Services Directory Number, from the Access Numbers and Routing Web page click the Entry#. The Edit Emergency Services Directory Number Web page appears, as shown in Figure 105 "Edit Emergency Services Directory Number Web page" (page 182).

Figure 105

Edit Emergency Services Directory Number Web page

Directory Number : 20	
Directing Digits : 10	
Routing Method :	
Route Number : 1 v	
🔿 Route List Index : Not Configured 😒	
Misdial Prevention :	
Misdial Delay: 2 🛩 (seconds)	
Last ESDN Digit Repetition ; 🔽	

To edit the CLID configuration for a Customer, select a Customer from the **Choose a customer** drop-down list and click **Edit**. The **Edit Access Numbers and Routing** Web page appears, as shown in Figure 106 "Edit Access Numbers and Routing Web page" (page 183).

Figure 106 Edit Access Numbers and Routing Web page

Access Numbers and Routing	
Input Description	Input Value
Customer Number (CUST):	0 🗸
Emergency Services Directory Number (ESDN):	911
Emergency Services Access Routing Method (ROUTING):	Route Number (ESRT) 🖌 15
Directing Digits (DDGT):	4444
Default ESA Calling Number (DFCL):	967444
On-Site Notification station DN (OSDN):	

To add a new CLID configuration for a Customer, from the Access Numbers and Routing Web page click Add. The Add Access Numbers and Routing Web page appears, as shown in Figure 107 "Add Access Numbers and Routing Web page" (page 184).

Figure 107 Add Access Numbers and Routing Web page

Input Description	Input Value
Customer Number (CUST):	2 💌
Emergency Services Directory Number (ESDN):	
Emergency Services Access Routing Method (ROUTING):	Route Number (ESRT) 💌
Directing Digits (DDGT):	
Default ESA Calling Number (DFCL):	
On-Site Notification station DN (OSDN):	
t Cancel	

Choose a Customer from the **Customer Number** drop-down list. Complete the information in the remaining fields and click **Submit**.

To delete the CLID configuration for a customer, from the **Access Numbers and Routing** Web page click **Delete**.

Response Locations

Click the **Emergency Services > Emergency Response Locations** link in the **System** branch of the Element Manager navigator to open the **Emergency Response Location** Web page, as shown in Figure 108 "Emergency Response Location Web page" (page 185).

Figure 108 Emergency Response Location Web page

Add Enable Disable Delete						Got	Goto ERL List Refresh			
	ERL	State	Site Name	Location Description	Route Number	Route List Index	Access Code	Prepend Digits	Locator	Onsite Notification DN
0	<u>256</u>	DIS								
С	<u>257</u>	DIS		ZONE1						
С	<u>258</u>	DIS		ZONE2						

This Web page allows users to add, enable, disable, or delete Emergency Response Locations (ERLs).

To add an ERL, click the radio button for the ERL and click Add.

To enable an ERL, click the radio button for the ERL and click **Enable**.

To disable an ERL, click the radio button for the ERL and click **Disable**.

To delete an ERL, click the radio button for the ERL and click **Delete**.

To edit an ERL, click the ERL number. The **Edit Emergency Response Location** Web page appears, as shown in Figure 109 "Edit Emergency Response Location Web page" (page 186).

Figure 109 Edit Emergency Response Location Web page

lit Emergency Response Location	
Input Description	Input Value
Emergency Response Locator (ERL):	256
Site Name (SITENAME):	
Location Description (LOCDESC):	
Routing Method (ROUTING):	Route Number (RT)
Access Code (AC):	Null (NULL)
Prepend Digits (PREPEND):	
Locator (LOCATOR):	
On-Site Notification DN (OSDN):	
ubmit Refresh Cancel	

click Add. The Add Emergency Response Location Web page appears, as shown in Figure 110 "Add Emergency Response Location Web page" (page 187).

Figure 110 Add Emergency Response Location Web page

Emergency Response Locator (ERL) Site Name (SITENAME) Location Description (LOCDESC) Routing Method (ROUTING)			
Location Description (LOCDESC)			
Routing Method (ROUTING)			
	Route Number (RT)	~	
Access Code (AC)	Null (NULL)	~	
Prepend Digits (PREPEND)			
Locator (LOCATOR)			
On-Site Notification DN (OSDN)			
Cancel			

Enter the information for the new ERL and click **Submit**.

Subnet Information

The Subnet Location Information Web pages allow users to modify subnet information.

Click the **Emergency Services > Subnet Information** link in the **System** branch of the Element Manager navigator to open the **Subnet Location Information Service** Web page, as shown in Figure 111 "Subnet Location Information Service Web page" (page 188).

Figure 111 Subnet Location Information Service Web page

Maintenance				
Emergency Services Dia	i <u>qnostics</u> (LD 117)			
Configuration				
				Goto Subnet Index
Add Delete				Refres
IP Address	Mask bits	Emergency Response Location	Emergency Caller Location	Location Description
0 192.167.102.3	32	256	4444	

The Maintenance section contains a link to the **Emergency Services Diagnostics** Web page. See "Emergency Services Diagnostics" (page 75).

The Configuration section lists the configured subnet entries. To delete a configured Subnet Location, select the appropriate radio button beside an IP Address and click **Delete**.

To edit a configured Subnet Location, click the Subnet Location **IP Address**. The **Edit Subnet Location Information** Web page appears, as shown in Figure 112 "Edit Subnet Location Information Web page" (page 189).

Figure 112 Edit Subnet Location Information Web page

Г

Input Description IP Address (IF Mask bits (MASKBITS Emergency Response Location (ERI Emergency Caller Location (ECI Location Description (LOCATIONDESCRIPTIO)
Emergency Response Location (ER Emergency Caller Location (EC
Emergency Caller Location (EC
Location Description (LOCATIONDESCRIPTION

To add a Subnet Location, from the **Subnet Location Information Service** Web page click **Add**. The **Add Subnet Location Information** Web page appears, as shown in Figure 113 "Add Subnet Location Information Web page" (page 190).

Figure 113 Add Subnet Location Information Web page

Input Description	Input Value
IP Address (IP):	0.0.0.0
Mask bits (MASKBITS):	(1-32)
Emergency Response Locator (ERL):	(1-65535)
Emergency Caller Locator (ECL):	(0-65535)
Location Description (LOCATIONDESCRIPTION):	

Enter the information for the new Subnet Location and click **Submit**.

Dynamic ELIN

The Dynamic Identification Web pages allow users to modify Dynamic Emergency Location information.

Click the **Emergency Services > Dynamic ELIN** link in the **System** branch of the Element Manager navigator to open the **Dynamic ELIN** Web page, as shown in Figure 114 "Dynamic ELIN Web page" (page 191).

Figure 114 Dynamic ELIN Web page

ynamic ELIN					
Add Delete					Refresh
Emergency Response Location	Terminal Number	Dynamic ELIN	State	Mapped DN	Expiry Time (MM/DD HH:MM)
	24	à		76	52

This Web page lists the configured Dynamic ELINs.

To delete an ELIN, click the radio button for the ELIN and click **Delete**.

To add an ELIN, click Add. The Add Dynamic Location Identification Number Web page appears, as shown in Figure 115 "Add Dynamic Location Identification Number Web page" (page 191).

Figure 115

Add Dynamic Location Identification Number Web page

Add Dynamic Location Identification Number					
Input Description		Input Value			
Emergency Respon	se Location (ERL):	(1-65535)			
Tern	ninal Number (TN):				
ubmit Cancel					

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 Enter the information for the new ELIN and click **Submit**.

Virtual Office Phone

The Virtual Office Phone Web pages allow users to maintain lists of mapped and unused Virtual Office TNs.

Click the **Emergency Services > Virtual Office Phone** link in the **System** branch of the Element Manager navigator to open the **Virtual Office Phone** Web page, as shown in Figure 116 "Virtual Office Phone Web page" (page 192).

Figure 116 Virtual Office Phone Web page

mergency services are provid	ed to virtual office phones		
			Refresh
Emergency DN	Number of TNs in pool	Starting TN	TN Reservation
911	1	096 0 00 00	20
			Refresh
Virtual Office DN	TN	Timer	Signalling IP
	Emergency DN 911	Emergency DN Number of TNs in pool 911 1	Emergency DN Number of TNs in pool Starting TN 911 1 096 0 00 00

To delete a Mapped Virtual Office TN, click the radio button for the Customer and click **Delete**.

To Add a Mapped Virtual Office TN, click **Add**, enter the information for the new Virtual Office TN, and click **Save**.

This Web page includes two sections listing Mapped Virtual Office TN Pools and Virtual Office TNs in use.

Geographic Redundancy

Geographic Redundancy is available only on CPP IV and CP PM systems.

Database Replication Control

To configure or edit Database Replication information, click the Geographic Redundancy > Database Replication Control link in the System branch of the Element Manager navigator. The **Database Replication Control** Web page appears as shown in Figure 117 "Database Replication Control Web page" (page 193).

Figure 117 Database Replication Control Web page

Database Replication Control	
Database replication control	
Unchecking the check box and clicking on Save will delete the database replication control block	
Rule number for backup and restore: 🔽	
Automatic replication backup: As defined in backup schedule	V
Automatic replication restore: 🔽	
Automatic sysload: 🔽	
Secret string	
The secret string is used for encryption and decryption of zipped database for database replication. It configured	needs to be always
Revert to default:	
Secret password:	
	Save Cancel

On the **Database Replication Control** Web page, you can configure the following information:

- Rule Number for backup and Restore
- Automatic Replication Backup (ABKUP)
- Automatic Replication restore
- Automatic Sysload

Note: You must configure one SCS backup rule before **Database Replication Control** Web page can be configured.

You can also create a Secret string. You create a mandatory Secret string for encryption and decryption of a zipped database and database replication.

State Control

To configure State Control information, click the **Geographic Redundancy** > **State Control** link in the **System** branch of the Element Manager navigator. The **State Control** Web page appears as shown in Figure 118 "State Control Web page" (page 194).

Figure 118		
State Control	Web	page

Input Description		Input V	alua
	lancy Threshold (GRTHR): 1	input v	alue
	neout in minutes (STFTO): 5		
	imeout in minutes (FCTO): 5		
	eactivation Mode (SDAM): Auton	atic (AUTO) 💌	

On the State Control Web page, users can configure:

- Associated Secondary Call Server
- Threshold1 (Number Of IP phones registered)
- Threshold2 (Number of Media Gateways registered)
- Short Term Failure Timeout in minutes
- Fault Clearance Timeout in minutes
- Secondary CS Deactivation Mode

The information entered on this Web page corresponds to the commands available in LD 117.

For more information about Geographic Redundancy, see *System Redundancy Fundamentals (NN43001-507).*

Software

The **Software** link of the **System** branch of the Element Manager navigator can be used to perform patching of the Call Server or the Media Gateway.

To have access to the patching feature, you must enter the administration password configured in LD 17 and have PDT access. Patches can be downloaded from the Nortel web site using any web browser.

For MGC and VGMC loadware distribution and functionality instructions, refer to the "Enterprise Voice Solutions Patch Reference and Best Practice Guidelines" located on the Enterprise Solutions PATCH Library (ESPL) page at <u>www.nortel.com/espl</u>. Authorized users can log in to the ESPL using their e-mail address as Login ID, SAM ID or Norpass password. If the user does not have access to the ESPL page, it will show as "Not available". Users who do not have access can contact Nortel ESPL support for assistance, or can follow the New User Registration link from the main ESPL Login page.

Call Server PEPs

Perform Call Server patching by clicking the **Software > Call Server PEPs** link in the **System** branch of the Element Manager navigator. The **Call Server** Web page appears, as shown in Figure 119 "Call Server Web page" (page 196).

Figure 119 Call Server Web page

User PEPs	O Dependency lists	
PEP Setting	P	EP Bin (Total: 0; Limit: 15)
PEP File Name	Browse	
In service initialize threshold 5	<<	Load and Activate
Select Command PEP Status (PSTAT)	PEP ID Apply to All	Submit
ystem has no loaded patches.		~

From the Call Server Web page, the user can:

- load and activate a new Product Enhancement Package (PEP)
- get the status of a single PEP or all PEPs (PSTAT)
- activate a single PEP or all PEPs (PINS)
- deactivate a single PEP or all PEPs (POOS)
- remove a single PEP or all PEPs (POUT)
- view the details on a PEP (PLIS)

The **PEP Setting** section at the top left of the Web page enables the user to select files and choose settings. Clicking the right arrow (->>) button moves PEP files into the **PEP Bin** section. Clicking the left arrow (<<-) button moves PEP files out of the **PEP Bin** section. Click **Load and Activate** to submit the selected PEP to the call server. Results are displayed at the bottom of the screen.

Note: The user can download only 15 PEP files at a time. To install more than 15 PEPs on a single entity, the user must run the utility again.

All PEP commands require the PEP ID. After selecting the PEP command from the drop-down list, enter the **PEP ID** in the text box.

The **Apply to All** check box is enabled for all commands with the exception of the PLIS command. Clicking the **Submit** button executes the command. Results are displayed at the bottom of the screen.

PEP Management can be applied to Call Servers. Element Manager enables users to load Matrix DepLists (MDP) to the Call Server and manage the MDPs by using the Management DepList commands. Click the **Dependency lists** radio button. See Figure 120 "Call Server Web page - Dependency Lists" (page 197).

Figure 120

Call Server Web page - Dependency Lists

OUser PEPs	Oppendency lists	
	Dependency list Setting	
Dependency list File Name	Browse Load and Activate	
Select Command	Deplist Name	
DEPLIST Load (DLOAD)		
Days PEP vulnerable to sysload 3		
In service initialize threshold 5	All	Submit
In service days to monitor inits 7		
11 Server:		~
 stem has no loaded Dependency		

PEP lists are populated with individual PEPs contained in an update when a Matrix DepList is opened. The Refresh command refreshes the contents of an MDP on a target system and enables the user to load MDPs properly.

PEP Management supports the following commands:

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- load and activate a new PEP (DLOAD)
- get the status of a single PEP or all PEPs (DSTAT)
- activate a single PEP or all PEPs (DINS)
- deactivate a single PEP or all PEPs (DOOS)
- remove a single PEP or all PEPs (DOUT)
- view the details on a PEP (DLIS)

Each PEP in the Matrix DepList has its own PEP handle and can be uninstalled, similar to current multipatch functionality.

Loading and Activating PEP Settings on the Call Server

Step	Action
1	Select the User PEPs radio button on the Call Server page.
2	Click Browse. The Choose file window appears.
3	Choose a file to be downloaded and click Open .
4	Enter the number of Days PEP vulnerable to sysload.
5	Enter the In service initialize threshold.
6	Enter the In service days to monitor inits.
7	Click the>> (right arrow) button to move the PEP files into the PEP Bin section.
8	Click Load and Activate to submit the selected PEPs to the call server. Results are displayed at the bottom of the screen.
	End

Additional Commands

From the Select Command list select one of the following:

- PEP Status (PSTAT) Shows the status of the PEP
- PEP In-Service (PINS) Places the PEP in service
- PEP Out-Of-Service (POOS) Takes the PEP out of service
- PEP Out (POUT) Unloads the PEP
- PEP List (PLIS) Lists information about the PEP

Once the appropriate command has been selected, select either **PEP ID** and enter the PEP ID that you want to execute the command on or select **Apply to All** to execute the selected command on all of the PEPs. Once this has been completed, select **Submit**.

Loading and Activating Dependency lists on the Call Server

Step	Action
1	Select the Dependency lists radio button on the Call Server page.
2	Click Browse. The Choose file window appears.
3	Choose a file to be downloaded and click Open .
4	Click Load and Activate to submit the selected Deplist to the call server.
	End

Additional Commands

From the Select Command box select one of the following:

- DEPLIST Load (DLOAD) Loads the Deplist
- DEPLIST Status (DSTAT) Shows the status of the Deplist
- DEPLIST In-Service (DINS) Places the Deplist in service
- DEPLIST Out-Of-Service (DOOS) Takes the Deplist out of service
- DEPLIST Out (DOUT) Unloads the Deplist
- DEPLIST List (DLIS) Lists information about the Deplist

Once the appropriate command has been selected, select the **Deplist Name** that you would like to execute the command on. Once this has been completed, select **Submit**.

The following other changes can be executed when loading a Deplist:

- Enter the number of **Days PEP vulnerable to sysload**
- Enter the In service initialize threshold
- Enter the In service days to monitor inits



WARNING

Service updates that contain many PEPs can take time to install.

Software

The **Software** link of the **System** branch of the Element Manager navigator can also be used to upload and store files, upgrade firmware, and perform patching activities.

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Centralized File Upload

The file upload function enables users to upload and store loadware and firmware files on the Signaling Server. These files can then be downloaded to network elements, using the functions available under the **Software > File Upload** link in the **System** branch of the navigator. The **Centralized File Upload** Web page appears as shown in

Figure 121 Centralized File Upload Web page

Delete	File Name	Туре	Create Time
	IPL59018.sa	Voice Gateway Media Card workfile	October 1, 2008 4:17:32 AM AD
	IPL59018.mc32s	MC32S workfile	October 1, 2008 4:17:32 AM AD
	0602B76.bin	IP Phone 2004 Phase 0/1	October 1, 2008 4:17:30 AM AD
	0603B76.bin	IP Phone 2002 Phase 1	October 1, 2008 4:17:31 AM AD
	0604DBL.bin	IP Phone 2004 Phase 2, IP Phone 2002 Phase 2, IP Phone 2001 Phase 2	October 1, 2008 4:17:31 AM AD
	0621C4P.bin	IP Phone 2007 Phase 2	October 1, 2008 4:17:31 AM AD
	0623C4I.bin	IP Phone 1110	October 1, 2008 4:17:31 AM AD
	0624C4Lbin	IP Phone 1120E	October 1, 2008 4:17:31 AM AD
	0625C4I.bin	IP Phone 1140E	October 1, 2008 4:17:31 AM AD
	0627C4I.bin	IP Phone 1150E	October 1, 2008 4:17:31 AM AD
	062AC5Lbin	IP Phone 1210, IP Phone 1220, IP Phone 1230	October 1, 2008 4:17:31 AM AD
	2310S74.bin	IP Audio Conference Phone 2033	October 1, 2008 4:17:31 AM AD
	LW/FW file name	Browse	File upload

For more information about the file upload function, see *Signaling Server IP Line Application Fundamentals (NN43001-125).*

IP Phone Firmware

The **Software > IP Phone Firmware** link in the **System** branch of the Element Manager navigator allows users to upgrade IP Phone firmware. For more information, see *Signaling Server IP Line Application Fundamentals (NN43001-125)*.

Media Cards

Click the **Software > Media Cards PEPs** link in the **System** branch of the Element Manager navigator to open the **Media Cards** Web page as shown in Figure 122 "Media Cards Web page" (page 201).

Figure 122 Media Cards Web page

User PEPs					
		O Depe	ndency lists		
ement type: Media C	ard	P	latform type: Voice Gat	teway Media Card	~
	PEP Setting			PEP Bin (T	otal: 0; Limit: 15)
In service days f			Remove		and Activate
			lect Elements		
Open all nod	es	Close	All nodes		Clear all
Open all nod Node ID: 12 Index	ELAN IP		All nodes .168.55.40	Total elements: Role	
Node ID: 12		Close Node IP: 192	All nodes		

From this Web page the following functions can be performed:

- load and activate a new PEP
- view the status of a single PEP or all PEPs (PSTAT)
- activate a single PEP or all PEPs (PINS)
- deactivate a single PEP or all PEPs (POOS)
- remove a single PEP or all PEPs (POUT)
- view the details on a PEP (PLIS)

The **PEP Setting** section at the top left of the Web page enables users to select files and choose settings.

Step	Action
1	Select the correct Element type and then Platform type.
2	Click Browse .
	The Choose file window appears.
3	Choose a file to be downloaded and click Open .
4	Enter the number of Days PEP vulnerable to sysload.
5	Enter the In service initialize threshold.
6	Enter the In service days to monitor inits.
7	Click the>> (right arrow) button to move the PEP files into the PEP Bin section.
8	Click Load and Activate to submit the selected PEPs to the call server.
	Results are displayed at the bottom of the screen.
	End

Procedure 83 Loading and Activating PEP Settings to the Signaling Server

Clicking the -->> (right arrow) button moves PEP files into the **PEP Bin** section. Likewise, clicking the <<-- (left arrow) button moves PEP files out of the **PEP Bin** section. Click **Load and Activate** to submit the selected PEPs to the call server. Results are displayed at the bottom of the screen.

Note: A maximum of 15 PEP files can be downloaded at a time. If more than 15 PEPs must be installed on a single entity, the utility must be run again.

Click the **PSTAT** button to open the **Type** Web page for the selected element.

All PEP commands require the PEP ID. After selecting the PEP **Command** from the drop-down list, enter the **PEP ID** in the text box.

The **Apply to All** check box is enabled for all commands with the exception of the PLIS command. Clicking the **Submit** button executes the command. Results are displayed at the bottom of the screen.

Additional Commands:

Customers, Routes and Trunks

Contents

This section contains information about the following topics:

"Introduction" (page 203)
"Customers" (page 203)
"Route and Trunk Configuration" (page 230)
"Routes and Trunks" (page 230)
"D-channels" (page 240)
"Digital Trunk Interface" (page 244)

Introduction

The **Customers** and **Routes and Trunks** branches of the Element Manager navigator are used to launch Web pages that enable the user to configure and edit data relating to customers and their equipment.

Customers

When the user clicks the **Customers** branch of the Element Manager navigator, the **Customers** Web page appears, as shown in Figure 123 "Customers Web page" (page 204). To configure customer data, click the **Customer Number**.

Figure 123 Customers Web page

Delete		Refresh
Customer Number	Total Routes	Total Trunks
00	2	20
0 01	0	0

Note: To create a new customer, you must create a new role in Unified Communications Management (UCM) and modify the permissions for that role so that Customer Tenant Mappings reflect permissions for all customers to be added.For information about creating a new roll in UCM, refer to *Unified Communications Management Common Services Fundamentals* (NN43001-116).

To add a new customer, click Add.

The **Basic Configuration** Web page appears, as shown in Figure 124 "Basic Configuration Web page" (page 205).

Figure 124 Basic Configuration Web page

r: * (0.99) r: * r: *
Com
Save

The information entered in this Web page corresponds to Default Customer Data Block information traditionally configured using LD 15 -Customer Data Block.

Enter the required information in the three fields and click **Save**.

The **Edit** Web page appears, as shown in Figure 125 "Edit Customer Web page" (page 206).

Figure 125 Edit Customer Web page

Edit	
Basic Configuration	
Application Module Link	
Call Detail Recording	
Call Party Name Display	
Call Redirection	
Centralized Attendant Service	
Controlled Class of Service	
Feature Options	
Feature Packages	
Flexible Feature Codes	
Intercept Treatments	
ISDN and ESN Networking	
Listed Directory Numbers	
Mobile Service Directory Numbers	
Multi-Party Operations	
Night Service	
Options	
Recorded Overflow Announcement	
SIP Line Service	

This Web page contains links to Web pages where users can configure additional parameters for each route data block.

Application Module Link

The **Application Module Link** Web page allows users to configure the Application Module Link data block for a customer. Click **Application Module Link** to open this Web page, as shown in Figure 126 "Application Module Link Web page" (page 207).

Figure 126 Application Module Link Web page

oplication Module Link	
Value Added Server Identifier :	:
Group 2 status events :	Select the empty option to remove the configured Value Added Server Identifier if any
Group 3 status events :	
Group 4 status events :	
Group 5 status events :	
Group 6 status events :	
Group 7 status events :	:
Group 8 status events :	:
Group 9 status events :	:
Group 10 status events :	
Group 11 status events :	
Group 12 status events :	:
Group 13 status events :	:
Group 14 status events :	:
Group 15 status events :	

Enter the **Value Added Service Identifier** and Group status events information and click **Save**.

Call Detail Recording

The **Call Detail Recording** Web page allows users to configure the Call Detail Recording data block for a customer. Click **Call Detail Recording** to open this Web page, as shown in Figure 127 "Call Detail Recording Web page" (page 208).

Figure 127 Call Detail Recording Web page

all Detail	Recording
	Call Detail Recording : 🗹
	Incoming Packet data call : 🔲
	Outgoing Packet data call : 🔲
	Auxiliary Identification Output :
	Display each record in new line : 🔲
	Coordinated Dialing Plan Record : 🔲
	End to End Signaling digits in CDR record :
	Buffer Data Interface : 🗹
	CDR on Originally Dialed Trunk Route :
	Bearer Capability : 📃
	Port : 📃 💌
	Calling Number Identification : Digits field
	Charge Account Number length : 0 💌
	Forced Charge Account :
	Minimum number of digits for FCA code :
	FCA network class of service : 0 (0 - 99)

Enter the appropriate information and click **Save**.

Call Party Name Display

The **Call Party Name Display** Web page allows users to configure the Call Party Name Display data block for a customer. Call Party Name Display names for Incoming Digit Conversion (IDC) are supported on this Web page. Click **Call Party Name Display** to open this Web page, as shown in Figure 128 "Call Party Name Display Web page" (page 209).

Figure 128 Call Party Name Display Web page

all Party Name Display	
	Configuration: Standalone
	Maximum length: 17 💌
Static allocation	of name storage: 📝
	Default length: 13 💌
Designator for multiple	appearance DNs: 🔲
Display reasons fo	or call redirection : 🔽
	Set mnemonics for different types of call redirection
	Call forward all calls: F
Ċ	Call forward no answer: N
H	unt or call forward busy: B
	Call pickup: P
	Call transfer: T
Attendan	alternative answering: A
Er	mergency Consultation:
Call for	ward Non Intercom call: NI

Enter the appropriate information and click Save.

Note: The Static Allocation of name storage check box will be checked and not editable if the BGD package is enabled.

Call Redirection

The **Call Redirection** Web page allows users to configure the Call Redirection data block for a customer. Click **Call Redirection** to open this Web page, as shown in Figure 129 "Call Redirection Web page" (page 210).

Figure 129 Call Redirection Web page

II Redired	tion
	CFNA treatment for DID calls : Flexible CFNA DN 💌
	DID forward no answer ring cycles : 0 💌
	CFNA treatment for external trunk DID calls : Flexible CFNA DN 💌
	CFNA treatment for other calls : Flexible CFNA DN 💌
	Call forward to trunk access code : 🔲
	Customer call forwarded DN : * (0 - 23 digits)
	Change call redirection by time of day : 🗹
	Alternate time option 0, from : 0 🗸 00 to 0 🗸 00 ×
	Alternate time option 1, from : 0 💌 00 to 0 💌 00 🛪
	Alternate time option 2, from : 0 🗸 00 to 0 🗸 00 x
	Alternate time option 3, from : 0 💌 00 to 0 💌 00 *
	Call redirection by day : 💌
	Days for day option 0 :
	Days for day option 1 :
	Days for day option 2 :
	Days for day option 3 :
	Redirection Holidays
	Do not disturb hunting : 🔲

Enter the appropriate information and click **Save**.

Click **Redirection Holidays** to open the **Redirection Holidays** Web page, as shown in Figure 130 "Redirection Holidays Web page" (page 211).

This Web page displays holiday redirections for existing dates and allows users to add, edit, or delete holidays.

Figure 130 Redirection Holidays Web page

Add Delete				Refresh
Date +	Holiday Redirection 0	Holiday Redirection 1	Holiday Redirection 2	Holiday Redirection 3
Jan 01 2006	YES	NO	NO	NO
Dec 25 2006	NO	YES	YES	NO

To add a holiday, click **Add**. The **Add Date of Holiday** Web page appears, as shown in Figure 131 "Add Date of Holiday Web page" (page 211).

Figure 131 Add Date of Holiday Web page

Date :	1 🗸	January	~	2006		
Holiday Redirection 0 :						
Holiday Redirection 1 :						
Holiday Redirection 2 :						
Holiday Redirection 3 :						
						Save Cancel
	Holiday Redirection 0 : Holiday Redirection 1 : Holiday Redirection 2 :	Date : 1	Holiday Redirection 0 : Holiday Redirection 1 : Holiday Redirection 2 :	Holiday Redirection 0 : Holiday Redirection 1 : Holiday Redirection 2 :	Holiday Redirection 0 : Holiday Redirection 1 : Holiday Redirection 2 :	Holiday Redirection 0 : Holiday Redirection 1 : Holiday Redirection 2 :

Use this Web page to configure holiday redirections for a customer. Enter the holiday information and click **Save**.

Centralized Attendant Service

The **Centralized Attendant Service** Web page allows users to centralize their attendant services at a single location. From the **Edit** Web page, click **Centralized Attendant Service** to open this Web page, as shown in Figure 132 "Centralized Attendant Service Web page" (page 212).

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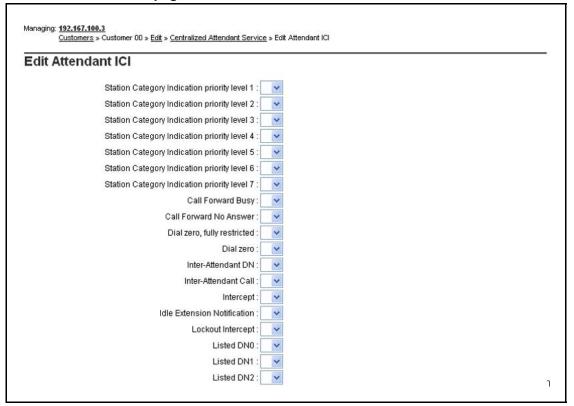
Figure 132 Centralized Attendant Service Web page

Centralized Attendant Service Illows customers with multiple locations to centralize their atter	ndant services at a single location.
Status	Enable Centralized Attendant Service
	🔿 Main attendant
	Incoming Call Indicators
	 Remote attendant
Active mode a	fter sysload:
Special tone fo	r LDN calls:
Local at	tendant DN:
Ro	ute number: (0 - 511)
Sile	ent hold DN:
Silent hold	recall timer: (0 - 511 seconds)
	Save

Enter the appropriate information and click Save.

To edit the Attendant Incoming Call Indicators, click the **Main attendant** radio button, and click **Incoming Call Indicators**. The **Edit Attendant ICI** Web page appears, as shown in Figure 133 "Edit Attendant ICI Web page" (page 213).

Figure 133 Edit Attendant ICI Web page



Enter the appropriate information and click Save.

Controlled Class of Service

The **Controlled Class of Service** Web page allows users to configure the Controlled Class of Service data block for a customer. Click **Controlled Class of Service** to open this Web page, as shown in Figure 134 "Controlled Class of Service Web page" (page 214).

Figure 134 Controlled Class of Service Web page

ontrolled Class of Service	
Restricted service :	Unrestricted
Enhanced Level 1 :	Unrestricted
	Customer defined first level of restriction
Enhanced Level 2 :	Unrestricted
	Customer defined second level of restriction
Network wide electronic lock:	0 (0.99)
	Controlled Network Class of Service. Please refer help file to map values to Class of Service.
Electronic lock on private lines :	
	Save

Enter the appropriate information and click **Save**.

Flexible Feature Codes

The **Flexible Feature Codes** Web page allows users to configure the Flexible Feature Codes (FFC) data block for a customer. To access the **Flexible Feature Codes** Web page for a customer, click the **Flexible Feature Codes** link of the **Edit** Web page to open the Web page shown in Figure 135 "Flexible Feature Codes Web page" (page 215).

Figure 135 Flexible Feature Codes Web page

exible Feature Codes						
Controlled class of service restricted service:	Unre	estricted]		
Station control password length:	6 -	1				
d	lumpe	ctive password ed, and a comp				
Enable use of station control passwords for based administration user level acce	set F	V				
Default SCP	W: [
Mobile Extension Feature Activation Code:		1				
Change flexible feature code end-of-dialing indicator:						
String length of end-of-dial indica	tor:	0 🕶				
String to Indicate end-of-diali	ng:					
Auto dial delay in seconds :	0 •	-				
Properties:						
	E F	Flexible Feati	ure Confir	mation Tor	ie	
	Πa	onference eur	opean des	postes tel d	efaults	
Replacement for the * in the CEPT default cod	es [
Flexible Feature Code Entries						
					Save	Cancel

To configure Change Flexible Feature Code end-of-dialing indicator, select the **Change Flexible Feature Code end-of-dialing indicator** checkbox.

Enter the appropriate information and click Save.

Flexible Feature Code Entries

To access Flexible Feature Code Entries click on the **Flexible Feature Code Entries** hyperlink. The **Search for Flexible Feature Code Entries** Web page appears as shown in Figure 136 "Search for Flexible Feature Code Entries Web page" (page 216).

Note: To access **Flexible Feature Code Entries** Web page for a Customer the FCC data block must be configured, see Procedure 87 "Configuring Flexible Feature Codes" (page 217). If you click the Flexible Feature Code Entries hyperlink before configuring the FCC data block, the message "FCC Block is not configured. Click on [OK] to configure the FCC block for the customer." appears. Click **OK** to automatically configure the FCC data block and open the **Flexible Feature Code Entries** Web page.

Figure 136

Search for Flexible Feature Code Entries Web page

Flexible Feature C			
Flexible feature code type Value	ature Code Entries	Lookue	
	L		Search
Flexible Feature Code Bearch for a type or value. Use Bearch text		te type prompts or search usin	ig * * * before or after the
earch for a type or value. Use		le type prompts or search usin	ig "*" before or after the
earch for a type or value. Use		le type prompts or search usin	ig * * * before or after the

To search for specific Flexible Feature Codes, follow the steps in Procedure 84 "Searching for Flexible Feature Codes" (page 216).

Procedure 84

Searching for Flexible Feature Codes

Step	Action
1	Click the Flexible feature code type radio button to activate search for Flexible Feature Codes.
2	Click the Look up hyperlink. The Flexible Feature Code Lookup pop up window appears.
3	Click the check box of the required features and click Assign . The selected feature prompt names are displayed in the Specific Feature Code type input box.
4	Click Search . The datagrid lists only the codes for the selected feature.
	End

To search for Flexible Feature Codes by Value, follow the steps in Procedure 85 "Searching for Flexible Feature Codes by Value" (page 217).

Procedure 85 Searching for Flexible Feature Codes by Value

Step	Action	
1	Enter the configured Flexible Feature Code value in the Value in put box.	
2	Check the Value radio button, the Search button is enabled.	
3	Click the Search button. The flexible feature code, type, and the value are listed in the datagrid.	
	End	

To search for Flexible Feature Codes using Advanced Search, follow the steps in Procedure 86 "Searching for Flexible Feature Codes (Advanced)" (page 217).

Procedure 86 Searching for Flexible Feature Codes (Advanced)

Step	Action
1	Enter the wildcard character * before or after the search text in the 'Flexible feature code type' input box.
2	Check the Flexible feature code type radio button, the Search button is enabled.
3	Click the Search button. All the flexible feature code type with the configured values that match the given search text are listed in the datagrid.
	End
	figure Flexible Feature Codes for a customer, follow the steps in lure 87 "Configuring Flexible Feature Codes" (page 217).

Procedure 87 Configuring Flexible Feature Codes

Step	Action
1	In the Flexible Feature Codes Web page, check the box Flexible Feature Confirmation Tone and Conference European Des Postes Tel (CEPT) defaults. The Replacement for * in CEPT default codes appears as a sub prompt for Conference European Des Postes Tel (CEPT) defaults prompt and should be enabled only when Conference European Des Postes Tel (CEPT) defaults prompt is checked.

- 2 To complete the configuration, click **Save**.
- 3 Click **Cancel** to cancel the action. The **Edit** Web page is displayed.

--End--

To add Flexible Feature Codes to the Customer, follow the steps in Procedure 88 "Adding Flexible Feature Codes" (page 218).

Procedure 88 Adding Flexible Feature Codes

Step	Action
1	Click on the Flexible Feature Code Entries hyperlink on the Flexible Feature Code Web page. The Flexible Feature Code Entries Web page appears.
2	Click Add in the Flexible Feature Code Entries Web page. The Add Flexible Feature Code Web page appears.
3	Click the Look up hyperlink adjacent to the Flexible feature code type input box. The Flexible Feature Code Lookup popup window appears and lists all the Flexible Feature Codes.
4	Click on a Flexible Feature Code to add to the Flexible feature code type input box.
5	Enter a value in the Value box.
6	Click Save , to add the Flexible Feature Code. The new Flexible Feature Code is displayed in the Flexible Feature Code Entries Web page.
	End

--End--

Feature Options

The **Feature Options** Web page allows users to configure the Feature Options data block for a customer. Click **Feature Options** to open this Web page, as shown in Figure 137 "Feature Options Web page" (page 219).

Figure 137 Feature Options Web page

ure Options	
Special prefix number :	
Network authorization code : 📃	
Internal/external definition : 📃	
Analog semi-permanent connection re-connection timer :	(10 - 180)
Network station camp-on to sets on this node : 📃	
List entry number delimiter : No d	lelimiter(*)
Mandatory speed call delimiter : 📃	
Serial data interface port monitor : 0 📑	
Personal call assistant : OFF	×
Target personal call assistant DN :	
Boss secretary filtering enhancement : 💌	
Lamp status when boss's set has BSFE active and is idle :	LCD Lamp flash rate is 60 impulses per minute 💌
Lamp status when boss's set has BSFE active and is busy :	LCD Lamp flash rate is 30 impulses per minute 👻
Lamp status when boss's set does not have BSFE active and is idle :	LCD Lamp is off
Lamp status when boss's set doesn't have BSFE active and is busy :	LCD Lamp is on
Enable virtual office automatic logout : 📃	
Virtual office automatic logout time using 24 hour clock :	0 💌
Change conference display configurations : 🥅	

To configure Boss Secretary Filtering Enhancement, select the **Boss Secretary Filtering Enhancement** checkbox.

To configure Virtual Office Automatic Logout, select the **Enable Virtual Office Automatic Logout** checkbox

To configure Conference Display, select the **Change conference display configurations** checkbox.

Enter the appropriate information and click **Save**.

Listed Directory Numbers

The **Listed Directory Numbers** Web page allows users to configure the Listed Directory Numbers data block for a customer. Click **Listed Directory Numbers** to open this Web page, as shown in Figure 138 "Listed Directory Numbers Web page" (page 220).

Figure 138

Listed Directory Numbers Web page

isted Direct	ory Numbers	
	Departmental listed directory number : 💌	
	Attendant consoles associated with LDN 0 :	
	Attendant consoles associated with LDN 1 :	
	Attendant consoles associated with LDN 2 :	
	Attendant consoles associated with LDN 3 :	
	Attendant consoles associated with LDN 4 :	
	Attendant console associated with LDN 5 :	
	Listed Directory Number 0: 8999	
	Listed DN 1 :	
	Listed DN 2 :	
	Listed DN 3 :	
	Listed DN 4 :	
	Listed DN 5 :	
	Attendant incoming indicators :	

To configure attendant consoles associated with Listed Directory Numbers, select the **Departmental listed directory number** checkbox.

Enter the appropriate information and click **Save**.

Mobile Service Directory Number

The **Mobile Service Directory Numbers** Web page allows users to view, edit, add, and delete Mobile Service Directory Numbers. Click **Mobile Service Directory Numbers** to open this Web page, as shown in Figure 139 "Mobile Service Directory Numbers Web page" (page 221). For more information about Mobile Directory Service Numbers and Mobile Extension, refer to *Features and Services Fundamentals - Book 4 of 6* (NN43001-106-B6).

Figure 139 Mobile Service Directory Numbers Web page

				Delete	dd	A
ct Call Blocking	ation Code (Authorizati	Security Code		DN.	
	1	YES	98765432	555	4445	0
	1	YES	87654321	666	5556	2 C
						_

ISDN and ESN Networking

The **ISDN and ESN Networking** Web page allows users to configure the ISDN and ESN Networking data block for a customer. Click **ISDN and ESN Networking** to open this Web page, as shown in Figure 140 "ISDN and ESDN Networking Web page" (page 222).

Figure 140 ISDN and ESDN Networking Web page

ISDN and ESN Networking	
General Properties	
Flexible trunk to trunk connection option: Flexible orbiting prevention timer: Home DN:	
Country code: National access code: International access code: Options:	(0 - 9999) Code for processing the called number
Calling Line Identification	Connection of supervised external trunks
Size: Country code: Calling Line Identification Entries	256 (0 - 4000) (0 - 9999) Code displayed as part of calling number
	Save Cancel

Enter the appropriate information and click **Save**.

To configure Calling Line Identification (CLID) parameters, click **Calling** Line Identification Entries. The Calling Line Identification Entries Web page appears, as shown in Figure 141 "Calling Line Identification Entries Web page" (page 222).

Figure 141

Calling Li	ne Identification Entrie	5	
Search for CLID)		
Criteria:		Search	
	CLID Range:		
alling Line Ider	tification Entries		

To search for a CLID, enter the CLID Range and click Search.

To add a CLID, click **Add**. The **New Calling Line Identification** Web page appears, as shown in Figure 142 "New Calling Line Identification Web page" (page 223).

Figure 142 New Calling Line Identification Web page

ew Calling Line Identification	
General Properties	
Entry Id:	
National Code:	(0 - 999999)
	Code for national home number
Local Code:	(1-12 digits)
	Code for home local number or listed DN
Home Location Code:	(1-7 digits)
Local Steering Code:	
Use DN as DID :	YES
Emergency Services Access	
Emergency Local Code:	(1-12 digits)
	Code for home local number during Emergency calls
Emergency Options:	Home national number for emergency services access calls
	Append the originating directory number for emergency services access calls
Calling Party Name Display	
Roman characters:	

Enter the parameters for the new CLID and click Save.

Night Service

The **Night Service** Web page allows users to configure the Night Service data block for a customer. Click **Night Service** to open this Web page, as shown in Figure 143 "Night Service Web page" (page 224).

Figure 143 Night Service Web page

ht Service	
First night service DN by time of day :	
Hour and minute for first night service DN :	
Second night service DN by time of day :	
Hour and minute for second night service DN :	
Third night service DN by time of day :	
Hour and minute for third night service DN :	
Fourth night service DN by time of day :	
Hour and minute for fourth night service DN :	
	Save Cancel

Enter the appropriate information and click **Save**.

Feature Packages

The **Feature Packages** Web page allows users to view and edit the parameters associated with feature packages. Click **Feature Packages** to open this Web page.

Click the plus sign located to the left of the Feature Packages heading to expand the feature packages, as shown in Figure 144 "Feature Packages Web page" (page 225).

Figure 144 Feature Packages Web page

-Feature Packages	
+ Do Not Disturb Individual	Package: 9
+ End-to-End Signaling	Package: 10
+ Message Waiting Center	Package: 46
+ New Flexible Code Restriction	Package: 49
+ Set Relocation	Package: 53
+ Network Alternate Route Selection	Package: 58
+Distincti∨e Ringing	Package: 74
+ Departmental Listed Directory Number	Package: 76
+ Command Status Link	Package: 77
+ Pretranslation	Package: 92
+ Dialed Number Identification System	Package: 98
+ Malicious Call Trace	Package: 107
+ Incoming Digit Conversion	Package: 113
+ Directed Call Pickup	Package: 115
+ Enhanced Music	Package: 119
+ Station Camp-On	Package: 121
+ Integrated Digital Access	Package: 122
+Digital Private Network Signaling System 1	Package: 123
+ Flexible Tones and Cadences	Package: 125
+ Multifrequency Compelled Signaling	Package: 128
+ International Supplementary Features	Package: 131
+ Enhanced Night Service	Package: 133
+ Integrated Services Digital Network	Package: 145

Note: The only feature packages whose parameters can be viewed and edited are those that have been enabled on the system. Feature packages cannot be removed or added from Element Manager.

Click the plus sign located to the left of the feature package name to view and edit the parameters associated with the feature package. For feature packages that are not equipped for the customer, Element Manager includes a button labeled **To Order**. This button provides a link to information on how to order the feature package.

Enter the appropriate information and click Save.

ATTENTION

If configuring M3900 System Initiated Language (Package 386) and Japanese is selected as the default language, the user must explicitly configure the set-to-set-messages (MSG 1 to MSG10). Otherwise, the customer information does not load when clicking **Submit** and does not display.

Intercept Treatments

The **Intercept Treatments** Web page allows users to configure the Intercept Treatments data block for a customer. Click **Intercept Treatments** to open this Web page, as shown in Figure 145 "Intercept Treatments Web page" (page 226).

Figure 145 Intercept Treatments Web page

ntercept Treatments	
Congestion tone for a	II trunks : Overflow tone 💌
Direct inward system access	lockout : Overflow tone 💌
Flexible line	lockout : Overflow tone
Do not	t disturb : Busy Tone 👻
Intercept RAN R	oute Number: (0-511)
Emergency services access misdia	aled call : Overflow tone 💌
Intercept RAN R	oute Number: (0-511)
Additional Treatment	t Options

Enter the appropriate information and click **Save**.

To configure additional prompts for Intercept Treatments, click **Additional Treatment Options**. The **Intercept Treatments Options** Web page appears, as shown in Figure 146 "Intercept Treatments Options Web page" (page 227).

Figure 146 Intercept Treatments Options Web page

					Refresh	i
Condition	Station	Attendant	Tie Trunk	Non Tie	Ran Route	^
Access denied	Overflow tone	Overflow tone	Overflow tone	Attendant		
Call to vacant number	Overflow tone	Overflow tone	Overflow tone	Attendant		
Calls to listed directory number	Not applicable	Overflow tone	Not applicable	Not applicable		
Call to a lockout set	Busy tone	Busy tone	Busy tone	Busy tone		
<u>Maintenance busy</u> numbers	Overflow tone	Overflow tone	Overflow tone	Attendant		
Restricted call	Overflow tone	Not applicable	Overflow tone	Not applicable		
Redirection count limit exceeded	Attendant	Overflow tone	Attendant	Attendant		
MFC call to vacant office	Overflow tone	Overflow tone	Overflow tone	Attendant		
MFC call to vacant number	Overflow tone	Overflow tone	Overflow tone	Attendant		
MFC congestion	Overflow tone	Overflow tone	Overflow tone	Attendant		~

To edit an Intercept Treatment for a customer, click the **Condition**. The **Edit** Web page for that Condition is displayed, as shown in Figure 147 "Edit Condition Web page" (page 227).

Figure 147 Edit Condition Web page

lit Access denied			
Station :	Overflow tone	~	
Attendant :	Overflow tone	~	
Tie Trunk :	Overflow tone	~	
Non Tie :	Attendant	~	
Intercept RAN Route Number :	* (0.511)		
			Save Cancel

Enter the appropriate information and click **Save**.

Multi Party Operations

The **Multi Party Operations** Web page allows users to configure the Multi Party Operations data block for a customer. Click **Multi Party Operations** to open this Web page, as shown in Figure 148 "Multi Party Operations Web page" (page 228).

Figure 148 Multi Party Operations Web page

Flexible Misoperation Options			
Ringing No Answer treatment :	Standard Operation	Standard Operation	~
All Other Cases :	Disconnect	Forward	1
Rings before forwarding/disconnecting :	6 🛩		
Rings before forwarding to transferring station :	4 🐱		
Mandatory Recall required prior to dialing control digits :			
Control digit Timeout :	14 🛩		
Ignore Switchhook Flash signal from 500/2500 sets			
Manual Hold after enquiry : 📃			
Programming of Control Digits			
Conference :	1 🐱		
Toggle :	2 🗸		
Disconnect :	3 🗸		
Consultation Connection Disconnect Option alternative :			
Manual forced camp on : 📃			
Attendant Clearing during Night Service : No A	utomatic Treatment 🐱		

Enter the appropriate information and click **Save**.

Recorded Overflow Announcement

The **Recorded Overflow Announcement** Web page allows users to configure the Recorded Overflow Announcement data block for a customer. Click **Recorded Overflow Announcement** to open this Web page, as shown in Figure 149 "Recorded Overflow Announcement Web page" (page 229).

Figure 149 Recorded Overflow Announcement Web page

corded Overflow An	nouncement			
	First RAN Route	e: (o.	511)	
	Time	Delay: 20	(0 - 2044 seconds)	
	Second RAN Route	e: (0.	511)	
	Time	Delay: 40	(2 - 2044 seconds)	
Treat	ment during waiting time	e : Ring Back 🕚	-	
	Music	Route :	(0-511)	
ICI key numbe	rs that may receive ROA	٨:		
		ICI key numbers	separated by space	
				Save Cancel

Enter the appropriate information and click Save.

SIP Line Service

The SIP Line Service package 417 must be equipped in order to enable SIP Line Service on CS 1000 system.

The **SIP Service** Web page allows users to configure SIP Line Service parameters.

You can enable or disable SIP Line Service by clicking the check box. Once the service is enabled, the rest of the SIP Line service parameters are displayed. The SIP root domain is a mandatory field when SIP Line service is enabled. The User Agent DN is an optional field but when this DN prefix is configured in the customer page, it is used to build the HOT U key information on the **Phones** Web page for SIPL Phones.

For more information, see SIP Line Fundamentals (NN43001-508).

Figure 150 SIP Service Web page

Managing: <u>47.11.48.97</u> Customer 5 × Customer C0 × <u>Ed1</u> × SP Se	vice	
SIP Service		
	🗹 EIP Line Genice	
	Root domain: NORTELCOM -	
	User agent DN profile	
	Optonal features: 📃 Nortel Kultimedia	
	Trequire Velue	Save

Timers

The **Timers** Web page allows users to configure the Timers data block for a customer. Click **Timers** to open this Web page, as shown in Figure 151 "Timers Web page" (page 230).

Figure 151 Timers Web page

imers	
Switch hook flash timing :	45 896
Permanent hold timer :	30 (1-63)
Dial tone and interdigit timeout for non-DTMF sets :	30 32 30
Dial tone and interdigit timeout for DTMF sets :	
Line disconnect tone timer for 500/2500 telephones :	6 💙 (seconds)
Delayed answer timer :	0 (0 - 120 seconds)
Busy tone/overflow tone timeout :	14 (2-60 seconds)
Duration between reminder cadences :	60 (2 - 120 seconds)
Attendant queue timing threshold :	30 (0 - 255 seconds)
Auto dial delay :	0 v (seconds)
Attendant forward no answer timer :	0 (0 - 126 seconds)
Attendant forward buzz tone :	0 v (seconds)
Night forward no answer or ring cycles :	0 (0.63)
Attendant delay on hold timer :	0 🛩 (seconds)
Length of Howler tone :	300 (0 - 600 seconds)
Network alternate route selection interdigit timer :	8 🗸

Enter the appropriate information and click **Save**.

Note: The Attendant forward no answer timer and Attendant forward buzz tone must be even numbers.

Route and Trunk Configuration

There are three options in the **Routes and Trunks** branch of the Element Manager navigator.

Routes and Trunks

Click the **Routes and Trunks** link on the **Routes and Trunks** branch of the Element Manager navigator to open the **Routes and Trunks** Web page, as shown in Figure 152 "Routes and Trunks Web page" (page 231). From this Web page, users can view information about existing customers, routes, and trunks.

Figure 152 Routes and Trunks Web page

Customer: 0	Total routes: 2	Total trunks: 20	Add route
- Customer: 1	Total routes: 0	Total trunks: 0	Add route

This Web page also contains buttons that link to additional Web pages. Follow these links to

- add a new route
- edit route data
- add a new trunk
- edit trunk data
- delete multiple trunks

Route Properties

Click the **Edit** button beside a Route row to open the **Route Property Configuration** Web page for the selected customer and route. See Figure 153 "Route Property Configuration Web page" (page 232).

Note: If there are a large number of routes or trunks, this Web page can be slow to load.

The information entered in the **Basic Configuration** section of this Web page corresponds to Route Data Block information traditionally configured using LD 16 - Route Data Block.

Note: H.323 and SIP must not use the same route.

For information about configuring routes, see *IP Peer Networking Installation and Commissioning (NN43001-313).*

Figure 153 Route Property Configuration Web page

	ion	
- Basic Configuration		
Route data block (RDB) (TYPE)	RDB	
Customer number (CUST)	00	
Route number (ROUT)	10	
Designator field for trunk (DES)		
Trunk type (TKTP)	TIE	
Incoming and outgoing trunk (ICOG)	Incoming and Outgo	ing (IAO) 😽
Access code for the trunk route (ACOD)	23	*
Trunk type M911P (M911P)		
The route is for a virtual trunk route (VTRK)		
Digital trunk route (DTRK)		
Integrated services digital network option (ISDN)		
Basic Route Options		
Network Options		
General Options		
Advanced Configurations		

Basic Configuration

In the **Basic Configuration** section of this Web page (see Figure 154 "Basic Configuration for routes" (page 233)), the following functions can be performed:

- Assign a Route Number (ROUT) using the drop-down list.
- Enter a **Designation** (DES) for the route.
- Select a Trunk Type (TKTP) from the drop-down list.
- Use the drop-down list to indicate that the trunk is Incoming and/or Outgoing (ICOG).
- Assign an Access Code (ACOD) to the trunk route.

Element Manager may request that users enter data for additional parameters, depending on what is entered in the Basic Configuration fields. Choices in the drop-down lists for every parameter in the Basic Configuration fields are determined by the data entered above that field.

Figure 154 Basic Configuration for routes

ustomer 0, New Route Configuration		
- Basic Configuration		
Route data block (RDB) (Th	(PE): RDB	
Customer number (CU	JST): 0	
Route number (RC	- 💌 -	
Designator field for trunk (D	DES):	
Trunk type (Th	(TP):	v -
Incoming and outgoing trunk (IC	:OG):	~
Access code for the trunk route (AC	:OD):	
+ Basic Route Options		
+ Network Options		
+ General Options		
+ Advanced Configurations		

To save changes made in this section, click **Submit** at the bottom of the **Route Property Configuration** Web page.

Basic Route Options

In the Basic Route Options section (see Figure 155 "Basic Route Options configuration" (page 234)), use the check boxes to activate the following options for this route:

- Billing Number Required (BILN)
- Call Detail Recording (CDR)
- Controls or timers (CNTL)
- Conventional (TIE trunk only) (CNVT)
- Incoming DID Digit Conversion (IDC)
- Process Notification Networked Calls (PNNC)

In addition, use the drop-down list to select a Multi-frequency Compelled or MFC Signaling (MFC) type.

Note: The route used in this example is a TIE trunk route. The inputs requested by Element Manager vary depending on the responses to earlier input requests, including Trunk Type (TKTP).

Depending on which boxes are selected in the preceding list, Element Manager requests that users enter data for additional parameters, as shown in Figure 155 "Basic Route Options configuration" (page 234).

Figure 155 Basic Route Options configuration

Attendant announcement (ATAN) No Attendant Announcement. (NO)	*
Billing number required (BILN) 🗹	
- Billing number length (BLEN) 10 🛩	
- Billing number (BNUM)	
- Billing number displayed (BDSP) 🔽	
Call detail recording (CDR)	
- CDR records generated on incoming calls (INC)	
- CDR record printing content option for redirected calls (LAST)	
- Time to answer output in CDR (TTA)	
- CDR ACD Q initial connection records to be generated (QREC)	
- CDR on outgoing calls (OAL)	
North American toll scheme (NATL) 🔽	
Controls or timers (CNTL)	
Conventional (Tie trunk only) (CNVT)	
Incoming DID digit conversion on this route (IDC)	
Multifrequency compelled or MFC signaling (MFC) No MFC (NO)	
Process notification networked calls (PNNC)	

To save changes made in this section, click **Submit** at the bottom of the **Route Property Configuration** Web page.

Network Options

Figure 156 "Network Options for routes" (page 235) provides an example of the input requested in the **Network Options** section for the route shown in Figure 153 "Route Property Configuration Web page" (page 232). The actual input that Element Manager requests varies depending on the type of route and the responses to earlier input requests.

Figure 156 Network Options for routes

Input Description	Input Value	
Electronic Switched Network pad control (ESN)		
Signaling arrangement (SIGO)	Standard (STD)	~
Route Class (RCLS)	Route Class marked as external (EXT) 💌	
Off-Hook Queuing (OHQ)		
Off-Hook Queue Threshold (OHQT)	0 💌	
Call back queuing (CBQ)		
Number of Digits (NDIG)	2 💌	
Authcode (AUTH)		

To save changes made in this section, click **Submit** at the bottom of the **Route Property Configuration** Web page.

General Options

Figure 157 "General Options for routes" (page 235) provides an example of the input requested in the **General Options** section for the route shown in Figure 153 "Route Property Configuration Web page" (page 232). The actual input that Element Manager requests varies depending on the type of route and the responses to earlier input requests.

Figure 157 General Options for routes

- General Options		
M1 is the only controlling party on incoming calls (CPDC)		
Dial tone on originating calls (DLTN)		
Hold failure threshold (HOLD)	02 02 40	
Trunk access restriction group (TARG)	01	
Search method for outgoing trunk member (SRCH)	Linear Hunting Search	method (LIN) 🐱
Alternate trunk route for outgoing trunks (STEP)	F	Range: 0 - 511
Actual outgoing toll digits to be ignored for code restriction (OABS)		
Display IDC name (DNAM)		
Enable equal access restrictions (EQAR)		
ACD DNIS route (DNIS)		

To save changes made in this section, click **Submit** at the bottom of the **Route Property Configuration** Web page.

Advanced Configurations

Figure 158 "Advanced Configurations for routes" (page 236) provides an example of the input requested in the **Advanced Configurations** section for the route shown in Figure 153 "Route Property Configuration Web page" (page 232). The actual input that Element Manager requests varies depending on the type of route and the responses to earlier input requests.

Figure 158 Advanced Configurations for routes

- Advanced Configurations	
Malicious call trace alarm is allowed for external calls (ALRM)	
Allow last re-directing number (ARDN)	ARDN (NO) 🔽
ANI identifier number (ANTK)	
AC15 timed reminder recall (ATRR)	
Auto terminate (AUTO)	
Collect call blocking allowed (CCBA)	
Call forward restriction (CFWR)	
Maximum number of CNI digits (CLEN)	1 💌
Time (in seconds) that an extension is allowed to ring or be On-hold or Call Park before the trunk is disconnected (DCTI)	0 Range: 0 - 511
North American distinctive ringing for incoming calls (DRNG)	
Home local number (HLCL)	
Home national number (HNTN)	
In-band automatic number identification route (IANI)	
Internal/external definition (IDEF)	Use network info (NET) 🐱
Identify originating party (IDOP)	
Insert (INST)	
Manual outgoing trunk route (MANO)	
Malicious Call Trace Delay Time in seconds (MCDT)	0 ~

To save changes made in this section, click **Submit** at the bottom of the **Route Property Configuration** Web page.

New Trunk Configuration

Click the **Add Trunk** button beside a Customer Row or a Trunk Row to open the **New Trunk Configuration** Web page for the selected customer, route, and trunk, as shown in Figure 159 "New Trunk Configuration Web page" (page 237).

Figure 159 New Trunk Configuration Web page

omer 0, Route 1, New Trunk Conf	figuration
Basic Configuration	
Input Description Mutiple trunk input number (MTINPUT)	Input Value
) TIE trunk data block (TIE)
Terminal Number (TN)	
Designator field for trunk (DES)	
Extended Trunk (XTRK))
Route number, Member number (RTMB))
Level 3 Signaling (SIGL))
Card Density (CDEN)	
Start arrangement Incoming (STRI))
Start arrangement Outgoing (STRO))
Trunk Group Access Restriction (TGAR)	
Channel ID for this trunk. (CHID)	
Network Music (NMUS)	
Increase or decrease the member numbers (INC)	
Increase of decrease the member humbers (INC)) Edit

The **New Trunk Configuration** Web pages are divided into two categories:

- 1. Basic Configuration
- 2. Advanced Trunk Configurations

Basic Configuration

In the **Basic Configuration** section of these Web pages (see Figure 159 "New Trunk Configuration Web page" (page 237)), users can perform the following tasks:

- Enter a Designator field (DES) for the trunk.
- Select an Extended Trunk (XTRK) card type from the drop-down list.
- Edit the route or member number in the **Route number**, **Member number** (**RTMB**) text box. The range is 0-4000.
- Use the Level 3 Signaling (SIGL) drop-down list to select a Level 3 signaling method.

- Use the **Start arrangement Incoming (STRI)** drop-down list to select a start arrangement for incoming calls.
- Use the **Start arrangement Outgoing (STRO)** drop-down list to select a start arrangement for outgoing calls.
- Use the **Increase or decrease the member numbers (INC)** drop-down list to select either increasing channel numbers and member numbers or increasing channel numbers and decreasing member numbers.
- Click the Class of Service (CLS) Edit button to view Class of Service information for the trunk. See Figure 160 "Class of Service Configuration Web page" (page 238).

Figure 160 Class of Service Configuration Web page

lass of Service	
Input Description	Input Value
- ACD Priority (CLS)	*
- Analog Semi-Permanent Connections (CLS)	×
- ARF Supervised COT (CLS)	×
- Barring (CLS)	×
- Battery Supervised COT (CLS)	×
- Busy Tone Supervised COT (CLS)	~
- Calling Line Identification (CLS)	~
- Calling party (CLS)	~
- Central Office Ringback (CLS)	~
- Centrex Switchhook Flash (CLS)	~
- Dial Pulse (CLS)	~
- DTR PAD value (CLS)	~
- Echo Canceling (CLS)	~
- Hong Kong DTI (CLS)	~
- Loop Break Supervised COT (CLS)	~
- Make-break ratio for dial pulse (CLS)	~
- Manual Incoming (CLS)	~
-Media Security (CLS)	×
-Network Hook Flash Over M911P (CLS)	~

Note: The member used in this example is a TIE trunk. The inputs requested by Element Manager may vary depending on the responses to earlier input requests.

To save changes made in this section, click **Submit** at the bottom of the New **Member Configuration** Web page.

Advanced Trunk Configurations

Figure 161 "Advanced Configurations for trunks" (page 239) provides an example of the input requested in the **Advanced Trunk Configurations** section for the TIE Trunk shown in Figure 159 "New Trunk Configuration Web page" (page 237).

Figure 161 Advanced Configurations for trunks

Input Description		Input Value
CTI trunk Monitoring and Control (AST)		
Auto Terminate DN (ATDN)]
Music Conference Loop (CFLP)		Range: 0 - 159
Call Modification Features restriction (CMF)		
Digit Collection Ready (DTCR)		
Forced Charge Account (FCAR)		
Multifrequency digit level (MFL)	0 💌	
Multifrequency PAD (MFPD)		
Manual Directory Number (MNDN)	-]
Network Class of Service group (NCOS)	0 🗸	
Night Service Group number (NGRP)	0 🛩	
Night Service directory number (NITE)]
Pulse Code Modulation Law (PCML)	~	
Pad Category table number for digital trunks (PDCA)		
Private Line Directory Number (PRDN)		
Is the ISPC link used by a D-channel (SDCH)		
Signaling Category table number (SICA)	1 💌	
Connection Reference Number (SREF)		Range: 1 - 9999999
Answer and disconnect Supervision required (SUPN)		
Step-by-step CO trunk (SXS)		

Note: The member used in this example is a TIE trunk. The inputs requested by Element Manager may vary depending on the responses to earlier input requests.

To save changes made in this section, click **Submit** at the bottom of the Web page.

Delete multiple trunk members

Click **Multi-Del** located beside a member row to open the **Delete multiple trunk members** Web page for the selected member, as shown in Figure 162 "Delete multiple trunk members page" (page 240). On this Web page, the information for the Parent Route is read-only.

Figure 162

Delete multiple trunk members page

Input Description Input Value Customer number (CUST_NUM) 0 Route number (ROUT_NUM) 1 Route description (ROUT_DES) PfV_H323 Trunk type (TKTP) PT1 Total trunk members (TOTL_TN) 10 elect TN and deleting number Selection Description Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Set total trunk number to be deleted (up to 32) 1	omer 0, Route 1, Delete multiple trunk	members	
Customer number (CUST_NUM) 0 Route number (ROUT_NUM) 1 Route description (ROUT_DES) PIV_H323 Trunk type (TKTP) IPT1 Total trunk members (TOTL_TN) 10 elect TN and deleting number Selection Description Selection Value Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 v Set total trunk number to be deleted (up to 32) 1 v	arent Route Information		
Route number (ROUT_NUM) Route description (ROUT_DES) PIV_H323 Trunk type (TKTP) IPTI Total trunk members (TOTL_TN) total trunk member Selection Description Selection Description Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Set total trunk number to be deleted (up to 32)	Input Description		Input Value
Route description (ROUT_DES) PIV_H323 Trunk type (TKTP) IPTI Total trunk members (TOTL_TN) 10 elect TN and deleting number Selection Description Selection Description Selection Value Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Set total trunk number to be deleted (up to 32) 1	Customer number (CUST_NUM)	Ö	
Trunk type (TKTP) Total trunk members (TOTL_TN) elect TN and deleting number Selection Description Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Set total trunk number to be deleted (up to 32)	Route number (ROUT_NUM)	1	
Total trunk members (TOTL_TN) elect TN and deleting number Selection Description Selection Value Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Colspan="2"Colsp	Route description (ROUT_DES)	PIV_H323	
elect TN and deleting number Selection Description Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 Set total trunk number to be deleted (up to 32) 1	Trunk type (TKTP)	IPTI	
Selection Description Selection Value Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 v Set total trunk number to be deleted (up to 32) 1 v	Total trunk members (TOTL_TN)	10	
Set starting TN number to be deleted (OUT) Trunk: 1; TN: 096 0 02 00 V Set total trunk number to be deleted (up to 32) 1 V	elect TN and deleting number		
Set total trunk number to be deleted (up to 32) 1	Selection Description		Selection Value
	Set starting TN number to be deleted (OUT) T	'runk: 1; TN: 096 (0 0 2 0 0 💌
Delete Cancel	Set total trunk number to be deleted (up to 32) 1	~	
Delete Cancel			
Delete Cancel			
	Delete Cancel		

To delete multiple trunk members using this Web page:

 Use the Set starting TN to be deleted drop-down list determine the start of the deletion list. Use the Set total trunk number to be deleted drop-d indicate the total number of trunks to be deleted (up to 	
	Ö
3 Click Delete.	

D-channels

Click the **D-Channels** link on the **Routes and Trunks** branch of the Element Manager navigator to open the **D-Channels** Web page. This Web page allows users to configure or edit D-channel information, as shown in Figure 163 "D-Channels Web page" (page 241).

Figure 163 D-Channels Web page

hannels				
laintenance				
MSDL Diagnostic TMDI Diagnostics	pheral Equipment (LD 3 s (LD 96)			
Configuration				
hoose a D-Channel N	umber: 0 💌 and ty	rpe: DCH 💌 to Add		
- Channel: 10	Type: DCH	Card Type: DCIP	Description: PIV_VDCH	Edit

Maintenance

This sections contains links to the following commands:

- D-Channel Diagnostics (LD 96)
- Network and Peripheral Equipment (LD 32, Virtual D-Channels)
- MSDL Diagnostics (LD 96)
- TMDI Diagnostics (LD 96)
- D-Channel Expansion Diagnostics (LD 48)

For more information about these commands, see "System" (page 35).

Configuration

From the **D-Channels** Web page users can view basic information about existing D-channels.

This Web page also contains buttons that link to additional Web pages. Follow these links to do the following:

- add a new D-channel
- edit D-channel data

To add a new D-channel, select a number from the **Choose a D-channel Number** drop-down list, select a D-channel **type** from the type drop-down list, and click **to Add**. To edit the configuration information about an existing D-channel, click the **Edit** button located to the right of the Description field.

Click the **to Add** button, or any of the **Edit** buttons, to open the **D-Channels Property Configuration** Web page for that channel, as shown in Figure 164 "D-Channels Property Configuration Web page" (page 242)).

Note: H.323 and SIP can use the same D-channel.

Figure 164 D-Channels Property Configuration Web page

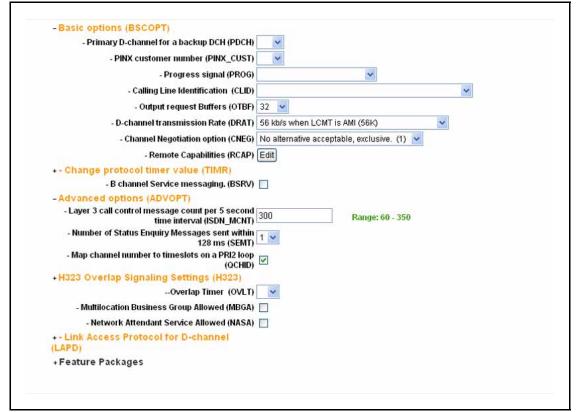
Basic Configuration	
Input Description	Input Value
Action Device And Number (ADAN) (TYPE)	DCH
D channel Card Type (CTYP)	× ·
Group number (GRP)	×
Device number (DNUM)	×
Port number (PORT)	
Designator (DES)	
Recovery to Primary (RCVP)	
User (USR)	· · ·
Interface type for D-channel (IFC)	Meridian DMS-100 (D100)
Country (CNTY)	ETS 300 =102 basic protocol (ETSI)
D-Channel PRI loop number (DCHL)	
Primary Rate Interface (PRI)	more PRI
Secondary PRI2 loops (PRI2)	
Release ID of the switch at the far end (RLS)	25 🗸
Central Office switch type (CO_TYPE)	100% compatible with Bellcore standard (STD) 👻
ntegrated Services Signaling Link Maximum (ISLM)	200 Range: 1 - 4000

In the **D-Channels Property Configuration** Web page, users can:

- Enter information about the **Basic Configuration** Web page.
 - The information entered in this section corresponds to ADAN and ADAN DCH (Action Device and Number, D-channel and back-up D-channels) data traditionally configured using LD 17 - Configuration Record 1. In addition to basic D-channel configuration, additional information can be entered for optional settings in the following two categories:
 - Basic D-channel options (BSCOPT)
 - Advanced D-channel options (ADVOPT)

These options are shown in Figure 165 "Basic and Advanced D-Channel options" (page 243).

Figure 165 Basic and Advanced D-Channel options



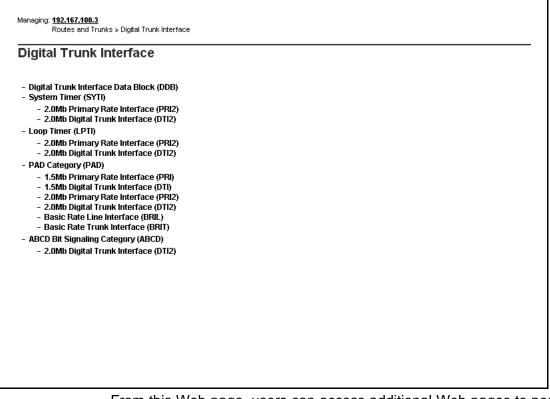
- Configure information about the Feature Packages Web page.
 - Digital Private Networking Signaling System 1 (Package 123)
 - Virtual Network Services (Package 183)

To save changes made in this section, click **Submit** at the bottom of the **D-channels Property Configuration** Web page.

Digital Trunk Interface

When the user clicks the **Digital Trunk Interface** link on the **Routes and Trunks** branch of the Element Manager navigator, the **Digital Trunk Interface** Web page appears, as shown in Figure 166 "Digital Trunk Interface Web page" (page 244). This Web page allows the user to configure or edit Digital Trunk Interface information.

Figure 166 Digital Trunk Interface Web page



From this Web page, users can access additional Web pages to perform the following functions:

- configure Digital Trunk Interface Data Block (DDB) information
- configure System Timer (SYSTI) parameters for:
 - 2.0 Mb Primary Rate Interface (PRI2)
 - 2.0 Mb Digital Trunk Interface (DTI2)
- configure Loop Timer (LPTI) parameters for:
 - 2.0 Mb Primary Rate Interface (PRI2)
 - 2.0 Mb Digital Trunk Interface (DTI2)

- configure PAD Category (PAD) parameters for:
 - 1.5 Mb Primary Rate Interface (PRI)
 - 1.5 Mb Digital Trunk Interface (DTI)
 - 2.0 Mb Primary Rate Interface (PRI2)
 - 2.0 Mb Digital Trunk Interface (DTI2)
 - Basic Rate Line Interface (BRIL)
 - Basic Rate Trunk Interface (BRIT)
- configure ABCD Bit Signaling Category (ABCD) parameters for the 2.0 Mb Digital Trunk Interface (DTI2)

To configure or edit Digital Trunk Interface Data Block (DDB) information, click **Digital Trunk Interface Data Block (DDB)**. The **Threshold Set List** Web page appears. See Figure 167 "Threshold Set List Web page" (page 245).

Figure 167 Threshold Set List Web page

Threshold Set List		
+ Clock Controller Basic Properties Edit Please Choose the Threshold Set Index 1 💉 to Add		
Remote (yellow) Alarm clear three	shold: 3	
Bipolar violation Count thre		
Loss of Frame Alignment Co		
Bipolar Violation maintenance and out-of-service thre Slip Rate Non-Tra		
Slip Rate Nor- Ira	cking. 5 S	

From this Web page, users can access additional Web pages to perform the following functions:

- edit Clock Controller Basic Properties
- add a Threshold Set Index
- edit an existing Threshold Set Block

Users can edit Clock Controller properties by clicking the **Edit** button next to the **Clock Controller Basic Properties** button. The **Clock Controller Basic Properties** Web page appears, as shown in Figure 168 "Clock Controller Basic Properties Web page" (page 246).

Figure 168 Clock Controller Basic Properties Web page

Input Description	Input \
Clock Controller Card Number (MGCLK):	(supl# sh# card#)
- Primary Reference (PREF):	(card#)
- Secondary Reference (SREF):	(card#)
Multi Purpose Serial Data Link Idle Code Selection (ICS):	
Submit Refresh Cancel	

Users can then enter the required information in the text boxes.

To add or edit a Threshold Set Index, follow the steps in Procedure 89 "Adding or editing a Threshold Set Index" (page 246).

Procedure 89 Adding or editing a Threshold Set Index

Step	Action
To add a 1	<i>Threshold Set Index</i> Select a Threshold Set Index from the drop-down list.
2	Click to Add .

To edit the configuration information in an existing Threshold Set Block, click **Edit** located to the right of the index number.

--End--

When the **to Add** button or a Threshold Set Index Edit button is clicked on Figure 167 "Threshold Set List Web page" (page 245), the **Threshold Set Block** Web page for that index appears, as shown in Figure 169 "Threshold Set Block Web page" (page 247).

Figure 169 Threshold Set Block Web page

Input Description	Input Value
Threshold set (TRSH):	1
Remote (yellow) Alarm clear threshold (RALM):	3
Bipolar violation Count threshold (BIPC):	2
Loss of Frame Alignment Counter (LFAC):	3
polar Violation maintenance and out-of-service threshold (BIPV):	32
Slip Rate Tracking mode maintenance (SRTK):	5 30
Slip Rate Non-Tracking (SRNT):	53
s of Frame Alignment maintenance and out-of-service thresholds (LFAL):	
Slip Rate Improvement Monitoring time in minutes (SRIM):	2
Slip Rate Maintenance Maximum (SRMM):	2

The information entered in this section corresponds to DDB (Digital Trunk Interface Data Block) information traditionally configured using LD 73 - Digital Trunk Interface.

To save changes made in this section, click **Submit** at the bottom of the **Threshold Set Block** Web page.

Dialing and Numbering Plans

Contents

This section contains information about the following topics:

"Introduction" (page 249) "Electronic Switched Network" (page 249) "Flexible Code Restriction" (page 252) "Incoming Digit Translation" (page 255)

Introduction

Element Manager enables users to configure the Dialing and Numbering Plans for the Call Server and the Network Routing Service (NRS) Manager. The information configured in the Dialing and Numbering Plans corresponds to the Command Line Interface (CLI) prompts and responses for Electronic Switched Network (ESN) data traditionally configured in LD 86, LD 87, and LD 90.

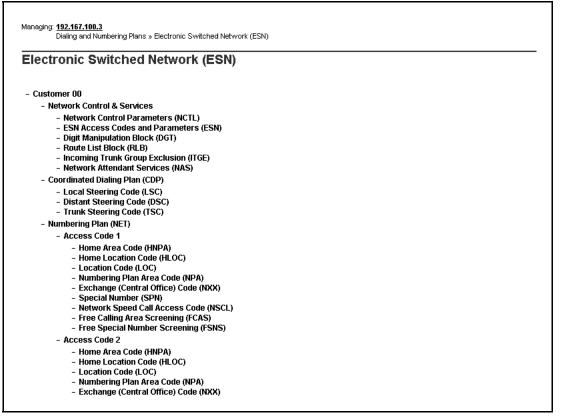
For more information about the overlays referred to in this chapter, see Software Input Output Administration (NN43001-611) and Software Input Output Reference - Maintenance (NN43001-711).

Electronic Switched Network

To configure or edit the Dialing and Numbering Plan for the Electronic Switched Network, click the **Electronic Switched Network** link in the **Dialing and Numbering Plans** branch of the Element Manager navigator. The **Electronic Switched Network (ESN)** Web page appears as shown in Figure 170 "Electronic Switched Network (ESN) Web page" (page 250). From this Web page users can configure the Dialing and Numbering Plan for each customer on the Electronic Switched Network. Element Manager provides access to the following Dialing and Numbering Plan parameters:

- Network Control & Services
- Coordinated Dialing Plan (CDP)
- Numbering Plan (NET)

Figure 170 Electronic Switched Network (ESN) Web page



Network Control and Services

Under Network Control and Services, users can click the links to configure or modify the parameters associated with the following items:

- Network Control Parameters (NCTL)
- ESN Access Codes and Parameters (ESN)
- Digit Manipulation Block (DGT)
- Route List Block (RLB)
- Incoming Trunk Group Exclusion (ITGE)
- Network Attendant Services (NAS)

The Network Control Parameters (NCTL) that are configurable using Element Manager correspond to data traditionally configured in LD 87. The settings for the remaining five items under Network Control & Services correspond to CLI prompts and responses in LD 86.

To view the total free and used Location Codes (LOCs), click **Customer** xx > Network Control & Services > ESN Access Codes and Basic Parameters. The ESN Access Codes and Basic Parameters Web page appears as shown in Figure 171 "ESN Access Codes and Basic Parameters Web page" (page 251).

Figure 171

N Access Codes and Basic Paramete	re
	15
Input Description	Input Value
Maximum number of Digit Manipulation tables (MXDM):	100 (0-1000)
Maximum number of Route Lists (MXRL):	100 (0-1000)
	0 00 00 23 59
Time of Day Schedules (TODS): (Items separated by a space)	
Routing Controls (RTCL):	
Check for Trunk Group Access Restrictions (TGAR):	
•	00-0 01-0 02-0 03-0 04-0 05-0 06-0 07-0 08-0 09-0 10-0 11-0 12-0 13-0
	14-0 15-0 16-0 17-0 18-0 19-0 20-0 21-0 22-0 23-0 24-0 25-0 26-0 27-0 28-0 29-0 30-0 31-0 32-0 33-0 34-0 35-0 36-0 37-0 38-0 39-0 40-0 41-0
Maximum number of Supplemental Digit restriction blocks (MXSD):	100 (0 - 1500)
Maximum number of Incoming Trunk Group exclusion tables (MXIX):	
ximum number of Free Calling area screening tables (MXFC):	100 (0.255)

....

This feature has its own packaging (LOCX). The package must be added under **Customers > Customer xx Property Configuration > Feature Packages**. This package can be activated only when the FNP package is enabled.

Coordinated Dialing Plan

Under Coordinated Dialing Plan (CDP), users can click links to configure or modify parameters associated with the following codes:

- Local Steering Code (LSC)
- Distant Steering Code (DSC)
- Trunk Steering Code (TSC)

The Coordinated Dialing Plan parameters that are configurable using Element Manager correspond to data traditionally configured in LD 87.

Numbering Plan

Under Numbering Plan (NET), users can click links to configure or modify parameters associated with the following codes:

- Home Area Code (HNPA)
- Home Location Code (HLOC)
- Location Code (LOC). Maximum number of LOCs is 16 000.
- Numbering Plan Area Code (NPA)
- Exchange (Central Office) Code (NXX)
- Special Number (SPN)
- Network Speed Call Access Code (NSCL)

These codes can also be configured using the prompts and responses in LD 90.

Numbering Plan (NET) is also used to configure the following two LD 87 features:

- Free Calling Area Screening (FCAS)
- Free Special Number Screening (FSNS)

Flexible Code Restriction

To configure or edit Flexible Code Restriction information, click the **Flexible Code Restriction** link in the **Dialing and Numbering Plans** branch of the Element Manager navigator. The **Flexible Code Restriction** Web page appears, as shown in Figure 172 "Flexible Code Restriction Web page" (page 253).

Figure 172 Flexible Code Restriction Web page

ible Code Restriction		
- Customer: 00	Edit FCR	
- Customer: 01	EditFCR	

This Web page contains **Edit FCR** buttons that link to **Flexible Code Restriction Property** Web pages for each of the customers configured on the Call Server.

To view the list of Flexible Code Restriction Trees for a customer, click the **Edit FCR** button located beside the customer number. The **Flexible Code Restriction** Property Web page for the selected customer opens (see Figure 173 "Flexible Code Restriction Property Web page" (page 254)).

Figure 173 Flexible Code Restriction Property Web page

Dialing and Numbering Plans » <u>Flexibl</u>	<u>s code riestriction</u> » cust		succonrespons	
omer 00 Flexible Co	de Restriction	Property		
Code Restriction Tree Number:	0	Edit CRNO		
Code Restriction Tree Number:	1	New CRNO		
Code Restriction Tree Number:	2	New CRNO		
Code Restriction Tree Number:	3	New CRNO		
Code Restriction Tree Number:	4	New CRNO		
Code Restriction Tree Number:	5	New CRNO		
Code Restriction Tree Number:	6	New CRNO		
Code Restriction Tree Number:	7	New CRNO		
Code Restriction Tree Number:	8	New CRNO		
Code Restriction Tree Number:	9	New CRNO		
Code Restriction Tree Number:	10	New CRNO		
Code Restriction Tree Number:	11	New CRNO		
Code Restriction Tree Number:	12	New CRNO		
Code Restriction Tree Number:	13	New CRNO		
		New CRN0		

The Flexible Code Restriction Property Web page contains buttons that link to Code Restriction Tree Configuration Web pages for each Code Restriction Tree Number (CRNO). If there is an existing configuration for the CRNO, the button is labeled **Edit CRNO**. If a configuration has not been defined for the CRNO, the button is labeled **New CRNO**. Click the **Edit CRNO/New CRNO** button to open the **Code Restriction Tree Configuration** Web page for the corresponding CRNO, as shown in Figure 174 "Code Restriction Tree Configuration Web page" (page 255).

Figure 174 Code Restriction Tree Configuration Web page

ode Restriction Tree Number Configuration Input Description	Input Value
Code Restriction Tree Number (C	
Initial - Allow or deny all codes.	
Digit sequence to be denied. (DENY)	
1	
Create new DENY 1 🗾 Starting from	Add New
Digit sequence to be allowed. (ALOW)	
Create new ALOW 1 💌 Starting from	Add New
Digit sequence to be bypassed. (BYPS)	
Create new BYPS 1 🗾 Starting from	Add New
mit Delete Cancel	

By entering values in the appropriate text boxes, users can:

- add or edit digit sequences to be enabled
- add or edit digit sequences to be denied

The information entered in this section corresponds to data traditionally configured using LD 49 - Flexible Code Restriction and Incoming Digit Conversion.

To save changes made in the configuration for this Code Restriction Tree, click **Submit** at the bottom of the Web page.

Incoming Digit Translation

To configure or edit Incoming Digit Translation information, click the **Incoming Digit Translation** link in the **Dialing and Numbering Plans** branch of the Element Manager navigator. The **Incoming Digit Translation** Web page appears, as shown in Figure 175 "Incoming Digit Translation Web page" (page 256).

Figure 175 Incoming Digit Translation Web page

oming Digit Translation		
- Customer: 00	Edit IDC	
- Customer: 01	Edit IDC	

This Web page contains **Edit IDC** buttons that link to **Incoming Digit Conversion Property** Web pages for each of the customers configured on the Call Server.

To view the list of Incoming Digit Conversion Trees for a customer, click the **Edit IDC** button located beside the customer number. The **Incoming Digit Conversion Property** Web page for the selected customer appears. See Figure 176 "Incoming Digit Conversion Property Web page" (page 257).

Figure 176 Incoming Digit Conversion Property Web page

omer 00 Incoming D	igit Conversio	n Property	
-	-		
Digit Conversion Tree Number:	0	Edit DCNO	
Digit Conversion Tree Number:	1	New DCNO	
Digit Conversion Tree Number:	2	New DCN0	
Digit Conversion Tree Number:	3	New DCN0	
Digit Conversion Tree Number:	4	New DCN0	
Digit Conversion Tree Number:	5	New DCN0	
Digit Conversion Tree Number:	6	New DCN0	
Digit Conversion Tree Number:	7	New DCN0	
Digit Conversion Tree Number:	8	New DCN0	
Digit Conversion Tree Number:	9	New DCN0	
Digit Conversion Tree Number:	10	New DCN0	
Digit Conversion Tree Number:	11	New DCNO	
Digit Conversion Tree Number:	12	New DCN0	
Digit Conversion Tree Number:	13	New DCN0	
Digit Conversion Tree Number:	14	New DCN0	
Digit Conversion Tree Number:	15	New DCN0	
Digit Conversion Tree Number:	16	New DCNO	

The Incoming Digit Conversion Property Web page contains buttons that link to Digit Conversion Tree Configuration Web pages for each Digit Conversion Tree Number (DCNO). If there is an existing configuration for the DCNO, the button is labeled Edit DCNO. If a configuration has not been defined for the DCNO, the button is labeled New DCNO. Click the Edit DCNO/New DCNO button to open the Digit Conversion Tree Configuration Web page for the corresponding DCNO. From this Web page, users can configure Incoming Digit Conversion data.

Figure 177

Digit Conversion Tree Configuration Web page

gulari	IDC tree ling party DID disabled	Free 0 Configu	auon	
Add.	Desete (DD	Delete IDC tr	96	Betrest
	Incomina Diaite +	Converted Digits	CPND Name	CPND language
10	122	6600	abcd	Katakana characters
2 C	0600	6600	abcd	Roman characters

The information entered in this section corresponds to data traditionally configured using LD 49 - Flexible Code Restriction and Incoming Digit Conversion.

Phones

Contents

This section contains the following topics:

"Introduction" (page 259)

"Database Update" (page 262) "Station Fast Sync feature" (page 262)

"Templates" (page 263)

"Search Phones" (page 272)

"Add Phones" (page 275)

"Program Phone Keys" (page 281)

"Edit Phones" (page 284)

"Employee reference field support when exporting and import phone database" (page 287)

"Export and Import of employee reference field" (page 288)

"Import Telephones" (page 292)

"Move Phones" (page 298)

"Retrieve Phones" (page 299)

"Delete Phones" (page 300)

"Swap Phones" (page 301)

"Courtesy Change" (page 302)

"Reports" (page 303)

"Migration" (page 304)

Introduction

EM Phone Provisioning functionality provides an interface to provision phones on CS 1000 systems.

You access Phone Provisioning through the Phones branch of the Element Manager navigator as shown in the following figure.

Figure 178 Phone Provisioning navigation

 UCM Network Services Home 	
-Links	
- Virtual Terminals	
- System	
+ Alarms	
- Maintenance	
+ Core Equipment	
- Peripheral Equipment	t
+ IP Network	
+ Interfaces	
– Engineered Values	
+ Emergency Services	
+ Geographic Redunda + Software	ncy
- Customers	
- Routes and Trunks	
– Routes and Trunks – D-Channels	
– Digital Trunk Interface	
- Digital Hunk Interface	
- Electronic Switched N	
- Flexible Code Restrict	
- Incoming Digit Transl	
-Phones	
- Templates	
- Reports	
- Properties	
– Migration	
- Tools	
+ Backup and Restore	
– Call Server Initializatio	n
– Date and Time	
+ Logs and reports	
- Security	
+ Passwords	
+ Policies	

Use Element Manager to configure phones for the Call Server. The configuration information described in this chapter corresponds to the Command Line Interface (CLI) prompts and responses for Telephone Administration traditionally configured in LD 10 and LD 11.

Additional information is retrieved from the Call Server for validation purposes corresponds to Print Routines traditionally performed in LD 20, LD 21, and LD 22.

For more information about the overlays described in this chapter, see Software Input Output Administration (NN43001-611) and Software Input Output Reference - Maintenance (NN43001-711).

Feature Operation during Upgrade

When Element Manager is upgraded to CS 1000 Release 6.0 the phone data is not automatically upgraded. Complete the steps below to perform the upgrade.

Perform the following operations to upgrade from CS 1000 Release 5.5 to CS 1000 Release 6.0 network for a system without Subscriber Manager.

Procedure 90 Upgrading to CS 1000 Release 6.0 without Subscriber Manager

Step	Action
1	Upgrade to CS 1000 Release 6.0.
2	Launch Element Manager.
3	Follow the step in procedure Procedure 109 "Retrieve Phones" (page 299) to populate the phone database.

--End--

Perform the following operations to upgrade from CS 1000 Release 5.5 to CS 1000 Release 6.0 network for a system with Subscriber Manager.

Procedure 91	
Upgrading to CS 1000 Release 6.0 with Subscriber Manager	

Step	Action	
1	Upgrade to CS 1000 Release 6.0.	
2	Launch Element Manager.	
3	Follow the step in procedure Procedure 109 "Retrieve Phones (page 299) to populate the phone database.	
4	Run Account synchronization from Subscriber Manager. Accounts created in Release 5.5 are automatically removed from Subscriber Manager.	
5	Run the Migration utility to re-create accounts based on CPND names (See, "Migration" (page 304)).	
	End	

Note: The phone templates and the link from phone to templates created in Release 5.5 are lost during this upgrade. This limitation is corrected from Release 6.0 onwards.

You can follow the manual work around steps to bring back template information and link them to the corresponding phones.

Create templates from existing phones. (See, "Create a Template from an existing phone" (page 266).) This allows you to create templates quickly rather than creating them from scratch.

Use the Bulk Phone Edit procedure to link the selected phones with the template. (See, "Update phones using the phone Templates" (page 285).)

Database Update

When you start Phones for the first time, the application automatically updates the database in the background. You must perform the update before you manage telephones to retrieve configuration changes in packages, customer data blocks, and CPND customer blocks. The following message appears: "Please wait for requested page to load while system properties are being updated.". You can configure telephones when the update finishes.

To manually update the database, click on the Properties link of the Phones branch of the Element Manager navigator and click Update in the Database Update section of the **Properties** Web page.

The **Database Update** Web page appears, as shown in Figure 179 "Database Update Web page" (page 262)

Figure 179 Database Update Web page

Properties	
Database Upd	late
Clicking the updat from the Call Serve	te button will initiate retrieval of system, customers and CPND customer properties rr.
Last Updated: 200	09-01-28 11:05:45.0
	Update
	Update
Courtesy Char	
terre between the terre terre terre and the terre ter	
When courtesy cha	nge

The Last Updated field displays the timestamp of the last update performed.

Station Fast Sync feature

The Station Fast Sync feature keeps the Phones Database synchronized with the PBX.

When a phone is modified on call server using CLI, then SNMP trap is sent from the Call Server to Element Manager with error code MGMT0001. When Element Manager receives the notification, it retrieves changes or deletes the TN/DN as required. This functionality is enabled by configuring the Element Manager IP address as an SNMP trap destination in LD 117. The EM IP address is configured automatically when EM Phones is launched for the first time. However, if changes from the CLI are not being reflected in EM Phones, it is recommended to verify that the management trap destination is correct using LD 117 See *Communication Server 1000 Fault Management - SNMP* (NN43001-719).

A log entry is created for each Fast Sync notification received.

Note: A manual "Retrieve and Reconcile All" must be performed periodically to ensure data consistency with the Call Server. The automatic fast synchronization update relies on SNMP traps and overlay access to maintain the data. Blocked or dropped SNMP traps and overlay conflicts can result in a data mismatch between the Call Server and EM.

Templates

Use Element Manager to access Templates that contain attributes common to a CS1000 phone type. After you create a template, use it to apply common attributes to a group of telephones, without having to repetitively define the same value for each telephone. In general, using a template is a more efficient method of adding large number of telephones than individually maintaining each telephone.

The administration pages for Templates are organized as a link named Templates inside the Phones section of EM navigator.

Click the Templates link to open the **Templates** Web page as shown in Figure 180 "Templates Web page" (page 264). The **Templates** Web page lists all available templates by name, the telephone type to which they apply, and the time and date of the last update. The action bar has buttons to add, export, import, and delete templates.

Note: Due to performance considerations, the recommended maximum number of templates supported by the system is 100.

Figure 180 Templates Web page

emplates					
	3				
Add	Export Import Delete		Refresh		
	Template Name+	Phone Type	Last Updated		
2	2500 Digitone Standard	2500	2009-03-82 13:34:22		
	<u>M2006</u>	M2006	2009-03-82 14:02:57		

Create a Template

To add a template click Add on the **Templates** Web page. The **Template Details** Web page appears as shown in Figure 181 "Template Details Web page" (page 265). Select the telephone type to use for the Template.

Figure 181 Template Details Web page

. auchune	e Details				
General Prop	erties <u>Features</u> <u>Kevs</u>				
General Pr	operties				-
	Template name:				
	Telephone type:	500 - Analo	g Sta 💌		
	Designation:		×		_
	Directory number :				
	CLID entry :				
Features Feature	Description			/alue	
AACD	Meridian Link Associated ACD) Agent	No 💌		-
ABDA	CDR on Abandoned Calls		Denied 💌		
ADAY	Alternate Redirection by Day 0	ption	0		
AGRA	Agent Greeting		Denied 💌		
AGTA	ACD Agent Analog Telephone		Denied 💌		
AHOL	Alternate Redirection by Holid	ay Option	0		-
Single Line	Features				
	Features Feature		Value		
]	Value		4

The fields marked with an asterisk (*) are mandatory.

The Template name identifies the template. If a template exists with the same name as specified, then an error message, "Template name already in use. Please specify another Template name." appears when you try to save the new template.

The templates are not system-specific, and hence all the phone features and keys applicable to the selected phone type are available for configuration in the **Template Details** Web page. The available features and key features change based on the selected phone type.

Note: Enter a partial DN as part of the key configuration parameter to enable a phone configured with this template to pick up a DN according to the partial DN.

Configure all required parameters, and click Save to save the template and return to the **Templates** Web page. The view refreshes to display the newly added template.

After you create a template, you can use it to add telephones to the system. When you use a template to add a telephone, only those keys and features that are valid for the system in context appear in the **Phone Details** Web page.

Create a Template from an existing phone

You can define a new template from an existing telephone configuration.

Select a telephone to convert to a phone template and view the new template in the **Template Details** Web page.

Procedure 92 Save a phone as template

Step	Action			
1	Click the Phones branch of the Element Manager navigator to open the Search for Phones Web page.			
2	Select the telephone to save as a template from the Search Result section of the Search for Phones Web page.			
	<i>Note:</i> You can create a template only from one telephone. An error message appears if you select multiple phones for creating a template.			
3	Select Save As Template from the More Actions list as shown in Figure 182 "Search For Phones Web page with option to save a phone as template" (page 267).			

Figure 182 Search For Phones Web page with option to save a phone as template

Crite	ria: Customer	r 💌 Value	0 •				
					Results Per F	age 10 🔹 Se	arch Reset
hones	s Found (2)						
Add	Import	Retrieve	Delete		•		Refresh
Г.	Customer+	TN	Prime DN	<more actions=""> Swap</more>	hone Type	Template	UXID
1	0	065 0 00 01	1234	Move	1110	a second second second	
217	0	065.0.00.02	1111	Edit Save As Template	1150		

The **Template Details** Web page appears as shown in Figure 183 "Template Details Web page with the select phone converted into a template" (page 267) .

Figure 183

Template Details Web page with the select phone converted into a template

General Properti	es Features Kevs		
General Prop	erties		-
- eatures	Template name: Telephone type: Designation: Zone: Key Expansion Modules:	1150 - IP Phone 1150 ♥ test 000	
Feature	Description	Va	ue
ABDA	CDR on Abandoned Calls	Denied 💙	^
ADAY	Alternate Redirection by Day Option	0	,
			Save Cancel

4 Enter a template name in the **Template name field**.

Note: The Template name must be unique. If you enter an existing template name that an error message appears.

5 Click **Save** to save the template.

Search for Phones Web page appears. The information of selected phone is converted into a telephone template.

--End--

View a Template

To view template details, click the template name link in the **Templates** Web page. The **Template Details** Web page appears displaying the selected template.

Update a Template

To update a template, click the template name link in the **Templates** Web page. The **Template Details** Web page appears displaying the selected template.

Make the required modifications to the template and save the changes.

Note: When you update a Template, the telephones associated with this Template are not automatically updated. See, "Update phones using the phone Templates" (page 285).

Delete a Template

Select any template from the **Templates** Web page and click Delete to remove the template.

You must confirm the deletion. When you click OK, the selected template is deleted immediately. If you click Cancel, the deletion is cancelled and the **Templates** Web page appears.

Note: When you delete a template, its association with telephones is removed, but the telephones are not deleted.

Export and Import Templates

You can export and import templates in CSV format.

Template data configured at one EM is not available for every EM in the UCM Common Services framework. You must perform a manual export and import procedure to share this data between various Element Managers. You import and export Templates from the **Templates** Web page as shown in Figure 184 "Import and Export Templates" (page 269).

Note: No data validation occurs when you import a template. You must ensure that proper values are present under all fields in the CSV file that you import.

Figure 184 Import and Export Templates

		and a second	
Add	Export Import Dele	ite	Refres
	Template Name	Phone Type +	Last Updated
	2004P2 with DN	2004P2	2008-02-06 10:34:09

You can use a comma-delimited ASCII text file, with a file extension of CSV as the data file. The first line or record of the file must contain the names of the fields that you import. You must enclose each field in the record in quotation marks. The first field in the data record is template name and is used as the key during the import. Existing templates are updated if a template with the same name exists and a new template is created, if the template name does not exist.

The following are the mandatory fields required for a template import:

- TEMPLATE_NAME
- PHONE
- DES

Depending on the imported telephone type, other mandatory fields are required. For example in case of an IP Phone, **Zone** is a mandatory field. If any of the mandatory fields are missing in a data record, the import process ignores that data record. The other data requirements for import of templates as well as the list of field names to be used for import of templates are similar to Import Telephones. See, "Import Telephones" (page 292).

Note: You cannot import CPND because templates do not support them.

The following is a sample of data in CSV format.

"TEMPLATE_NAME","PHONE","DES","ZONE","KEY0", "1110 for HR dept","1110","Test","000","SCR 2 D"

Note 1: In the above sample data, Key0 is configured with partial DN.

Note 2: The UI reports errors encountered during the import operation. You can modify the CSV file and try the import again.

Note 3: The template import is shorter than the telephone import operation so no log file is written.

Procedure 93 "Export Templates" (page 270) describes the step you complete to export one or more templates.

Procedure 93 Export Templates

Step	Action
1	Click the Templates link on the EM navigator.
	The Templates Web page appears.
2	Select the list of templates to export.
3	Click Export .
4	The Bulk Export for Templates Web page appears as shown in

Figure 185 "Bulk Export for Templates Web page" (page 270).

Figure 185 Bulk Export for Templates Web page

Download Exported Templates	
Export Results:	2
Total number of templates exported from the database: 1	
Click the above 'Download Exported Templates ' link to download: 1. the specifications for creating the import CSV file, 2. all the configured templates (if any) in the database.	

5

Click the **Download Exported Templates** link to download and save the exported data to your computer as shown in Figure 186 "Download Exported Template" (page 271).

Figure 186 Download Exported Template

	Download Exported Templates	
xport Results: otal number of templates ex	ported from the database: 1	8
lick the above 'Download 1. the specifications : 2. all the configured 1		
	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <u>What's the risk?</u>	

--End--

Procedure 94 "Import Templates" (page 271) describes the steps to import one or more templates.

Procedure 94 Import Templates

Step	Action
1	Click the Templates link on the EM navigator.
	The Templates Web page appears.
2	Click Import.
	The Import Templates Web page appears as shown in Figure

187 "Import Templates Web page" (page 272).

Figure 187 Import Templates Web page

port Template	'S
File name: [Browse
Import option: R	Overwrite existing template An existing template will be overwritten if a template with the same name is imported.
	Import Cancel
port Template	es Results

3

Specify the source file name by performing one of the following steps:

- Type the path and file name of the source file in the CSV file name box.
- Click **Browse** to locate and select the file.
- 4 Click **Import** to perform the Import operation.

--End--

Search Phones

Access the Phones functions in Element Manager from the **Search for Phones** Web page. Search for phones based on the following criteria:

- Prime DN
- Phone Type
- Terminal Number
- Designation
- Customer

- Template
- UXID

For example, to search for a telephone type, select Phone Type as the criteria and a telephone type from the Value list. Procedure 95 "Search for phones" (page 273) describes searching for telephones using template as the criteria.

Procedure 95 Search for phones

Step	Action
1	Click the Phones branch of the Element Manager navigator to open Search for Phones Web page, as shown in Figure 188
	"Search for Phones Web page" (page 273).

Figure 188 Search for Phones Web page

					Advac	ced Hide
Criteria:	Template	Value: No Tem	plate 💌			
Phones	Prime DN Phone Type Terminal Number Designation Customer Termitate UXID		Results per pag	20 •	Search	Reset
Add	Import Retrie	ve Defete	<more actions=""></more>	-		Retresh
	ir search criteria, enter o nes may also be added o		value and click Searc	h.		

- 2
- Select **Template** as the criteria from the **Criteria** list.

Note: If you select no template as the criteria then the search returns all phones not associated to a template.

- 3 Enter a Value for the template to search for.
- 4 Click **Search**. The **Search for Phones** Web page displays the telephones that match the specified Template as shown in Figure 189 "Search for Phones Web page" (page 274).

Figure 189 Search for Phones Web page

						ê	avanced 1 Hide	
Criteri	a: Tem	plate 💌	Value: ABD	A				
					[<u>aa</u>	- Search	Reset	
				Resu	ts per page 20	• Search	Reset	
hone	s Foun	d (28)						
Add	Imp	Retrie	ve De	lete (more a	actions> 💌		Refresh	
- <u>Q</u>	stomer	IN	Prime DN	Designation	Phone Type	Template *	UXID	
	0	000 1 08 00	4502	A1	M2008	ABDA	-	
Г	0	000 1 08 01	4504	A2	M2008	ABDA		
	0	000 1 06 02	4506	A3	M2008	ABDA		
Г	0	100 0 02 04	4753	DL.	2050PC	ABDA		Ŀ
	0	100 0 02 05	4754	DL.	2050PC	ABDA		Ŀ
Г	0	100 0 02 06	7000	IP1230	1230	ABDA		Ŀ
	0	100 0 02 07	1002	ABDA	2004P1	ABDA		Ŀ
Г	0	100.0.02.08	1003	ABDA	2004P1	ABDA		Ŀ
	0	100 0 02 09	1004	ABDA	2004P2	ABDA	-1	Ŀ
((F H	Page 1 -		1 - 20 of	28		Page 1 of 2	
							-	1

--End--

To search using additional criteria, click the Advanced link in the top right corner. The **Advanced Search for Phones** Web page appears, as shown in Figure 190 "Advanced Search for Phones Web page" (page 275).

Enter the criteria for the advanced search and click Search.

Figure 190 Advanced Search for Phones Web page

advanced	Se	arch for Phone	s						
								Basic 1 1	Hid
Logic	(Field	Com	nparison	Value)		
1	٠	ABDA-CDR on Aband	doned Calls		 Allowe 	d 💌) 💌	$\odot \times$	0
2 OR •		[• ?				3 X) (
3 AND	٠	Г		. 7				3 ×	0
AND T	•			* ?				3 X	1
5 AND	٠			7				3 x	16
Add Critens hones Four Add			elete Comore activ	cano	Result	per page 20 💌	Search	Reset	
		TN.*	Prine Dis	Designation	Phone Type	Template		0000	
Custome									

Add Phones

The following methods are used to add telephones:

- Add single or multiple telephones
- Add phones using a template
- Add phones using copy from TN option

To add a single telephone, perform the steps in Procedure 96 "Add Single Phone" (page 275).

Procedure 96 Add Single Phone

Step	Action
1	From the Search for Phones Web page, click Add.

The **New Phones** Web page appears, as shown in Figure 191 "New Phones Web page" (page 276).

Figure 191 New Phones Web page

Phones	
Number of phones	1 (1-100)
Customer	
	Phone Type 1140 - IP Phone 1140
Туре	: C Template Basic -
	C Copy From TN
Options	Default value for DES
	Default value for ZONE
	Only applicable to IP phone types Default value for Node Id Only applicable to UEXT-SIPL phone types
	Automatically assign DN starting DN
	Automatically assign TN starting TN
ired Value	Preview Cancel

- Enter **1** in the **Number of phones** box.
- 3 to which this telephone is associated from the **Customer** list.
- 4 Select the **Phone Type** from the list.
- 5 Select **Default value for DES**, and type the value in the box.
- 6 If the telephone type is analog, select **Automatically assign DN** to automatically assign the next DN from the starting DN value.

Note 1: Click the Magnifying Glass to look up a DN.

Note 2: You can select **Automatically assign DN** for analog telephone types and while creating telephones and templates having a partial DN.

7 Select Automatically assign TN to automatically assign the next available TN from the starting TN value.

Note: Click the Magnifying Glass to look up a TN.

8 Click **Preview**.

The **Phone Details** Web page appears, as shown in Figure 192 "Phone Details Web page" (page 277).

2

Figure 192 Phone Details Web page

Phone	e Details	1480.077	
Į	and the second s	System: EM on pecm1100 Phone Type: 1140 Sync Status: NEW	
3eneral Pi	roperties Features Keys	1	
General	l Properties		
	Termina	r Number: 1 • • • • • • • • • • • • • • • • • •	
Feature	s		
Feature Featu		on Value:	
		on Value:	-
Featu	ire Descriptio	· · · · · · · · · · · · · · · · · · ·	4
Featu AAA	re Descriptio Automatic Answer Back	Denied 💌	4
Featu AAA ABDA ADAY	Automatic Answer Back CDR on Abandoned Calls Alternate Redirection by Day	Denied 💌	×
Featu AAA ABDA	rre Description Automatic Answer Back CDR on Abandoned Calls Alternate Redirection by Day Option	Denied 💌	
Featu AAA ABDA ADAY ADV	re Description Automatic Answer Back CDR on Abandoned Calls Alternate Redirection by Day Option Data Port Verification	Denied Denied Denied	

- 9 If necessary, you can change the **Customer Number** from the default number you selected in the **New Phones** Web page.
- **10** If **Terminal Number** is empty, click the magnifying glass icon and select an available TN.
- 11 Enter or update the DES value in the **Designation** field.
- 12 Choose the desired features in the **Features** section.

13 Choose the desired keys in the **Keys** section. To program keys using Phone graphical interface see "Program Phone Keys" (page 281).

Note 1: If the telephone type is analog, the **Keys** section is not available.

Note 2: Match DN page is only applicable for Single Call Ringing (SCR) you start Match DN by clicking on the Phone icon. If you start Match DN in the context of Digital and IP Phones, all UEXT sets with same DN appear. If the context is UEXT all the Digital and IP Phones are appear in the Match DN page. When you select Single Call Ringing (SCR) for Key 0, the telephone icon (Match DN) appears. If you select any telephone and click **Assign** then FDN, HUNT, NCOS, TGAR, and CLS features are copied to the telephone that you are configuring or for which you are editing information

14 Click **Validate** to validate the new telephone.

The status of the Validation appears, listing validation errors that occur. If validation errors occur, repeat the relevant sections of this procedure to correct the errors.

15 Click **Save** to add the new telephone to the database.

Note: Click Cancel to cancel the current operation and redirect to the **Phone Search** Web page.

--End--

If you select Copy from TN in Step 4 of the **New Phones** Web page, the new Phone uses the properties of the specified TN, with the following exceptions:

- The Default value for DES, if specified, takes precedence
- The Automatically assign DN, if enabled, takes precedence.
- The Automatically assign TN, if enabled, takes precedence.

If you select Template in Step 4 of the New Phones page, the new Phone uses the properties of the specified template, with the following exceptions:

- The Default value for DES, if specified, takes precedence.
- The Automatically assign DN, if enabled, takes precedence.

The Template field displays all templates. To add a telephone, select a template from the list.

When Auto Assign DN is on and you specify when a starting DN, the starting DN overwrites the existing partial DN specified in the template. The message "The current DN is the specified starting DN. It is not the partial DN specified in the template" is displayed indicating that the starting DN overwrites the partial DN specified in the template.

When Auto Assign DN is switched off, a Partial DN specified in the template becomes the DN. The Add Phones fails unless the user corrects the DN. The message, "The current DN is the partial DN specified in the template. The DN must be modified in order to successfully add the phone." appears.

To add multiple telephones, perform the steps in Procedure 97 "Add Multiple Phones" (page 279).

Procedure 97 Add Multiple Phones

Step	Action
1	From the Search for Phones Web page, click Add.

The **New Phones** Web page appears, as shown in Figure 193 "New Phones Web page" (page 279).

Figure 193 New Phones Web page

w Phones	
Number of phones Customer	
Туре	Phone 1150 - IP Phone 1150 Type C Template C Copy From TN
Options :	Default value for DES Default value for ZONE Only applicable to IP phone types Default value for Node Id Only applicable to UEXT-SIPL phone types
	Automatically assign DN starting DN

2 Enter the number of telephones to add in the **Number of phones** field.

You can add up to 100 phones at a time.

- 3 Select the customer to which these telephones are associated from the **Customer** list.
- 4 Select **Default value for DES**, and type the value in the text box.
- 5 Select **Default value for Zone**, and type the value in the text box.
- 6 Select **Automatically assign DN** to automatically assign the next available DN.
- 7 Select **Automatically assign TN** and type the value in the starting TN box; or, you can leave the value blank and the system assigns the next available TN (Loop, Shelf, Card, Port or Unit) to the specified telephones as defined in the Hardware database for the system.
- 8 Click **Preview**.

The **Preview Phones** Web page appears, as shown in Figure 194 "Preview Phones Web page" (page 280).

Figure 194 Preview Phones Web page

Number of phones being	g added: 5			
Customer		Designation	ZONE	Terminal Number
0- Customer 0	*	test	000	080 0 00 24
0- Customer 0	*	test	000	080 0 00 25
0- Customer 0	*	test	000	080 0 00 26
0- Customer 0	*	test	000	080 0 00 27
0- Customer 0	*	test	000	080 0 00 29

This Web page lists the attributes of each new telephone based on the selections entered in the **New Phones** Web page in previous steps.

The **Preview Phones** page lists the desired number of telephones with automatically assigned TN to each telephone either from the starting value entered or from the automatically assigned values.

- 9 If the **Customer** number is incorrect, select the correct value from the list.
- **10** If the **DES** field is empty or incorrect, type the correct value.

- **11** For an analog telephone, If the **DN** field is missing or incorrect, type the correct value.
- 12 If the **TN** field is missing or incorrect, type the correct value.
- 13 Click **Finish** to add the telephones to the database.

--End--

You can select a template to add multiple telephones.

To add multiple analog phones when Auto Assign DN is on and when the starting DN is specified, the DNs are used from the unused DN list of the call server. For example, if the starting DN is 100 and the user adds three phones then 105, 115, 116 could be the DNs if they are the next available free DNs for the given starting DN.The DNs appear in the **Preview Phones** Web page and you can edit it.

To add multiple analog telephones when Auto Assign DN is switched off, the Partial DN specified in the template becomes the DN. Add multiple telephones fails unless you correct the DN. The message "The current DN is the partial DN specified in the template. The DN must be modified in order to successfully add the phone." appears.

To add multiple digital or virtual telephones when Auto Assign DN is switched on and when starting DN is specified, the starting DN is incremented and used. For example if the starting DN is 100 and we try to add three telephones then 100, 101, and 102 are the DNs. The DNs do not appear in the **Preview Phones** Web page so you cannot modify the DNs.

To add multiple digital or virtual telephones when Auto Assign DN is switched off, you cannot use the template with partial DN for adding multiple digital or virtual telephones. The error message "Multiple phone addition is not allowed since the template selected has a partial DN" appears indicating that this scenario is not allowed. However, no restriction is placed on adding telephones if the template does not contain a partial DN.

Program Phone Keys

You can program telephone keys by using a graphical image of the telephone.

You can program telephone keys from the **Phone Details** Web page by using the graphical image of the telephone, which appears when you click on the telephone image at the top left of the page as shown in the figure below.

Figure 195 Phone graphical interface

Phone Details	
	System: EM on pecm1100 Phone Type: 1110 Sync Status: NEW
General Properties Features Keys 1110 General Properties	PICK HUNTEL Key 19: CFW - Forward All Calls

Procedure 98 Programing phone keys using phone graphical interface

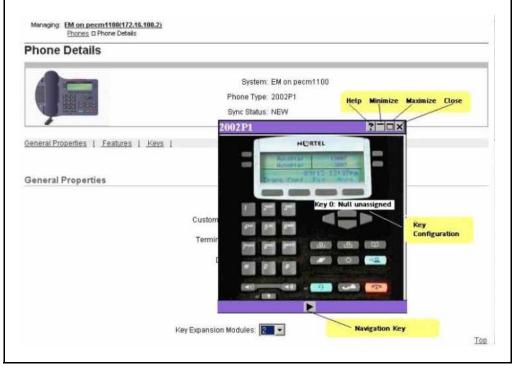
from the Search Result section of the Search for Phones Web age, click the telephone to be updated. The Phone Details Web page appears. Click on the telephone image at the top left of the page. The graphical interface for the select telephone appears.
Click on the telephone image at the top left of the page. The graphical interface for the select telephone appears.
he graphical interface for the select telephone appears.
Nole the line houten of the television construct to war average
lick the key button of the telephone you want to program.
he select box for the selected key of the Keys section of the Phone Details Web page appears highlighted.
change the key configuration as required.
Click Finish to add the telephone.
he window closes and the Search for Phones Web page

--End--

The Phone Graphical Interface window has help, minimize, maximize, and the close buttons on the title bar. To open the corresponding help page for the telephone displayed, click the question mark.

Use the minimize and maximize buttons to hide and display the graphical image window. Hover the mouse over the key buttons on the image to display a tool tip with the key number and the current configured value. See Figure 196 "Phone Graphical Interface navigation" (page 283).

Figure 196 Phone Graphical Interface navigation



When minimized, the Phone Graphical interface title bar remains visible. You can move the title bar so it does not obscure your view of the **Phone Details** Web page. However, you cannot drag and place the title bar on top of the navigation pane of the browser.

You can configure telephones with a key-based add-on module. Use the navigation button at the bottom to navigate to the extended keys for the telephone.

Edit Phones

Use the Edit feature to edit a single telephone or multiple telephones.

Note: You can update only one field at a time. Old Value and New Value fields are either boxes or lists. When you select a field to update, additional old and new values appears that correspond to the Key field parameters.

Edit single or multiple phones

Click the Phones branch of the Element Manager navigator to open the **Search for Phones** Web page.

To edit a single telephone or multiple telephones, perform the following procedure.

Procedure 99 Editing single or multiple phones

Step	Action
1	To search for telephones to edit, select a search criteria from the Criteria list
2	Sort the telephone list by telephone type.
3	Click the box beside the telephones to update.
4	Select Edit from the <more actions=""></more> list. The Bulk Phone Edit Web page appears.
5	In the edit Field , select the field to update. Some selected fields require you to enter other values.
6	Enter the old value in the Old Value text box or select it from the Old Value list. If you update a Key field, enter the old value of any parameter to change in the corresponding box on the left side.
7	Enter the new value in the New Value text box or select it from the New Value list. If you update a Key field, enter the new value of any parameter to change in the corresponding box on the right side.
8	Click Save to complete the edit, or click Cancel to undo changes and return to the Search for Phones Web page.
	End

Note: UXTY cannot be changed using Bulk Phone Edit for UEXT types. Bulk Phone Edit of UEXT types from one UXTY to another UXTY is not supported.

Update phones using the phone Templates

The association of telephones to a template simplifies the bulk change procedure. Use this association to enable a change to the template content to be applied to all telephones that use the template.

The **Bulk Phone Edit** Web page allows the user to update the telephone from templates. The value **Template** of the edit **Field** list, enables the user to update the telephone based on the value in the template.

In the edit **Field**, if you select Template, then the **Old Value** field displays an asterisk (*). The **New Value** field displays all Templates configured for the selected telephone type as seen in Figure 197 "Bulk Phone Edit Web page" (page 285).

Figure 197 Bulk Phone Edit Web page

ulk Phone Edit (2			
selected Phones will be upo	lated.		
Field	TEMPLATE - Template associated to a phone	×	
	Old Value : *		
	New Value : ABDA 💌		
		Save	Cancel

The template is considered the master during this update. All configured telephone attributes are overwritten with the attributes in the selected template. The CPND name configured in the telephone is retained during the update.

If the selected telephones to be updated are of different telephone types, then the **Template** field is not available in the edit **Field** list. You cannot change the following telephone properties when you update using Templates. These properties are different for every telephone and updating it from template is not supported.

- Designator (DES): This property is part of the General Properties section of the telephone details page.
- Station Control Password (SCPW): This property is part of the Features section of the telephone details page.
- Directory number parameter of any key feature.

In addition, certain properties are not part of the template and can be changed in the telephone.

- Terminal Number (TN): This property is part of the General Properties section of the telephone details page.
- Call Party Name Display (CPND): This property is part of the Keys section of the telephone details page.
- Voice Mail Box (VMB): This property is part of the Keys section of the telephone details page.

If a template has a partial DN configured, you cannot update a telephone with the Template by using the Edit function. The error message "Editing phones is not allowed since the template selected has a partial DN" appears. However, no restriction is placed on editing if the template does not contain partial DN.

Perform this procedure to associate a template with telephones that are not associated with a template.

Procedure 100 Associating a Template to Phones

Step	Action
1	Search for telephones that are not associated with a template.
2	Sort the telephone list by telephone type.
3	Select telephones to update.
4	Select Edit from the <more actions=""></more> list. The Bulk Phone Edit Web page appears.
5	In the edit Field, specify the value to update as Template.
6	In the Old Value field, select Asterisk (*).
7	In the New Value field, select the Template associate with the telephone.

8

Click **Save** to complete the edit, or click **Cancel** to undo changes and return to the **Search for Phones** Web page.

--End--

Note: When you update the telephone Element Manager may send an update to the account in Subscriber Manager depending on the attributes you updated.

Phone properties that can change without breaking the Template association

Certain properties differ for various telephones; therefore, changing these properties does not break the telephone-to-template association. The following is a list of properties:

- Designator (DES): This property is part of the General Properties section of the phone details page.
- Station Control Password (SCPW): This property is part of the Features section of the phone details page.
- Directory number parameter of any key feature.

In addition, certain properties are not part of the template, and can be changed in the phone.

- Terminal Number (TN): This property is part of the General Properties section of the phone details page
- Call Party Name Display (CPND): This property is part of the Keys section of the phone details page.
- Voice Mail Box (VMB): This property is part of the Keys section of the phone details page.

Employee reference field support when exporting and import phone database

Including this attribute in the export and import tools enables you to retain important data that is not persisted on the call server such as the employee reference and template ID. You can export and the import employee reference fields along with other supported telephone fields. The employee reference field stores the ID of the subscriber who owns the telephone. This field is the link between a telephone in EM Phone Provisioning and a subscriber in Subscriber Manager.

When you need to retain this offline data, perform Procedure 101 "Retaining offline data" (page 288).

Step	Action
1	Export the Phones database as a CSV file with the mandatory fields (TN, CUSTOMER, PHONE, DES), Template ID, and Employee Reference field.
2	Perform the Retrieve and Reconcile procedure to populate the phone database.
3	Import phones from the CSV file generated in step 1 to re-establish the link from telephone to template and telephone to subscriber.
	End

Export and Import of employee reference field

Procedure 101

Certain limitations apply while importing the EMPLOYEEREFERENCE field. In the import CSV file, if you update the EMPLOYEEREFERENCE field of an existing telephone, the following work flow occurs:

- EM Phone Provisioning updates the employee reference field in the telephone database.
- An update account notification is sent to Subscriber Manager. Because the notification is not an update to an existing account, Subscriber Manager ignores this notification.
- Run the Account Synchronization operation to synchronize the account differences between EM phone provisioning and Subscriber Manager. Account synchronization resynchronize the accounts as follows:
 - Account Synchronization finds that the older account exists in Subscriber Manager but not in EM phone provisioning. This account is automatically removed from Subscriber Manager.
 - Account Synchronization identifies a newer account in EM phone provisioning but not in Subscriber Manager, but the account has a subscriber ID in the directory. The newer account is automatically created in Subscriber Manager.

Procedure 102

Generating a report and exporting phones with employee reference in the selected report field

Step	Action
1	Select Report from the Phones branch of the EM navigator.

The **Edit a Report** Web page appears.

- 2 In the Field Selection section, select the fields to include in the report. Include EMPLOYEEREFERENCE field as well.
- 3 In the Custom Criteria section, select the criteria to determine which telephones are included in the report.
- 4 Select **CSV** as the report format from the Report Format list.
- 5 Click Generate Report.

The **Download Generated Report** Web page appears.

- 6 Download the report.
 - EMPLOYEEREFERENCE field is included in the generated report.
 - All telephones linked to a subscriber have a value for the EMPLOYEEREFERENCE field.
 - All telephones not linked to a subscriber do not have a value for the EMPLOYEEREFERENCE field.

--End--

Procedure 103

Generating a report and exporting phones with employee reference field as the criteria.

Step	Action					
1	Select Report from the Phones branch of the EM navigator.					
	The Edit a Report Web page appears.					
2	Select the fields to include in the report.					
3	In the Custom Criteria section, select the EMPLOYEEREFERE NCE field.					
	 The corresponding Value field changes to a text box. 					
	 The corresponding Comparison list contains only the equal to (=) operator. 					
4	Enter a value in the Value field.					
5	Select CSV as the report format from the Report Format list.					
6	Click Generate Report .					
	The Download Generated Report Web page appears.					

- 7 Download the report.
 - EMPLOYEEREFERENCE field is in the generated report.
 - All telephones linked to a subscriber have a value for the EMPLOYEEREFERENCE field.

--End--

Procedure 104

Importing a new phone with employee reference field

Step	Action
1	Modify the generated CSV, and add a new telephone with a valid employee reference field.
2	Click Import on the Search for Phones Web page.
	The Import Phones Web page appears.
3	Specify the name of the source file by performing one of the following steps:
	 Type the path and name of the file in the import source file text box
	• Click Browse to locate and select the file.
4	Click OK to import the file.
	The Import Status Web page appears indicating the success or failure of the import.
5	Click Common Manager to go to UCM home page.
6	Click the Subscribers link in UCM.
	The Search for Subscribers Web page appears.
7	Enter the subscriber's last name in the Name field of the search criteria, and click Search . Use the name of the subscriber whose ID you used in step 1.
	The Search for Subscriber Web page appears with search results that match the search criteria.
8	Click the name of the subscriber.
	The Subscriber Details Web page appears with a new account added to the account list.

--End--

Procedure 105

Importing an existing phone with no update to employee reference field

Step	Action
1	Modify the generated CSV to update an existing telephone.
	Update the DN of Key 0 so that the change is visible in Subscriber Manager.
2	Click Import on the Search for Phones Web page.
	The Import Phones Web page appears.
3	Specify the name of the source file by perfoming one of the following steps:
	 Type the path and name of the file in the import source file text box
	Click Browse to locate and select the file.
4	Click OK to import the file.
	The Import Status Web page appears indicating the success or failure of the import operation.
5	Click Common Manager to go to UCM home page.
6	Click the Subscribers link in UCM.
	The Search for Subscribers Web page appears.
7	Enter the subscriber's last name in the Name field of the search criteria and click Search . Use the subscriber name that you used in step 1.
	The Search for Subscriber Web page appears with search results that match the search criteria.
8	Click the name of the subscriber.
	The Subscriber Details Web page appears with the DN changes made to the account in the account list.
	End

Procedure 106 Importing an existing phone with updated employee reference field

Step	Action
1	Modify the generated CSV to update an existing telephone.
	Update the employee reference field to another valid subscriber.
2	Click Import on the Search for Phones Web page.
	The Import Phones Web page appears.

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- **3** Specify the name of the source file by performing one of the following steps:
 - Type the path and name of the file in the import source file text box
 - Click **Browse** to locate and select the file.
- 4 Click **OK** to import the file.

The **Import Status** Web page appears indicating the success or failure of the import.

- 5 Click **Common Manager** to go to UCM home page.
- 6 Click the **Subscribers** link in UCM.

The **Search for Subscribers** Web page appears.

7 Enter the subscriber's last name in the **Name** field of the search criteria, and click **Search**. Use the subscriber name that you used in step 1.

The **Search for Subscriber** Web page appears with search results that match the search criteria.

8 Click the name of the subscriber.

The **Subscriber Details** Web page appears with no changes made to the account in the account list. No changes are made to the account list of the subscriber whose employee reference field you used in step 1.

--End--

Import Telephones

You can import telephones into the telephone database by using the import function. Use the Import Telephones feature to import telephone data into the database from a comma-separated value (CSV) file. The **Import Telephones** Web page as shown in Figure 198 "Search for Phones Web page" (page 293)appears when you click the **Phones** link in EM navigator and then click **Import** from the **Search for Phones** Web page.

Figure 198 Search for Phones Web page

Criteria	Prime DN	▼ Value:			
Phones					
Add	Import)	Retrieve	Delete	Kmore action	ns> 👻
0.000	ur search criteria	enter or select t	he desired val	ue and click Se	arch

The Import Telephones Web page appears, as shown in Figure 199 "Import Telephones Web page" (page 293).

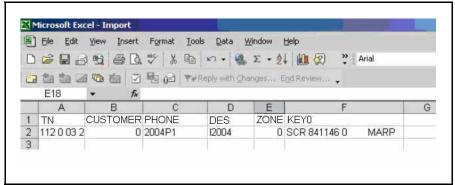
Figure 199 Import Telephones Web page

mport Telephones		
CSV file to be imported:		
	Browse	
		Save Cancel

Specifications for CSV file

- The data file must be in CSV format.
- The first line in the CSV file should contain a list of fields to import.
- Subsequent lines in the CSV file should contain data values for each field being imported and should be in the same order as the corresponding field names appear in the first line.

Figure 200 Example Contents of CSV file



The valid field names to be used while importing data into the database are in the **Available fields** list in **Fields selection** section of Reports UI. Click the **Reports** link of the **Phones** branch of the Element Manager navigator to access the Report UI. See, "Reports" (page 303). For more information see, *Software Input/Output - Administration* (NN43001-611).

Mandatory Fields

The first column of the import file must be either TN or PRIMEDN. The first column is used as a key to identify the telephones update.

Table 1 Mandatory Fields

Operation	Mandatory Fields	
Update an existing telephone record	TN (Terminal Number) or PRIMEDN (Prime Directory Number)	
Add a new telephone record	TN (Terminal Number), PHONE (Phone type), CUST (Customer Number), and DES (Designation)	
Add a IP Phone record	TN (Terminal Number), PHONE (Phone type), CUST (Customer Number), DES (Designation), and ZONE (Zone)	
Add DCS	TN (Terminal Number), PHONE (Phone type), DES (Designation), CUST (Customer Number), PRIMEDN (Prime Directory Number), FTR_CFW (Forward All Calls), DMC (DECT Mobility Controller), and IDNX (Index on DMC)	

If PRIMEDN is the first column, you can import only for updating telephones.

If TN is the first column, you can import to add or update a telephone.

For a TN, if a matching telephone is found, then the configuration is updated using data from the import file. If no matching telephones are found for a TN, then a new telephone is added to database if all the mandatory parameters for telephone configuration are specified in the import file.

Note: When you add DCS sets you cannot assign a TN to the telephone. The call server automatically assigns the TN after the telephone is added. Therefore, for DCS telephones, the business logic allows the telephone to be imported if the TN field remains blank. If a TN is assigned for DCS telephone, import will ignore the user specified TN.

Data requirements for importing Keys, CPND names and VMB

To import keys, the field name used in CSV file uses the format *Key* <*number>* where,*<number>* is the key number. For example, to import Key 10, the field name is **Key10** The value for key is specified in the following format:

<mnemonic> [<parameters>] [MARP] [ANIE(<value>)] [CPND_FIRS
T_NAME (<value>) CPND_LAST_NAME(value) CPND_LANG(value)
CPND_DISPLAY_FORMAT(value) [VMB_CLASS_OF_SERVICE(value)
VMB_SECOND_DN(value) VMB_THIRD_DN(value) VMB_KEEP_MES
SAGES(value)]

The entries in square brackets ([]) are optional and are based on key mnemonic and import requirements:

- <mnemonic>: Represents key feature mnemonic to be assigned to the key.
- <parameters>: Represents the key parameters. The values described in this section depend on key feature mnemonic.
- MARP: Indicates that the DN specified in the <parameters> section should use MARP on the key.
- ANIE(<value>) Specifies the value for ANIE entry. The <value> represents the ANIE entry value.

You can use the sections with names starting with *CPND* to import the CPND name for the DN specified in <parameters> section. To import new CPND names, specify a nonblank value for at least one of the two name fields:

- CPND_FIRST_NAME and CPND_LAST_NAME. To update existing CPND names using import, specify values for only those fields that need to be updated. It is not mandatory to specify a value for all fields.
- Use CPND_FIRST_NAME: Use this section to specify the CPND first name for the DN specified in <parameters> section.
- Use CPND_LAST_NAME: Use this section to specify the CPND last name for the DN specified in <parameters> section.
- CPND_LANG: Use this section to specify the CPND language for the CPND name.
- CPND_DISPLAY_FORMAT: Use this section to specify the CPND display format for the CPND name.

You can use the sections with names starting with *VMB* to import VMB configuration data for the DN specified in the cparameters> section. It is not mandatory to specify values for all fields; specify a value only for those fields that need to be updated:

- VMB_CLASS_OF_SERVICE: Use this section to specify the class of service value for the VMB.
- VMB_SECOND_DN: Use this section to specify a second DN for the VMB.
- VMB_THIRD_DN: Use this section to specify the third DN for the VMB.
- VMB_KEEP_MESSAGES: Use this section to specify the preference for keep messages field of the VMB.

The valid values are the same as those accepted by PBX overlays.

The following figure is an example of a CSV file to import.

Figure 201 Example of a CSV file to import



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Data requirements for importing Single Line Features

You can import Single line features (FTR) by specifying the field name in format FTR_<mnemonic>, where <mnemonic> is the mnemonic for a single line feature and by specifying the value in the format <mnemonic> <parameters>.

Figure 202 Example of a CSV file of FTR data to import for a DCS phone

9	Eile Edit	⊻jew Inser	rt Format	<u>I</u> ools <u>D</u> ata	Window Help					
	💕 🖬 🖪	9 8 1	219 12	X D B.	3 9 . 11 - 1	🧕 Σ 🔹	21 XI 🔟	100%	- 0 -	
	23 21 21	001	5 101 3	明 @ TOR	eply with Changes	End Review.	-			
Ari	al	+ 10	- B /	UEE	≣ ፼ \$ % ,	*.0 .00		- 3 - A		
-	R1C1		TN	Contraction of the second		and all all and a state of the				
_	R1C1		a second s	4	5	6	7	8	9	10
1	1	- fi	TN	4 CUSTOMER	5		7		9	10
1	1	2 PHONE	TN 3	4 CUSTOMER	5	6	7 INDX	8	9	10
	1 TN	2 PHONE	TN 3 DES	4 CUSTOMER	5 DN	6 DMC	7 INDX	8 FTR_CFW	9 FTR_SCU	10
1 2 3 4	1 TN	2 PHONE	TN 3 DES	4 CUSTOMER	5 DN	6 DMC	7 INDX	8 FTR_CFW	9 FTR_SCU	10

Figure 203

Example of a CSV file of FTR data to import for an analog telephone

	Eile Edit	view Inser	: F <u>o</u> rmat	<u>T</u> ools <u>D</u> ata	<u>W</u> indow <u>H</u> elp			
	💕 🖬 🖪	ABC	1 🦈 🛍	1 🔏 🕰 •	🎯 🔊 • 🖓 •	🔒 Σ 🔸 🛓	↓ <u>X</u> ↓ <u>III</u> →	100%
	220	6 1 0	5 8 13	BI DE YOR	eply with Changes	End Review		
Aria	1	- 10	BZ	п – – – –	=	+.0 .00 ; ;		- 3-
	R1C1		TN	× = =		100 -≫10 ÷		
-	1	2	3	4	5	6	7	8
			9	7			1. Contraction (1. Contraction)	0
1	TN	PHONE	DES	CUSTOMER	DN	FTR CFW	FTR SCU	

Data requirements for importing DN for analog telephones

DN field for analog telephones can have MARP and ANIE settings and, CPND and VMB configuration. You can import the DN field for analog telephones by specifying the field name as DN and by specifying the value in the following format:

DN<DNvalue> [MARP] [ANIE(<value>)] [CPND_FIRST_NAME (<value>) CPND_LAST_NAME(value) CPND_LANG(value) CPND_DISPLAY_FORMAT(value)] [VMB_CLASS_OF_SERVICE(value) VMB_SECOND_DN(value) VMB_THIRD_DN(value) VMB_KEEP_MES SAGES(value)] To Import telephones, perform the steps in Procedure 107 "Import Telephones" (page 298).

Procedure 107 Import Telephones

Step	Action				
1	Click the Phones link in EM navigator.				
	The Search for Phones Web page appears.				
2	Click Import to open the Import Telephones Web page.				
3	Specify the name of the file from which the telephone details are to be imported by using the browse button or by entering the file name. The file must be a CSV file.				
4	Click Save.				
	End				

The status of the import appears to the user. Obtain an initial format of the CSV file by generating a Report in CSV format by using the Reports link of the Phones branch of the Element Manager navigation page.

Note: The maximum session time in UCM is 2 hours by default. You need to change the maximum session time for import operation that exceeds 2 hours in the UCM Session Properties section. To change the maximum session time refer to *Unified Communication Management* (NN43001-116).

Move Phones

You can move a telephone to another TN with the same property values. To do this, perform the steps in Procedure 108 "Move Phones" (page 298).

Procedure 108 Move Phones

Step	Action					
1	From the Search Results section of the Search for Phones Web page, select Move from the <more actions=""></more> list.					
	The Move TN Web page appears, as shown in Figure 204 "Move TN Web page" (page 299).					

Figure 204 Move TN Web page

love TN					
lp					
	Fro	om: 096 0 01 00	To:	× 🔍	
					Submit Cancel
	2	Enter the	TN to mo	ove the telep	hone, and click Submit .

--End--

Retrieve Phones

The Retrieve Phones function synchronizes data from the Call Server to the Phones database. Perform the steps in Procedure 109 "Retrieve Phones" (page 299).

Procedure 109 Retrieve Phones

Remeve Filones

Step	Action
1	From the Search for Phones Web page, click Retrieve.
2	The Retrieve Options Web page appears, as shown in Figure 205 "Retrieve Options Web page" (page 300).

Figure 205 Retrieve Options Web page

es selected ones and cile					
cile					
m					
Customer	0 💌				
Туре	TNB				
erminal Number					
Card density	Ψ.				
Designator					
Tenant					
			Day 🔽 Year: 🕅	Terrat	
	Type : "erminal Number : Card density : Designator :	Customer : Type : Type : Card density : Designator : Tenant : Tenant :	Customer : III	Customer : UV Type : TNB Verminal Number : Card density : V Designator : V	Customer : UV Type : TNB Verminal Number : Card density : Verminal Designator : Verminal

3

Select one of the Retrieve Options, as follows:

Select **Phones selected** to retrieve the telephones in the phone **Search Results** section.

Select All phones and reconcile to retrieve the telephones.

Select **Custom** and enter any combination of search criteria to retrieve telephones that meet those criteria.

4 Click Submit.

--End--

Note 1: The maximum session time in UCM is 2 hours by default. You need to change the maximum session time for import operation that exceeds 2 hours in the UCM Session Properties section. To change the maximum session time refer to *Unified Communication Management* (NN43001-116).

Note 2: It is recommended to perform 'retrieve and reconcile' operation only by one user at a time. EM Phone Provisioning does not support concurrent users for the 'retrieve and reconcile' operation.

Delete Phones

To delete telephones, perform the steps in Procedure 110 "Delete Phones" (page 301).

Procedure 110 Delete Phones

Step	Action
1	From the Search for Phones , search for telephones based on a search criteria.
2	Click the boxes beside all the telephones to delete.
3	Click Delete .
4	Click OK to confirm the deletion of the telephones selected, or click Cancel to stop the operation.
	End

Swap Phones

When you swap telephones, two telephones exchange TNs. The following limitations apply to a swap:

- You can swap only two telephones at a time.
- The telephones to be swapped must belong to the same customer.
- The telephones to be swapped must have compatible TN types. For example, you cannot swap an analog (500/2500-type) telephone with a digital telephone.
- Swapping is not supported for DCS telephones. Element Manager does not control the allocation of virtual TNs for DCS telephones.
- If the synchronization status of one of the telephones to be swapped is New, it must be swapped with another telephone with a synchronization status of New.
- The telephones to be swapped must have the same VCE or DTA Class of Service.
- Swapping is not supported for IP Phones.
- Swapping is not supported with the BFS feature.
- Swapping is not supported if one of the telephones is an ACD telephone in the acquired state.
- Swapping is not supported for telephones with a branch office link.

Procedure 111 Swap Phones

Step	Action
1	From the Search for Phones , search for telephones based on a search criteria.
2	From the list of telephones, select the two telephones to swap.
3	Select Swap from the <more actions=""> list.</more>
	The changes are submitted to the database.
	End

Courtesy Change

The Courtesy Change feature checks the telephone busy/idle status before transmitting changes to the switch. If the telephone is busy, the change is not transmitted, the active call is disconnected, and the following error message appears: "Telephone is busy. Changes are not transmitted.".

Before a telephone call is transmitted to the call server, the overlay 32 STAT command is used to check the idle/busy status of the telephone. If the telephone is busy, then the changes are not committed to the switch and you must perform the operation again.

Nortel recommends that you turn off this feature before doing an bulk import operation.

Enabling and disabling the Courtesy Change feature

You can turn on or off the Courtesy Change feature from the existing Properties page.

To enable or disable the Courtesy Change feature, select the **Properties** link of the Phones branch of the Element Manager navigator, and select either **Enable** or **Disable**.

The following figure shows Courtesy Change on the **Properties** Web page.

Figure 206 Properties Web page

Database Update	
Clicking the update button will initiate retrieval of system, Call Server.	customers and CPND customer properties from the
ast Updated: Wed Nov 14 09:23:00 AST 2007	
	Update
Vhen courtesy change is enabled, changes are transmi	ued to the can server only it the phone is not busy.
C Enable © Disable	
Enterine	Save

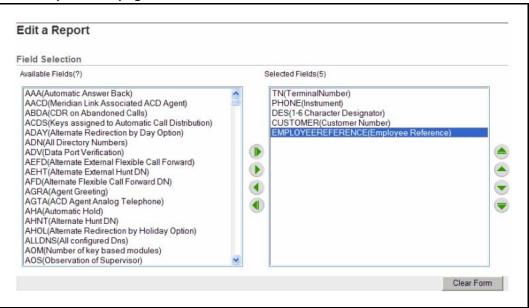
Note: Turning on the Courtesy Change feature significantly affects the performance of bulk add, delete, or import operations. Nortel recommends that you turn off the courtesy feature before such operations.

Reports

Element Manager provides the ability to construct complex SQL queries against the Phones database. The results can be in either HTML or CSV format. If you choose HTML format, only a maximum of 1000 records appear.

Click the **Reports** link of the **Phones** branch of the Element Manager navigator. The **Edit a Report** Web page appears, as shown in Figure 207 "Edit a Report Web page" (page 304).

Figure 207 Edit a Report Web page



Enter the desired criteria and report format. Click **Generate Report** to generate the report.

Migration

Use the Migration tool to migrates telephone data from Element Manager to Subscriber Manager. This tool associates the telephone with existing subscribers, or adds a subscriber and then add accounts to them.

You can migrate only telephones that have a CPND name configured. During migration, the tool checks with the Subscriber Manager for a subscriber with the same name as the CPND name in the telephone. Based on the search result, it either adds an account under the existing subscriber, or creates a new subscriber and then adds an account under it.

To start the Migration tool, select on the **Migration** link on the **Phones** branch of the Element Manager navigator. The **Migration** Web page appears as shown in Figure 208 "Migration Web page" (page 305).

tele

Figure 208 Migration Web page

Common Manager 4	Managing: EM on pecm1100(172.16.100.2) Phones D Maration
Links	Profess & Wighten
- Virtual Terminals	Migration
System + Alarms	
- Maintenance	Telephony accounts will be created for all phones. The accounts will be associated to a new or existing
+ Core Equipment	subscriber depending on the CPND name configured in the phone.
- Peripheral Equipment + IP Network	CPND name mismatch: 🗹 Create new subscriber
+ Interfaces	If the CPND name on the phone and the subscriber
- Engineered Values	name differ, a new subscriber will be created.
+ Emergency Services	Migrate Cancel
+ Geographic Redundancy	
+ Software	
Customers	
Routes and Trunks	
- Routes and Trunks	
- D-Channels - Digital Trunk Interface	
Dialing and Numbering Plans	
- Electronic Switched Network	
- Flexible Code Restriction	
- Incoming Digit Translation	
Phones	
- Templates	
- Reports	
- Properties	
-Migration	

To create a new subscriber when a CPND name mismatch occurs, ensure the **Create new subscriber** box is selected.

When you click **Migrate**, a confirmation message box appears before the migration starts.

While the migration is in progress, the system displays a status page that provides the current status of the migration. The page is refreshed every 5 seconds with the latest status.

After the migration is complete, the page shows the summary as shown in Figure 209 "Migration Results Web page" (page 305).

Figure 209 Migration Results Web page

+ System - Customers	Migration Results	
+ Routes and Trunks + Dialing and Numbering Plans - Phones	Migration Complete Number of phones to migrate: 10	
- Templates - Reports - Properties - Migration • Tools • Security	Subscriber accounts queued for creation: 8 Subscribers created 2 Subscriber accounts failed creation: 1 Subscribers failed creation: 0	
	For failures, you need to check the log files	Cancel

Tools

Contents

This section contains the following topics:

"Introduction" (page 307)

"Backup and Restore" (page 307)

"Call Server Initialization" (page 317)

"Date and Time" (page 320)

"Logs and Reports" (page 334)

Introduction

The following Call Server Tools can be accessed through Element Manager:

- Backup and Restore
- Call Server Initialization
- Date and Time
- Logs and Reports

Backup and Restore

The **Backup and Restore** link of the **Tools** branch of the Element Manager navigator provides access to Call Server Backup and Restore functions, as well as Personal Directories Backup and Restore functions.

Call Server

In the Services branch of the Element Manager navigator, click **Backup** and **Restore > Call Server**. The **Call Server Backup** and **Restore** Web page opens (see Figure 210 "Call Server Backup and Restore Web page" (page 308)).

Figure 210 Call Server Backup and Restore Web page

Call Sei	ver Backup and Restore
Backup Arc	hive Summary
	Last Backup Archive: Not Available
	Status: Not Available Backup Archive Initiation: Not Available
Backup	
Perform a ba	ackup of the Call Server data to the Call Server's primary and internal backup drives.
Restore	
Restore bac	ked up files from the internal backup memory device to the primary memory device.
Backup R	ules
Configure ar	nd view the Backup Rules.
Backup S	chedules
Configure ar	nd view the Backup Schedules.

Note: Backup Rules and Backup Schedules are available only on CPP IV and CP PM systems.

Backup

To back up the Call Server, click the **Backup** link on the **Call Server Backup and Restore** Web page. The **Call Server Backup** Web page opens, as shown in Figure 211 "Call Server Backup Web page" (page 309).

Figure 211 Call Server Backup Web page

Action Backup	Submit Cancel	

Select **Backup** from the **Action** drop-down list and click **Submit**. The **Call Server Backup Waiting** Web page opens to indicate that the backup is in progress.

The Backup function invokes a data dump and writes the Call Server data to the primary and internal backup drives.

The Backup function performs the same task as the EDD CLI command traditionally configured in LD 43.

A summary of the results of the EDD appears at the bottom of the **Call Server Backup** Web page.

Performing manual database replication

To manually invoke the database replication process, select **Backup According to Rule** from the **Action** drop-down list, and click **Submit**. The **Backup Rule Number** drop-down list appears. In the **Backup Rule Number** drop-down list, enter the Backup Rule number to use for the restore operation. Click **Submit**.

For more information on backing up and restoring databases for Geographic Redundancy, see *System Redundancy Fundamentals* (*NN43001-507*).

Restore

The Call Server Restore function restores the backed-up files from the internal backup device to the primary device. The Restore function performs the same task as the CLI RIB command traditionally configured in LD 43.



WARNING

The process to restore data using the Element Manager interface is immediate. There is no warning or detailed information provided on the specifics of the data to be restored.

Also, note that a "cold start" of the system is required before the restored data is in effect.

Click the **Restore** link on the **Call Server Backup and Restore** Web page. The **Call Server Restore** Web page opens (see Figure 212 "Call Server Restore Web page" (page 310)).

Figure 212 Call Server Restore Web page

up Data(RES) 🛛 🔽 Subm	it Cancel	

Select **Restore from Backup Data (RES)** in the **Action** drop-down list, and click **Submit**.

Note: The database for Element Manager IP Telephony is updated immediately after the restore. Other call server databases require a cold start after the restore.

For information about the server databases and when they were created, select **Database issue and creation date** in the **Action** drop-down list, and click **Submit**. The information is displayed in the text area below the command.

To manually invoke a database restore process, select **Restore According to Rule (RSR X Y)** from the **Action** drop-down list. The **Backup Rule Number** and **Restore Version** drop-down lists appear, as well as the **Apply Filtering** checkbox. In the **Backup Rule Number** drop-down list, enter the Backup Rule number to use for the restore operation.

For more information on backing up and restoring databases for Geographic Redundancy, see *System Redundancy Fundamentals* (*NN43001-507*).

Backup Rules

To add or edit a Backup Rule, click the **Backup Rules** link on the **Call Server Backup and Restore** Web page. The **Backup Rules** Web page opens as shown in Figure 213 "Backup Rules Web page" (page 311).

Figure 213 Backup Rules Web page

Add History Schedules Delete Rule Number Rule Type Rule Name SCS IP Address V 1 SCS BACKUP1 0.0.0.0 2	<u>Refres</u> /ersions
AND IN TRANSPORT DISCOURSE IN TRANSPORT	
O 1 SCS BACKUP1 0.0.0.0 2	!

To view a log of backup attempts, select a **Backup Rule** and click **History**. The **Backup History** Web page opens. This Web page displays information for each backup attempt based on the given Backup Rule.

To add a Backup Rule, click **Add** on the **Backup Rules** Web page. The **Add Backup Rule** Web page opens. To edit a Backup Rule, click the Backup **Rule Number**. The **Edit Backup Rule** Web page opens, as shown in Figure 214 "Edit Backup Rule Web page" (page 312).

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Figure 214 Edit Backup Rule Web page

lit Backup Rule 1		
Rule Type:	Secondary Call Server 💌	
	Only one backup rule of type Fixed Media Device or Removable Media Device can be configured	
Rule Name:	BACKUP1	
AN IP Address of Secondary CS for Geographic Redundancy:	0.0.0.0	
Number of versions kept:	2 🗸	
		Save Cancel

The following Backup Rule Types are available:

- Fixed Media Device
- Removable Media Device
- FTP
- Secondary Call Server

For more information on configuring backup rules for Geographic Redundancy, see *System Redundancy Fundamentals (NN43001-507)* ().

Backup Schedules

Backup schedules provide the user with the ability to schedule backup operations associated with a specified backup rule. To add or edit a Backup Schedule, click the **Backup Schedules** link on the **Call Server Backup and Restore** Web page. The **Backup Schedules** Web page opens as shown in Figure 215 "Backup Schedules Web page" (page 313)

Figure 215 Backup Schedules Web page

<u>Refres</u> Minutes
5

To add a Backup Schedule, click **Add**. The **Add Backup Schedule** Web page opens. To edit a Backup Schedule, click the **Schedule Number**. The **Edit Backup Schedule** Web page opens, as shown in Figure 216 "Edit Backup Schedule Web page" (page 314).

Figure 216 Edit Backup Schedule Web page

dit Backup Schedule	1	
	Backup Rule:: 1-BACKUP1 🔽	
	Frequency:: Monthly 🛩	
	Day:: 1 💌	
	Hour:: 2 🗸	
	Minute:: 5 💌	
		Save Cancel

Each backup schedule defines a total of six associated parameters, as follows:

- **Backup Schedule Number** up to ten backup schedules can be defined, numbered from one to ten.
- **Backup Rule** specifies the backup rule number associated with this backup schedule. The backup rule number must be previously configured.
- **Frequency** defines how often the scheduled backup operation occurs. The default is D. Not more than one backup schedule can be defined with Frequency set to the value A. Options are:
 - M (monthly)
 - W (weekly)
 - D (daily)
 - A (automatic immediately after every EDD)
- Day specifies the day on which the backup occurs with a default value of SU. When Frequency is M, the range is 1 to 31 with a default value of 1. This parameter does not apply when Frequency is set to either of the values D or A. When Frequency is W, the range is the days of the week as follows:
 - SU
 - МО
 - TU

- WE
- TH
- FR

— SA

- **Hour** specifies the hour in the day on which the backup occurs. The range is 0 to 23, with a default of 3. This parameter does not apply when FREQ is set to the value A.
- **Minute** specifies the minute in the hour in the day on which the backup occurs. The range is 0 to 59.

To update Backup Schedules, click **Automatic Schedules**. The **Update Backup Schedules** Web page opens, as shown in Figure 217 "Update Backup Schedules Web page" (page 315).

Figure 217 Update Backup Schedules Web page

pdate Backup Sch I the Backup Schedules of type	equies Secondary Call Server are scanned :	and associated Backup Schedules are updated.
	Frequency:	Monthly 🗸
	Day:	1 💌
	Hour:	0 🗸
	Minute:	0 💌
	Delay:	3 🕶
		Save Delete Cancel

Backup schedules are supported only on CP PII, CP PIV and CP PM systems. A backup schedule can be created, modified, deleted, and printed by the respective command options **NEW**, **CHG**, **OUT**, and **PRT**.

Personal Directories Backup and Restore

To backup or restore Personal Directories click the **Backup and Restore** > **Personal Directories** link of the Tools branch or the Element Manager Navigator.

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 The **Personal Directories Backup and Restore** Web page opens and shown in the following figure.

Figure 218

Personal Directories Backup and Restore Web page

Managing: <u>172.16.100.2</u> Tools » Backup and Restore » Personal Directories Backup and Restore	
Personal Directories Backup and Restore	
- Personal Directories Backup	
- Personal Directories Restore	

To backup Personal Directories click the Personal Directories Backup link of the **Personal Directories Backup and Restore** Web page.

The **Personal Directories Backup** Web page opens as shown in the following figure.

Figure 219 Personal Directories Backup Web page

Personal Directories Back	up		
Action Backup 💌 Submit Cance	el		
F	Remote backup IP address		
	Remote backup userid		
	Remote backup password		
	Remote backup full path		
	Remote backup file name		

To backup Personal Directories, enter the backup information and click **Submit**.

To restore Personal Directories click the Personal Directories Restore link of the **Personal Directories Backup and Restore** Web page.

The **Personal Directories Restore** Web page opens as shown in the following figure.

Figure 220 Personal Directories Restore Web page

Personal Directories Restore	
Action FTP from Remote Site Submit Cancel	
Remote backup IP address	
Remote backup iP address Remote backup userid	
Remote backup useriu	
Remote backup full path	I
Nemote backup full paul	

To restore Personal Directories, enter the backup information to restore and click **Submit**.

For information on Backup and Restore functions of Personal Directories, "Personal Directories" (page 166).

Call Server Initialization

The Call Server Initialization page is used to invoke Call Server INI & Call Server SYSLOAD commands.

Click the **Call Server Initialization** link in the **Tools** branch of the Element Manager navigator. The **Call Server Initialization** Web page opens, as shown in Figure 221 "Call Server Initialization Web page" (page 317).

Figure 221 Call Server Initialization Web page

	INI ACTIVE	SYSLOAD ACTIVE
CPU Information		
Disk State : NOT REDUNDANT		
Activity State : Active		
Health : 14		

To check for the message displayed, roll the mouse over buttons displayed on the page.

Nortel Communication Server 1000 Element Manager System Reference - Administration NN43001-632 03.16 28 May 2009 If there is an INI command on the button, then the following message is displayed, "Restarts the Application Server".

If it is a SYSLOAD command, then another message is displayed, "Restarts the Application Server as well as the Operating System".

Call Server INI ACTIVE Command

The Call server is a Redundant System or a Split System on the Active side.

Procedure 112

Initializing the INI ACTIVE command

Step	Action	
1	Click INI ACTIVE.	
	A confirmation message is displayed.	
2	Click OK .	
	The Call Server is rebooted and the Element Manager user is logged out.	
	End	

Call Server INI INACTIVE Command

The Call server is Redundant System on the Inactive side.

Procedure 113 Initializing the INI INACTIVE command

Step	Action
1	Click INI INACTIVE.
	A confirmation message is displayed.
2	Click OK .
	The inactive core is rebooted.
	End

Call Server INI BOTH Command

The Call Server is a CPP Redundant System.

Procedure 114 Initializing the INI BOTH command

Step	Action
1	Click INI BOTH.
	A confirmation message is displayed.
2	Click OK .
	The Call Server is rebooted and the Element Manager user is logged out.
	End

Call Server SYSLOAD ACTIVE

The Call server is a Redundant System or a Split System on the Active side.

Procedure 115

Initializing the SYSLOAD ACTIVE command

Step	Action
1	Click SYSLOAD ACTIVE.
	A confirmation message is displayed.
2	Click OK .
	The Call Server is rebooted and the Element Manager user is logged out.
	End

Call Server SYSLOAD INACTIVE Command

The Call server is Redundant System on the Inactive side.

Procedure 116 Initializing the SYSLOAD INACTIVE command

Step	Action
1	Click SYSLOAD INACTIVE.
	A confirmation message is displayed.
2	Click OK .

The inactive core goes for sysload.

--End--

Call Server SYSLOAD BOTH Command

The Call Server has a Redundant System.

Procedure 117 Initializing the SYSLOAD BOTH command

Step	Action
1	Click SYSLOAD BOTH.
	A confirmation message is displayed.
2	Click OK .
	The Call Server is rebooted and the Element Manager user is logged out.
	End

Note: If the selected command is not executed successfully for any reason, such as an overlay conflict for example, the following error message is displayed, "The command was not executed successfully. Try again."

Date and Time

The date and time management covers the configuration of time synchronization options, as well as the setting of the actual date and time, and time zone related settings. An important concept is that there is a recommended configuration for any elements that are part of a CS 1000 system (these are running CS 1000 applications, such as CS, SS, SIPL, PD).

Timezone offsets for distributed phone subscribers is separately configurable through the Element Manger Branch Office zone configuration. In order to ensure that the configuration for a CS 1000 system is consistent, the configuration must be done using Element Manager.

The purpose of system-level coordination of the operating system date and time configuration for all elements of a single CS 1000 system is to facilitate the interpretation of system event and error messages generated by different elements. The CS 1000 system level date and time management in Element Manager allows the configuration of Network Time Protocol (NTP) and Network Time Synchronization (NTS). The NTS client and NTP usage are mutually exclusive options for the CS 1000 system. A Call Server may be designated as the NTS master and utilize NTP to synchronize its own time.

In Element Manager, the configuration setting of NTP requires the systemadmin permissions, whereas setting of the actual date/time clock requires either systemadmin or timeadmin permissions.

For any other Linux servers that are not part of a CS 1000 system, configuration is done using Base Manager of UCM. See, *Linux Platform Base and Applications Installation and Commissioning* (NN43001-315).

Configuration of time synchronization options performed from Element Manager overrides those previously performed by CLI, Base Manager, or the install tool on all system elements. Conversely, if changes are attempted later on at the individual element level that may interfere with the system time synchronization options chosen at the system level using Element Manager.

Nortel recommends that you use the ELAN interface for all NTP communication within a system. This would be to communicate to CS 1000 NTP primary and secondary servers. The CS 1000 NTP primary and secondary servers would normally communicate with external NTP clock sources using their TLAN connections. If TLAN is not available, then ELAN would be used. In all cases, it is necessary to ensure that appropriate routing is in place for communication between devices. This applies for communication to external sources and also for communication with CS 1000 NTP primary and secondary servers if the ELAN network interfaces of devices are on different subnets.

System time synchronization options

The following are the time synchronization options offered. Only one such option may be chosen. All configuration for these options is done solely by Element Manager and conveyed to all system elements.

- NTS client (Call Server as NTS client) can be configured to allow the Call Server to be synchronized from a ISDN digital trunk D-channel. The Call Server then pushes time directly to all system elements. An exception is standalone Element Manager, where Element Manager is not running on an element with any of the Call Server, SS, SIPL, or PD applications. In such as case, Base Manager must be used to set appropriate time synchronization, if required, on that element
- NTS Master (Call Server as NTS master) can be configured to allow the Call Server to act as the NTS Master. This Call Server provides time synchronization to other Call Servers set up as NTS slaves across

MCDN. The system with Call Server as NTS master may use NTP configuration to maintain time from external time sources or internal hardware clock of the CS 1000 Primary NTP server.

 CS 1000 system level primary and, optionally, secondary NTP servers are configured on Linux system elements that are part of this CS1000 system. The secondary NTP server would act as a backup for the primary NTP server, and normally synchronize time with the primary NTP server and then try with other external sources. The default is that the element on which Element Manager is running is set as the CS 1000 primary NTP server, but that can be altered. All other Linux system elements (including EM if applicable) will synchronize to these CS 1000 NTP servers. Configuration is done by EM and pushed to all Linux elements.

The CS 1000 primary and secondary NTP servers can source their time in two ways:

- The CS 1000 primary and secondary NTP servers use their internal hardware clocks. The date/time has to be set using Base Manager on the primary (assuming that the secondary NTP server will sync time from the primary NTP server in normal operation).
- External NTP clock sources are used. The internal system primary and secondary NTP servers are synchronized from external clock sources, up to 10, with optional single key security. The secondary NTP server would normally synchronize with the primary NTP server, and only synchronized with the external sources if the primary is not available.

If you use NTP security, all the clock source servers need to have the same private key. This means that an internal primary NTP server can not use a different key to access an external server than that which is used for servicing requests from internal clients. The implication is that if the external connection is to be secured, the internal connections would also have to be secured using the same single key as the external connections. Also, all the external servers need to have the same private key to service the requests from the internal servers or other Linux NTP clients.

Note: In previous releases, the Call Server supported configuration of two external clock sources with different private keys for each, but only a single private key is supported in Communication Server 1000 Release 6.0.

When NTP configuration is done using EM, the ELAN IP addresses of system elements are obtained from UCM element information and used for the configuration of such elements as primary or secondary NTP servers. When NTP is utilized, you must configure each element with time zone and daylight saving adjustments. Element Manager supports Windows-style selection of time zones. The time zone you select determines the time zone regions and subregions to be used on Linux system elements. The configuration associated with the time zone you select is applied to all system elements

System Date and Time

The **System Date and Time** Web page offers configuration of the following:

- The ability to configure the Date and Time for the system
- The ability to configure the Time Zone
- The option to configure Network Time Protocol for the system
- The option to configure Network Time Synchronization for the system

Note: If there are no time synchronization options currently chosen (i.e., neither NTP nor NTS are configured) then a warning appears.

Click the **Date and Time** link in the **Tools** branch of the Element Manager navigator. The **System Date and Time** Web page opens, as shown in Figure 222 "System Date and Time Web page" (page 323).

Figure 222 System Date and Time Web page

System Date and Time		
The system clock may be set manually, or synchronized with a network time server.		
Current System Date and Time	Sync Now	Edit
Date: 13 February 2009 Time: 15:56:49		
Time Zone		Edit
Zone: (GMT-04:00) Attantic Time (Canada) (with Daylight Saving adjustments)		
NetworkTimeProtocol	Sync Now	Edit
Key ID: 1234 Private Key: ++++++++++++++++++++++++++++++++++++		
Network Time Synchronization		Edit
Node role: NTS Master		

The **System Date and Time** Web page summarizes the following sections:

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- Current System Date and Time: The time displayed is always the Call Server time.
- Time zone: The time zone configured for the CS 1000 system is displayed
- Network Time Protocol: The NTP server (Primary/Secondary) details are displayed. If security is configured then the key id and private key are shown (masked), otherwise a message is displayed with "Not configured".
- NTS configuration is displayed (NTS Master/NTS Slave/NTS Stand-alone).

Current System Date and Time

The Current System Date and Time section displayed on the **System Date and Time** Web page displays the current date and time on the CS 1000 Call Server. When you select Edit, you can manually set the date and time on the Call Server or NTP server. Manually setting the date and time is not an operation that you would normally perform in the cases where either NTP or NTS were configured because manual adjustments would be overwritten.

The Sync Now button initiates re-application of the date and time configuration to all elements. If NTP is in use on the system this results in an immediate synchronization with external NTP sources and/or the CS 1000 primary NTP server.

If the NTP is in use, then you are redirected to Base Manager to set the date and time on the internal Primary NTP server and if NTS is in use then you configure the date and time on the Call Server and in the case of a Linux based Call Server it is done through redirection to the Base Manager.

Use the Edit button in the following scenarios:

- If the system is running as NTS slave then time is set on the Call Server. For a VxWorks Call Server clicking Edit brings up a new page to set the time. For the CP PM Co-Resident CS & SS on Linux, the Base Manager of the CS server is opened in a new window.
- If the system is using NTP, then clicking Edit opens the Base Manager time page of the Primary NTP server in a new window.
- In the case of NTS master or NTS stand-alone (i.e., NTS disabled), then if NTP is in use clicking Edit opens the Base Manager time page.
- If time synchronization is not configured, a warning is normally given when accessing the page. Clicking Edit allows the time on the Call

Server to be set. For a VxWorks Call Server clicking Edit brings up a new page to set the time. For the CP PM Co-Resident CS & SS on Linux, the Base Manager of the CS server is opened in a new window.

If NTP is being used on the system, then after setting the time, click Sync Now, to immediately start time synchronization to all elements.

For more information about configuring Date and Time using Base Manager, refer to *Linux Platform Base and Applications Installation and Commissioning* (NN43001-315).

Procedure 118

Editing date and ti	me on a VxWorks	Call Server
---------------------	-----------------	-------------

Step	Action
1	Click Edit in the Current System Date and Time section of the System Date and Time Web page.
	The Edit Date and Time Web page opens, as shown in Figure 223 "Edit Date and Time Web page" (page 326)
2	Enter the Date and Time in the appropriate fields.
3	If necessary enter the value for the Daily Time Adjustment to compensate for a fast or slow system clock.
4	Click Save .
	The System Date and Time Web page opens with the new time settings.
5	If NTP is being used on the system, click Sync Now to immediately start time synchronization to all elements.

--End--

Figure 223 Edit Date and Time Web page

	ate and Time
)ate	Day: 15 🕶 Month: October 💌 Year: 2008 🔹
ime	
	Hours: 11 * Minutes: 10 * Seconds: 18 *
	T ime Adjustment time of day during the midnight routines to compensate for a fast or slow system clock Increment + Adjustment 000 * (0 - 250 milliseconds)
	time of day during the midnight routines to compensate for a fast or slow system clock

Time Zone

The **Time Zone** Web page displays the time zones and lists all the supported zones and UTC values. The time zone selected is used to set the time on the Call Server and Linux elements. For the case of a VxWorks Call Server internal mapping is also done of the offset from UTC and Daylight Saving time start and end dates. For a VxWorks Call Server, the Daylight Saving time start and end dates will be configured on the Call Server using the internally mapped values. For Linux devices, the Linux time region Daylight Saving time information is used.

If the time zone selected has automatic Daylight Saving adjustments built in, the text on the screen indicates that as "(with Daylight Saving adjustments)", otherwise the text indicates "(no Daylight Saving adjustments)". Some time zones (e.g., currently those associated with Jerusalem and Tehran) have Daylight Saving dates that vary each year. These are not handled and you must manually change the time zones for these regions upon entering or leaving the Daylight Saving calendar period. When such time zones are selected, the text on the screen indicates "(manual time zone change required when entering or leaving Daylight Saving period)".

Procedure 119 Editing the Time Zone

Step	Action
1	Click Edit in the Time Zone section of the System Date and Time Web page.
	The Time Zone Web page opens as shown in the following figure.
2	Select the Time Zone from the list.
3	Click Save .
	The System Date and Time Web page opens with the new time zone setting.

--End--

Figure 224 Time Zone Web page

ks may not run when expected, and other time- system stability issues and security certificate sary to log in again.
×

Network Time Protocol configuration

Prior to CS 1000 Release 6.0, Element Manager used overlay configuration of the Call Server (CS) on VxWorks to support system level NTP configuration. The NTP configuration only applied to the CS and all of the VxWorks based Communication Server 1000 system elements derived their time from the CS through a pbxLink.

You must use Element Manager to configure time synchronization settings that are used on the Call Server as well as all other system elements. The configuration of NTP differs from the support that was present prior to R6.0. Some settings for polling interval, query offset, and alarms which were applicable for VxWorks based CS are not offered now, since the Call Server now synchronizes only with internal system primary or secondary

NTP servers, and not with external clock sources. These settings will be hardcoded now and ten minutes for polling will be the mid-range of Linux NTP clients.

If this is the first time that NTP is being configured, once the **Synchronize System Clock with NTP** check-box is checked, the UI is loaded with a default configuration. The default configuration has the server running Element Manager selected as the internal Primary NTP server, and internal clock sources (hardware clock on this server) is used. If NTP had been previously configured on the system, but subsequently disabled then the previous configuration is displayed.

The default selection for transfer mode is "Secure". This selection requires the operator to enter the Key ID and Private key. Only a single key is supported to be applied for NTP protocol security between external clock sources as well as between internal system NTP servers and other system Linux elements. Only MD5 authentication is supported for NTP security. Selecting insecure transfer mode disables the fields for Key ID and Private key and the key data is not removed.

The selection of a primary internal NTP server is mandatory, whereas a secondary internal NTP server is optional, but recommended when there are two or more Linux based elements configured in the CS 1000 system.

The secondary internal NTP server normally gets its time source from the primary internal NTP Server. If the Primary internal NTP server does not respond to the Secondary, then the Secondary gets its time source from the first external NTP server which responds to polling by the Secondary.

NTP clients running on Linux base elements which are "Not a clock server", as well as on the VxWorks-based Call Server, get their time source from the Primary internal NTP server, or from the Secondary internal NTP server, if the Primary does not respond to polling by the other NTP clients in the CS 1000 system.

When you click the Sync Now button in the Network Time Protocol section, a ntpconfig command is sent to the Linux element with the pre-configured NTP details.

Procedure 120 Configuring Network Time Protocol

Step	Action
1	Click Edit in the Network Time Protocol section of the System Date and Time Web page.

The **Network Time Protocol** Web page opens as shown in Figure 225 "Network Time Protocol Web page" (page 330).

2 Click the Synchronize System Clock with NTP box.

Note: Clicking this box enables Network Time Protocol configuration otherwise only synchronization is available.

3 Select Secure.

Secure is the default setting.

Note: If transfer mode is to apply only to internal synchronization then it should be bundled under Local server sub-section.

4 Enter the Key ID and Private Key.

Note: Only a single key is supported to be applied for NTP protocol security between external clock sources as well as between internal system NTP servers and other system Linux elements. Only MD5 authentication is supported for NTP security. Selecting insecure transfer mode disables the fields for Key ID and Private key and the key data is not removed.

5 Select Primary and Secondary IP addresses from the list.

The drop down boxes for primary and secondary server IP addresses provide the choice of any Linux server associated with the given CS 1000 system.

Note: If NTP has not been configured for the CS 1000 system, the default value for the primary server IP address is the ELAN address of the server hosting Element Manager for the system.

6 To select an external server as a clock source click the **External** server(s) box.

Selecting **External server(s)** enables the additional fields labeled "NTP server IP" which allows you to enter the IP addresses of one to ten external clock sources.

Note: Specifying an external NTP clock sources are optional, and if configured, are used by the local Primary and Secondary NTP servers. If external servers are not configured then the internal hardware clocks are used on the primary and secondary NTP servers.

7 Enter an external clock source and click **Add**. You can add up to ten external clock sources. The list is an ordered list, such that

the first external source listed is contacted first, and if that fails then the next on the list is used.

Note: You may have to perform IP routing configuration to reach external servers. This would not normally be required for devices that reach external sources by the TLAN, since the default route for most devices uses the TLAN. Base Manager can be used for IP route configuration.

8 Click Save.

The parameters are transferred to all system Linux elements.

--End--

Figure 225 Network Time Protocol Web page

Synchronize System Clock with NTP:	~			
Transfer Mode:				
	O Insecure			
Key ID:	666			
	666 *(1-65535)			
Private Key:			numeric chars)	
	The length of the prival accepted.	te key should be a	t most 16 characte	ers where #, single quotes and spaces are no
	CS 1000 Linux system The NTP configuration		ated to all Linux ef	ements associated with this CS 1000 system
	The ELAN IP addresse missing IP addresses			ed below for proper configuration. Add any
Linux element IP:]	Add	
System Linux element IP	192 168 55 140	1	Remove	
	192 168 209 122 192 168 209 91		>	
	tems without a trailing	"" were manually	added and only th	ese may be removed.
	CS1000 system NTP s		our aphi dack acu	not be made into their line a from a formal
	같은 이렇게 많은 것을 가지 않는 것을 같아요. 것	server(s) may be y	our only clock sou	rce or may take their time from external
	CS1000 system NTP s servers defined below	server(s) may be y	our only clock sou	rce or may take their time from external
	CS1000 system NTP s servers defined below 192.168.209.92	server(s) may be y	our only clock sou	rce or may take their lime from external
Primary NTP server IP address: Secondary NTP server IP address:	CS1000 system NTP s servers defined below 192.168.209.92	server(s) may be y		
Primary NTP server IP address: Secondary NTP server IP address:	CS1000 system NTP s servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always s	server(s) may be y		
Primary NTP server IP address: Secondary NTP server IP address: Clock Source:	CS1000 system NTP servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always s External server(s)	server(s) may be y	name is on TLAN.	
Primary NTP server IP address: Secondary NTP server IP address: Clock Source:	CS1000 system NTP servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always s External server(s)	server(s) may be y	name is on TLAN.	
Primary NTP server IP address: Secondary NTP server IP address: Clock Source:	CS 1000 system NTP servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always s External server(s) External NTP clock sol NTP servers.	server(s) may be y	name is on TLAN. and if configured a rder of priority. The	are used by the local Primary and Secondary
Primary NTP server IP address: Secondary NTP server IP address: Clock Source:	CS1000 system NTP s servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always s External server(s) External NTP clock son NTP servers. Add up to ten external	server(s) may be y	name is on TLAN. and if configured a rder of priority. The	are used by the local Primary and Secondary a first item in the list will be used first. Enter an
Primary NTP server IP address: Secondary NTP server IP address: Clock Source:	CS1000 system NTP a servers defined below 192, 168, 209, 92 192, 168, 209, 101 ELAN IPs are always a External server(s) External NTP clock sol NTP servers. Add up to ten external IP Address below and	server(s) may be y	name is on TLAN. and if configured a rder of priority. The	are used by the local Primary and Secondary a first item in the list will be used first. Enter an

CS1000 Linux System Elements

The NTP Configurations propagate into all Linux elements associated with the CS1000 system. Default configuration shows the list of Linux elements registered with the CS1000 system. Linux elements that are not associated with the CS1000 system can be added and removed manually and updates the same for CS1000 system-level NTP servers.

CS1000 system-level NTP server(s)

The selection of a primary internal NTP server is mandatory, whereas a secondary internal NTP server is optional, but recommended when there are two or more Linux based elements configured in the CS 1000 system.

The secondary internal NTP server's NTP client normally gets its time source from the primary internal NTP Server. If the Primary internal NTP server does not respond to the Secondary, then the Secondary gets its time source from the first external NTP server which responds to polling by the Secondary.

NTP clients running on Linux base elements which are "Not a clock server", as well as on the VxWorks-based Call Server, get their time source from the Primary internal NTP server, or from the Secondary internal NTP server, if the Primary does not respond to polling by the other NTP clients in the CS 1000 system.

If NTP has not already been configured for the CS1000 system, the default value for is the ELAN address Element Manager for the system. The drop down boxes for primary and secondary server IP addresses provide the choice of any Linux server associated with the given CS1000 system. ELAN IP's are always shown even if the hostname is on TLAN.

Note: The Primary and Secondary IP addresses must be different and the system validates the IP addresses before they are accepted.

External Servers

The selection of External server(s) enables the additional fields labeled "NTP server IP" thereby allowing the operator to enter the IP addresses of one to ten external clock sources. The internal system primary and secondary NTP servers are Synchronized with these servers. The list is an ordered list, such that the first external source listed is contacted first, and if that fails then move on down the list. If the list is not in correct order then it may be necessary to delete sources and re-add in desired order. A newly added external server IPs is added to the end of the list.

If necessary to reach external servers then IP routing configuration may have to be performed on devices. This would not normally be required for devices that reach external sources by the TLAN, since the default route for most devices uses the TLAN. An IP route is required if the ELAN has to be used to reach an external source. The IP routes would have to be performed on the primary and secondary servers if required, and Base Manager can be used for this configuration. If external servers are not provided, the primary NTP server will derive its system clock from its internal hardware clock.

Note: The maximum number of Network Time Protocol server IP addresses is ten entries and are validated for uniqueness.

Network Time Synchronization

The clock synchronization feature is designed to work on ISDN networks, using D channel messages. NTS helps to synchronize time across different zones with different time zones for each. The Call Server is configured in master/stand-alone/slave modes for these zones. The stand-alone Call Server doesn't sync up with the master but the slave does sync up with the master. NTS enables the CS 1000 Call Server to derive its system clock from a Digital Trunk Signaling Link (DTRL). All of the other Signaling Servers, Media Gateway Controllers, and Voice Gateway Media Cards associated with the CS 1000 system derive their system clock from the Call Server to PBXLink. protocol.

In CS 1000 Release 6.0 support for NTS has been included in the deployment of Linux based servers. If the CS 1000 Call Server NTS Node Role is set as NTS slave then NTP and NTS configurations are mutually exclusive. For roles like stand-alone and master user can configure NTP for the elements to get time synced from the NTP servers. The Time Delta time adjustment factor keeps the Call Server at a difference with the master Call Server. This allows the slave Call Server to keep CS 1000 system time for its local timezone. If there are DST differences between the master NTS and slave NTS then manual adjustments may be required of the offset as the DST starts/ends.

You set the customer of the node and Local Virtual DN in charge of synchronizing the switch (that customer makes and receives the calls to and from the Master/Backup switch). That customer must already exist, prior to referencing it

If NTS is disabled and NTP is not in effect, then an warning message is shown to the user.

The Network Time Synchronization feature ensures that all time stamps in a network are synchronized from one source.

Procedure 121 Configuring Network Time Synchronization

Step	Action
1	Click Edit in the Network Time Synchronization section of the System Date and Time Web page.
	The Network Time Synchronization Web page opens, as shown in Figure 226 "Network Time Synchronization Web page" (page 334).
2	Select the Node Role form the list.
3	Select the Customer from the list.
4	Enter the Local Virtual DN.
5	Enter the Master/Backup Time Synchronization Number.
6	Choose the mode: Background (BKGD) or Daily Services Routine (DVCS).
7	If there are Daylight Saving Time (DST) differences between the master NTS and slave NTS then manual adjustments may be required of the offset as the DST starts or ends. Enter the Time Adjustment factor with clock on Master values
8	Click Save.

--End--

Figure 226

Custo	
Cusio	mer: 1
Local Virtual	DN:
Master/Backup T Synchronization Num	
М	ode: Background (BKGD)
	 Daily Services Routine (DVSC)
Time Delta	
Time Adjustment factor	with clock on Master
Sign 🕂 🔻 Ho	our 1 🔻 Minute 1 🔻

Network Time Synchronization Web page

Logs and Reports

To access IP Telephony Node Maintenance Reports click the **Logs and Reports > IP Telephony Nodes** link in the **Tools** branch of the Element Manager navigator. The **Node Maintenance and Reports** Web page appears.

For information on IP Telephony Node Maintenance and Reports, see "Nodes: Servers, Media Cards" (page 137).

In addition, information about the database status and synchronization are available under the Reports tab in NRS Manager. For more information on these reports, refer to *IP Peer Networking Installation and Commissioning (NN43001-313)*.

To display information on all IP Phones configured in the system, click the **Logs and Reports > IP Phone Location** link in the **Tools** branch of the Element Manager navigator. The **IP Phone Location** Web page opens, as shown in Figure 227 "IP Phone Location Web page" (page 335).

Figure 227 IP Phone Location Web page

		: All			6								
Phones Fourier State Hardware ID Public IP ERL ECL Location Description Manual Update Need Update Private IP 96 0 1 0 8000 1110 REG 180016ca007606623 192.167.103.26:5000 F <th>? Ph</th> <th></th> <th></th> <th></th> <th></th> <th>IP Phones</th> <th></th> <th>Search</th> <th></th> <th></th> <th></th> <th></th> <th></th>	? Ph					IP Phones		Search					
Image: Number Prime Number Prima Number Prima Number	Ph										Results	per page	100 🗸
Image: Number Prime Number Prima Number Prima Number		ones Eo	und (3	3)									
Number DN Hype State Haroware ID Public IP ERL ECL Description Update Update IP 96 01 0 8000 1110 REG 180016ca00760f6623 192.167.103.26:5000 96 01 1 8001 1110 REG 180016ca007636623 192.167.103.27:5000 96 01 1 96 01 1 8001 1110 REG 180016ca007636623 192.167.103.27:5000 96 01 1 96 01 1 96 01 1 8001 1100 REG 180016ca007636623 192.167.103.27:5000 96 01 1		0116310	unu (o	<i>'</i>]									Refresh
96 0 1 1 8001 1110 REG 180016ca0076736623 192.167.103.27:5000				<u>Type</u> <u>S</u>	<u>State</u> <u>Han</u>	dware ID	Public IP		ERL	<u>ECL</u>			Private
		96010	8000	1110 R	REG 180)16ca00760f66:	23 192.167.1	03.26:5000					
96 0 1 3 8004 1140 REG 18001365ff682a6625 192.168.249.68:5000													
)	96013	8004	1140 R	₹EG 1800)1365ff682a662	25 192.168.2	49.68:5000					

Enter the search criteria in the **Search for IP Phone Location** section and click **Search**. The results matching the criteria entered are displayed in the **IP Phones Found** section.

Call Server Report

To access the **Call Server Report** Web page, click the **Logs and Reports** > **Call Server Report** link in the **Tools** branch of the Element Manager navigator. The **Call Server Report** Web page opens as shown in the following figure.

Figure 228 Call Server Report Web page

	RDPREV	RDNEXT	RDSCONVERT
Report Log File Name with Path	RDOPEN	RDSHOW	
Display Latest Records 16	RDTAIL		
Display Oldest Records 16	RDHEAD		
Display Record Number 1373	RDGO		
Skip Records 0		Display Records 1	RD
Skip Records 0		Display Records 1 💌	RDS
Start Record Number 0		Display Records 📔 💌	VIEW
Backup Time (Hours) 20			

The following buttons provide one-click access to the following functions:

- RDSCONVERT Convert a report log file to text
- RDPREV Open the previous log file
- RDNEXT Open the next log file
- RDOPEN Open the latest report file
- RDSHOW Show a summary of the report file
- RDTAIL Show x records up to the newest record in the report file (where x is the configured display size).
- RDHEAD Show x records starting from the oldest record in the report file (where x is the configured display size).

To view selected detail data on records in the report file, use the text boxes, the drop-down lists, and the following buttons:

- RDGO Displays the record specified in the adjacent text box (where -1 is the oldest record and 1000 is the most recent).
- RD Browses the report records. Enter the number of records to skip and the number of records to display in the adjacent text boxes.
- RDS Browses the report records with (symbolic) memory dump. Enter the number of records to skip, and select the number of records to display using the adjacent text box and drop-down list.
- VIEW Views selected records. Enter a starting record number and select the number of records to view using the adjacent text box and

drop-down list. Negative numbers indicate records previous to the starting record.

Equipped Feature Packages

To view a list of software feature packages, click the **Logs and Reports** > **Equipped Feature Packages** link in the **Tools** branch of the Element Manager navigator. The **Equipped Feature Packages List** Web page opens as shown in Figure 229 "Equipped Feature Packages List Web page" (page 337).

Figure 229

Equipped Feature Packages List Web page

Ξq	uipped Feature Packages			
	Package Description	Package Name	Package Number +	^
1	Optional Features	OPTF	1	
2	Multi-Customer Operation	CUST	2	
3	Call Detail Recording, Teletype Terminal	CDR	4	
4	Call Detail Recording, Teletype Terminal	CTY	5	
5	Recorded Announcement	RAN	7	
6	Time and Date	TAD	8	
7	Do Not Disturb Individual	DNDI	9	
8	End-to-End Signaling	EES	10	
9	Intercept Treatment	INTR	11	
10	Automatic Number Identification	ANI	12	
11	Automatic Number Identification, Route Selection	ANIR	13	
12	Basic Routing	BRTE	14	
13	Do Not Disturb Group	DNDG	16	
14	Make Set Busy	MSB	17	
15	Special Service for 2500 Sets	SS25	18	-
			ge 100 💉 First Prev <u>Next</u>	

Peripheral Software Version Data

To view a list of Peripheral Software Version Data, including the loadware version of the Media gateway Controller (MGC) card, click the **Logs and Reports > Peripheral Software Version Data** link in the **Tools** branch of the Element Manager navigator. The **Peripheral Software Version Data** Web page opens as shown in Figure 230 "Peripheral Software Version Data Web page" (page 338).

Figure 230 Peripheral Software Version Data Web page

ipheral Software Version Data		
PSWV Version: 123	MDCS Version:	
Peripheral Software Application V	rsion Number	
Extended Network Card (XNET)	23	
Carrier Remote IPE Card (LCRI)	02	
Extended Peripheral Equipment Controller Card (XPEC)	41	
Multipurpose ISDN Signalling Link Basecode Loadware (MISP)	71	
MISP BRI Line Application Loadware (BRIL)	83	
MISP BRI Trunk Application Loadware (BRIT)	82	
MISP Meridian Packet Handler Application Loadware (MPH)	51	
Multipurpose Serial Data Link Basecode Loadware (MSDL)	73	
MSDL ASYN Application (SDI)	51	
MSDL DCH Application (DCH)	72	
MSDL Application Module Link Application (AML)	81	
BRSC Basecode (BRSC)	71	
BRSC BRI Application (BBRI)	54	
UIPE PRI Loadware Application (PRIE)	85	
UIPE BRIT Loadware Application (BRIE)	87	
NI2 TR1268 Datafile (NI02)	26	
ISO QSIG PRI2 Interface Datafile (ISIG)	33	
NEW ZEALAND Interface Datafile (TCNZ)	13	
ETSI Interface Datafile (ETSI)	48	
AUSTRIA Interface Datafile (AUS1)	48	
DENMARK Interface Datafile (DEN1)	48	
FINLAND Interface Datafile (FIN1)	48	
GERMANY Interface Datafile (GER1)	53	
ITALY Interface Datafile (ITA1)	53	

System License Parameters

To view a list of System License Parameters, click the Logs and Reports > System License Parameters link in the Tools branch of the Element Manager navigator. The System License Parameters Web page opens as shown in the following figure.

Figure 231 System License Parameters Web page

Managing: 192.167.102.3

Tools » Logs and reports » System License Parameters

System License Parameters

NAME	LIMIT	LEFT	USED
ANALOGUE TELEPHONES	32767	32767	0
CLASS TELEPHONES	32767	32767	0
DIGITAL TELEPHONES	32767	32767	0
DECT USERS	32767	32767	0
IP USERS	32767	32760	7
BASIC IP USERS	32767	32765	2
TEMPORARY IP USERS	32767	32767	0
DECT VISITOR USER	10000	10000	0
ACD AGENTS	32767	32762	5
PCA	32767	32762	5
ITG ISDN TRUNKS	32767	32767	0
H.323 ACCESS PORTS	32767	32757	10
AST	32767	32767	0
SIP CONVERGED DESKTOPS	32767	32765	2
SIP CTI TR87	32767	32767	0
SIP ACCESS PORTS	32767	32757	10
RAN CON	32767	32767	0
MUS CON	32767	32767	0
TNS	32767	32713	54
ACDN	24000	23998	2
AML	16	14	2
IDLE_SET_DISPLAY	CS1000E PIV Node 9		

Operational Measurements

Element Manager provides users with regularly scheduled reports on system traffic. To access these reports, click the **Logs and Reports > Operational Measurements** link in the **Tools** branch of the Element Manager navigator. The **Call Server Operational Measurements** Web page opens, as shown in Figure 232 "Operational Measurements Web page" (page 340).

Figure 232 Operational Measurements Web page

<section-header><text><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header>

System Traffic

To display details of the system's Traffic reports, click **System Traffic**. The **System Traffic** Web page opens, as shown in Figure 233 "System Traffic Web page" (page 341).

Figure 233 System Traffic Web page

	m Traffic		
Enabl	le Disable Thresholds Schedule		Refresh
	Report Title	Report Number	Report Status
1	Command status links and application module links	TFS008	Enabled
2	D-Channel	TFS009	Enabled
3	Dial tone delay	TFS003	Disabled
4	ISDN BRI trunk DSL system report	TFS014	Disabled
5	ISDN GF transport	TFS010	Disabled
6	Junctor group	TFS007	Disabled
7	Meridian packet handler	TFS015	Disabled
8	Multi-purpose ISDN signaling processor DCH management	TFS012	Disabled
9	Multi-purpose ISDN signaling processor messages	TFS013	Disabled
10	Multi-purpose ISDN signaling processor traffic	TFS011	Disabled
11	Network	TFS001	Disabled
12	Processor load	TFS004	Disabled
13	QoS IP statistics	TFS016	Disabled
14	Selected terminals	TFS005	Disabled
15	Service loops	TFS002	Disabled

To display a report, click the **Report Title**. The report displays in a new window.

To enable a report, select the report and click **Enable**.

To disable a report, select the report and click **Disable**.

To configure Threshold information, click **Thresholds**. The **Thresholds** Web page is displayed.

To configure report schedules, click **Schedules**. The **Report Schedule** Web page is displayed.

Customer Traffic

To display details of the Traffic reports for each Customer configured in the system, click **Customer Traffic**. The **Customer Traffic** Web page opens, as shown in Figure 234 "Customer Traffic Web page" (page 342).

Figure 234 Customer Traffic Web page

istomer Traffic		
oorts For Customer: 0 💌		
Enable Disable Thresholds Schedule		Refresh
Report Title	Report Number	Report Status
1 Call blocking due to lack of DSP resource	TFC012	Disabled
2 Call park	TFC007	Disabled
3 Customer console measurements	TFC003	Disabled
4 Feature key usage	TFC005	Disabled
5 Incoming trunk group measurements	TFN003	Disabled
6 Individual console measurement	TFC004	Disabled
7 ISPC links establishment	TFC105	Disabled
8 Messaging and auxiliary processor links	TFC008	Disabled
9 Network attendant service	TFC009	Disabled
10 Network class of service measurements	TFN002	Disabled
11 Networks	TFC001	Disabled
12 Radio paging	TFC006	Disabled
13 Route list measurements	TFN001	Disabled
14 Trunks	TFC002	Disabled
15 Use of broadcasting routes Set	TFC111	Disabled

To display Traffic reports for a Customer, select the Customer from the drop-down list.

To enable a report for the selected Customer, select the report and click **Enable**.

To disable a report for the selected Customer, select the report and click **Disable**.

To configure Threshold information for the selected Customer, click **Thresholds**. The **Thresholds** Web page is displayed.

To configure report schedules for the selected Customer, click **Schedules**. The **Report Schedule** Web page is displayed.

Traffic Parameters

To configure Traffic Parameters for the system, click **Traffic Parameters**. The **Edit Traffic Parameters** Web page opens, as shown in Figure 235 "Edit Traffic Parameters Web page" (page 343).

Figure 235 Edit Traffic Parameters Web page

dit Traffi	c Parameters
	Line Load Control Level : Off 🛛 💌
	Blocked group members cannot originate internal or trunk calls.
	Blocking Probabilities
	First: 000 * (0 - 100 %)
	Second: 000 * (0-100%)
	Third: 000 * (0-100%)
	Feature Key Customer : 0 💌
	Customer which will run the feature key measurements report. Only 1 customer can run this report at a time.
	Save

Select a Line Load Control Level from the drop-down list.

Enter the Blocking Probabilities.

Choose a Customer from the **Feature Key Customer** drop-down list and click **Save**.

Note: If the Line Load Control Level is set to Off, the Blocking **Probabilities** are disabled.

Quality of Service

Click **Quality of service** to open the **Ethernet Quality of Service Diagnostics** Web page. For more information, see "Ethernet Quality of Service Diagnostics" (page 82)

Bandwidth Management

Click **Bandwidth Management** to open the **Maintenance Commands for Zones** Web page. For more information, see "Zone Diagnostics" (page 111)

Individual Traffic Measurement

To configure lines and trunks for Individual Traffic Measurement, click **Individual Traffic Measurement**. The **Individual Traffic Measurement** Web page opens, as shown in Figure 236 "Individual Traffic Measurement Web page" (page 344).

Figure 236 Individual Traffic Measurement Web page

Add Delete	Towning	Refres
□ <u>Type</u> ▲ 1 □ TN	Terminal 096 0 02 01	
2 TN	096 0 02 00	

To add a terminal for Individual Traffic Measurement, click **Add**. The **Add TN** Web page opens, as shown in Figure 237 "Add TN Web page" (page 344).

Figure 237 Add TN Web page

TN:			
	Terminals with ITM set are included recorded.	d in the groups for which	Line Traffic Measurements are
			Save Cancel

Enter the TNs to be added in the **TN** text box. Enter up to five TNs and click **Save**.

Note: The TNs must be separated by a comma.

Security

The following links are provided under the Security branch of Element Manager:

- Passwords
 - System Passwords
 - Customer Passwords
- Policies
 - Media
 - System Keys
 - File Transfer
 - Port Access Restrictions
- Login Options
 - Shell Login
 - Access Warning

All information about the Security features available in Element Manager is covered and maintained in *Security Management Fundamentals* (NN43001-604).

Support

Contents

This section contains information about the following topics:

"Introduction" (page 349)

"Help" (page 349)

"Release Notes" (page 350)

Introduction

The following Support features can be accessed through Element Manager:

- Help
- Release Notes

Help

Element Manager provides context-sensitive online Help. To access Help, click the **Help** link located in the top right corner of the Element Manager Web pages. The **Help** Web page shown in Figure 238 "Help Web page" (page 350) appears.

Figure 238 Help Web page

Contents Index Search	Hide << Next
Element Manager - Overview	Overview
 Image: System Status Image: System Status Image: System Status 	Element Manager is a simple and user-friendly web-based interface that supports a broad range of system management tasks, including:
Network Numbering Plan Software Upgrade	 configuration and maintenance of IP Peer and IP telephony features
Software Upgrade Patching	 configuration and maintenance of traditional routes and trunks
E System Utility	 configuration and maintenance of numbering plans
 Administration Support 	 configuration of Call Server data blocks (such as configuration data, customer data, Common Equipment data, D- channels)
🖲 📚 Tools	 maintenance commands, system status inquiries, backup and restore functions
	 software download, patch download, patch activation
	Element Manager has many features to help administrators manage systems with greater efficiency. Examples are as follows:
	 web pages provide a single point-of-access to parameters that were traditionally available through multiple overlays.
	 parameters are presented in logical groups to increase ease-of-use and speed-of-access.
	 the "hide or show information" option enables administrators to see information that relates directly to the task at hand.
	 full-text descriptions of parameters and acronyms help administrators reduce configuration errors.
	 configuration screens offer pre-selected defaults, drop-down lists, checkboxes, and range values to simplify response selection.
	The Element Manager web server resides on the Signaling Server and can be accessed directly through a web browser or Optivity Telephony Manager (OTM). The OTM navigator includes integrated links to each network system and their respective instances of Element Manager.
	For details about the Succession 1000 Call Server parameters that you can configure and manage, see Software Input/Output: Administration (553-3001-311) and Software Input/Output: Maintenance (553-3001-511).
	For details about the IP Line 4.0/Voice Gateway parameters that you can configure and manage using, see IP Line: Description. Installation, and Operation (553-3001-365).

Release Notes

A Release Note can describe a design change or a product feature that was discovered after market release. Often, a Release Note describes how to work around a product limitation. Click the **Release Notes** link to access the Web-based Helmsman Express application.

Appendix A



WARNING

Do **not** contact Red Hat for technical support on your Nortel version of the Linux base operating system. If technical support is required for the Nortel version of the Linux base operating system, contact Nortel technical support through your regular channels

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