
Nortel Communication Server 1000

Nortel Communication Server 1000 Release 5.5

Communication Server 1000E

Software Upgrades

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New in this release

Features

There are no new features in this NTP for CS 1000 Release 5.5.

Other

Revision History

November 2008

Standard 02.07. This document is up-issued to support Communication Server 1000 Release 5.5. This document reflects the changes in the section Pre-upgrade checklists.

November 2008

Standard 02.06. This document is up-issued to support Communication Server 1000 Release 5.5. This document reflects the changes in the sections Upgrading and configuring the Signaling Server, Upgrading Call Server software (CP PII, CP PIV, CP PM), System Information, Upgrading Voice Gateway Media Cards and Appnedix C.

October 2008

Standard 02.05. This document is up-issued to support Communication Server 1000 Release 5.5. This document reflects the changes in the section Software Audit of the Pre-upgrade Checklist.

September 2008

Standard 02.04. This document is up-issued for Communication Server 1000 Release 5.5.

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Standard 01.01. This document is up-issued for Communication Server 1000 Release 5.0. This document contains information previously contained in the following legacy document, now retired: *Communication Server 1000E: Upgrade Procedures (553-3041-258)*.

August 2005

Standard 2.00. This document is up-issued to support CP PIV and Communication Server 1000 Release 4.5.

September 2004

Standard 1.00. This document is issued for Communication Server 1000 Release 4.0.

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How to get help

This section explains how to get help for Nortel products and services.

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. More specifically, the site enables you to:

- 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 don't find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

www.nortel.com/callus

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.

Finding the latest updates on the Nortel web site

The content of this documentation was current at the time the product was released. To check for updates to the latest documentation and software for CS 1000 Release 5.5, click one of the links below.

Latest Software	Takes you directly to the Nortel page for CS 1000 Release 5.5 software.
Latest Documentation	Takes you directly to the Nortel page for CS 1000 Release 5.5 documentation.

System Information

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

Subject

This document provides procedures for upgrading a Communication Server 1000E (CS 1000E) system to Nortel Communication Server Release 5.5 software.

Note on legacy products and releases

This NTP contains information about systems, components, and features that are compatible with Nortel Communication Server 1000 Release 5.5 software. For more information on legacy products and releases, click the **Technical Documentation** link under **Support** on the Nortel home page:

www.nortel.com

Applicable systems

This document applies to CS 1000E systems.

Intended audience

This guide is intended for system installers and administrators with a strong understanding of CS 1000E equipment and operation. Contact Nortel Training Centers for information on installation courses.

Conventions

In this document, CS 1000E systems are referred to generically as “system.”

Related information

This section lists information sources that relate to this document.

NTPs

The following NTPs are referenced in this document:

- *Converging the Data Network with VoIP* (NN43001-260)
- *Signaling Server: Installation and Commissioning* (NN43001-312)
- *IP Peer Networking: Installation and Commissioning* (NN43001-313)
- *Branch Office: Installation and Commissioning* (NN43001-314)
- *Optivity Telephony Manager: Installation and Commissioning* (NN43050-300)
- *Optivity Telephony Manager: System Administration* (NN43050-601)
- *Element Manager: System Administration* (NN43001-632)
- *IP Line Fundamentals* (NN43100-500)
- *IP Phones Fundamentals* (NN43001-368)
- *Communication Server 1000E: Overview* (NN43041-110)
- *Communication Server 1000E: Planning and Engineering* (NN43041-220)
- *Communication Server 1000E: Installation and Commissioning* (NN43041-310)
- *Network Routing Service Installation and Commissioning* (NN43001-564)
- *Option 11C Cabinet (TDM) to Communication Server 1000E Upgrade Procedures* (NN43041-464)

Online

To access Nortel documentation online, click the **Technical Documentation** link under **Support** on the Nortel home page:

www.nortel.com/

CD-ROM

To obtain Nortel documentation on CD-ROM, contact your Nortel customer representative.

Technical support

For technical support contact information, see “Technical Assistance service” on [page 245](#).

Overview

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This section contains information on the following topics:

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References in preparation for an upgrade

To plan the network, refer to *Communication Server 1000E: Planning and Engineering* (NN43041-220) and *Converging the Data Network with VoIP* (NN43001-260).

To read about installing, configuring, and managing Voice Gateway Media Cards and IP Phones, refer to *IP Line Fundamentals* (NN43100-500) and *IP Phones Fundamentals* (NN43001-368).

For detailed information about installing and configuring new components, refer to *Communication Server 1000E: Installation and Commissioning* (NN43041-310).

To read about virtual trunking and the Network Routing Service (NRS), refer to *Network Routing Service: Installation and Commissioning* (NN43001-564), *IP Peer Networking: Installation and Commissioning* (NN43001-313) and *Communication Server 1000E: Overview* (NN43041-110).

CS 1000 Release 5.5 upgrade paths

Table 1 lists the CS 1000E upgrade paths supported for CS 1000 Release 5.5.

Table 1
Upgrade paths

CS 1000 Release 4.5 system	CS 1000 Release 5.5 system
CS 1000E (CP PII and CP PIV)	CS 1000E (CP PII and CP PIV) software only
CS 1000E (CP PII)	CS 1000E (CP PIV)
CS 1000E (CP PII)	CS 1000E CP PM (Option 1, Option 2)
CS 1000E (CP PIV)	CS 1000E CP PM (Option 1, Option 2)

System types

Table 2 lists the various system types according to processor type.

Table 2
Upgrade Paths (Release 5.5 software)

Processor Type	System Type					
	Opt 11C	Option 51C	Option 61C CS 1000M	Option 81	Option 81C CS 1000M MG	CS 1000E
CP1 (68030)	-	1711	1811	1611	1611	-
CP2 (68040)	2121	2211	2311	1911	1911	-
CP3 (68060)	-	2421	2521	2621	2621	-
CP4 (68060E)	-	2821	2921	3021	3021	-
CP II	-	-	3221	-	3321	3321
CP IV	-	-	3521	-	3621	3621
CP PM	-	-	-	-	-	4021

MG 1000T upgrade and migration options

The following information is intended to highlight the major considerations required to properly engineer an MG 1000T upgrade. Careful and detailed planning must be done in advance to minimize system downtime. Each option offers different levels of ease of upgrade, complexity, redundancy, long term supportability and maintenance. Select the best option according to specific customer requirements.

Option 1

Upgrade the MG 1000T to a CS 1000E and maintain it as an autonomous node

Option 1 involves upgrading the MG 1000T to a CS 1000E, using either Pentium or CP PM Call Servers. Each existing MG 1000T chassis requires an MGC. The current PRI and media cards in the MG 1000T are maintained. The upgraded CS 1000E can still be used as a PRI gateway and contains all of the functionality of an existing CS 1000E.

Option 2

Migrate the functionality and PRI hardware of the MG 1000T into the CS 1000E

This option involves migrating the MG 1000T functions into a CS 1000E system. Each existing MG 1000T chassis requires an MGC. The current PRI and media cards in the MG1000T are maintained. All MG 1000T chassis are added to the CS 1000E as new MG 1000Es, and all PRI loops and DSP resources have to be added to the CS 1000E database. The NARS/BARS database on the MG 1000T must be replicated on the CS 1000E. MG 1000T Signaling Server NRS functionality can be moved to the CS 1000E node or remain as is. The NRS dialing plan must be changed accordingly.

Option 3

As an alternative, the MG 1000T can remain as is and continue to function as a PSTN gateway. With this option there is no MG 1000T 5.5 software upgrade path. Upgrade options 1 and 2 may be a requirement at some time in the future.

Note: NRS database synchronization is not supported between signaling servers running different releases.

Conversion and mapping information

The following information is required for the database conversion that must be performed as part of the CS 1000 Release 5.5 software installation.

Cabinet or Chassis to IPMG mapping

The following pages detail how the Small System TNs are mapped to Large System TNs. The SIPE cabinets are converted to IPMGs as shown in Table 3.

Note: Due to TN remapping, all external applications (such as Call Pilot) must to be verified following the upgrade to ensure implementation of any changes required for them to work properly with a large system TN format.

Table 3
SIPE cabinet/chassis to IPMG conversion

Cabinet/Chassis	IPMG
Call Server	000 0
Media Gateway 1	000 1
Media Gateway 2	004 0
Media Gateway 3	004 1
Media Gateway 4	008 0

Minimum software release

The conversion process can be applied to the database of existing small systems provided that the small system has a minimum software version of 23.10.

TN mapping

The following tables map the small system TNs to the CS 1000E TNs (large system TNs). The conversion feature maps the SIPE TNs to CS1000E TNs on the IPMGs.

IP phone TN mapping

When converting from small systems (Option 11C, MG1000B, CS 1000M or CS 1000S) to a CS 1000E CP PM system, the slot and unit number is mapped to the loop, shelf, card, and unit number as shown in Table 4. Because these

TNs map from a “small system” TN format to a “large system” TN format, the IP sets do NOT require reprogramming with a new TN.

Table 4
IP phone TN mapping

CS 1000S/M		CS 1000E CP PM			
Slot	Unit	Loop	Shelf	Card	Unit
61-64	0-31	96	0	1-4	0-31
65-68	0-31	100	0	1-4	0-31
69-72	0-31	104	0	1-4	0-31
73-76	0-31	108	0	1-4	0-31
77-80	0-31	112	0	1-4	0-31
81-84	0-31	96	1	1-4	0-31
85-88	0-31	100	1	1-4	0-31
89-92	0-31	104	1	1-4	0-31
93-96	0-31	108	1	1-4	0-31
97-99	0-31	112	1	1-3	0-31

ALC, DLC, analog trunk and regular IPE pack TN mapping

Table 5 provides TN mapping information for analog line cards, digital line cards, analog trunk cards, and xdtrs (digital trunk cards or IP phones are not addressed in this table). Not all slots are present on all small systems.

Table 5
ALC, DLC, analog trunk and regular IPE pack TN mapping (Part 1 of 3)

CS 1000S/M		CS 1000E CP PM			
Slot	Unit	Superloop	Shelf	Card	Unit
1	0-31	0	0	1	0-31
2	0-31	0	0	2	0-31
3	0-31	0	0	3	0-31
4	0-31	0	0	4	0-31
5	0-31	0	0	5	0-31
6	0-31	0	0	6	0-31
7	0-31	0	0	7	0-31
8	0-31	0	0	8	0-31
9	0-31	0	0	9	0-31
10	0-31	0	0	10	0-31
11	0-31	0	1	1	0-31
12	0-31	0	1	2	0-31
13	0-31	0	1	3	0-31
14	0-31	0	1	4	0-31
15	0-31	0	1	5	0-31
16	0-31	0	1	6	0-31
17	0-31	0	1	7	0-31
18	0-31	0	1	8	0-31

Table 5
ALC, DLC, analog trunk and regular IPE pack TN mapping (Part 2 of 3)

CS 1000S/M		CS 1000E CP PM			
Slot	Unit	Superloop	Shelf	Card	Unit
19	0-31	0	1	9	0-31
20	0-31	0	1	10	0-31
21	0-31	4	0	1	0-31
22	0-31	4	0	2	0-31
23	0-31	4	0	3	0-31
24	0-31	4	0	4	0-31
25	0-31	4	0	5	0-31
26	0-31	4	0	6	0-31
27	0-31	4	0	7	0-31
28	0-31	4	0	8	0-31
29	0-31	4	0	9	0-31
30	0-31	4	0	10	0-31
31	0-31	4	1	1	0-31
32	0-31	4	1	2	0-31
33	0-31	4	1	3	0-31
34	0-31	4	1	4	0-31
35	0-31	4	1	5	0-31
36	0-31	4	1	6	0-31
37	0-31	4	1	7	0-31
38	0-31	4	1	8	0-31
39	0-31	4	1	9	0-31

Table 5
ALC, DLC, analog trunk and regular IPE pack TN mapping (Part 3 of 3)

CS 1000S/M		CS 1000E CP PM			
Slot	Unit	Superloop	Shelf	Card	Unit
40	0-31	4	1	10	0-31
41	0-31	8	0	1	0-31
42	0-31	8	0	2	0-31
43	0-31	8	0	3	0-31
44	0-31	8	0	4	0-31
45	0-31	8	0	5	0-31
46	0-31	8	0	6	0-31
47	0-31	8	0	7	0-31
48	0-31	8	0	8	0-31
49	0-31	8	0	9	0-31
50	0-31	8	0	10	0-31

Digital trunk mapping

This mapping (shown in Table 6) applies to DTI, DTI2, PRI, PRI2, MISP, DPNSS and other circuit packs.

Table 6
Digital trunk mapping (Part 1 of 4)

CS 1000S/M		CS 1000E CP PM				
Slot	Channel	Digital Loop	Channel	Superloop	Shelf	Card
1	0 - 31	20	0 - 31	0	0	1
2	0 - 31	21	0 - 31	0	0	2

Table 6
Digital trunk mapping (Part 2 of 4)

CS 1000S/M		CS 1000E CP PM				
Slot	Channel	Digital Loop	Channel	Superloop	Shelf	Card
3	0 - 31	22	0 - 31	0	0	3
4	0 - 31	23	0 - 31	0	0	4
5	0 - 31	24	0 - 31	0	0	5
6	0 - 31	25	0 - 31	0	0	6
7	0 - 31	26	0 - 31	0	0	7
8	0 - 31	27	0 - 31	0	0	8
9	0 - 31	28	0 - 31	0	0	9
11	0 - 31	52	0 - 31	0	1	1
12	0 - 31	53	0 - 31	0	1	2
13	0 - 31	54	0 - 31	0	1	3
14	0 - 31	55	0 - 31	0	1	4
15	0 - 31	56	0 - 31	0	1	5
16	0 - 31	57	0 - 31	0	1	6
17	0 - 31	58	0 - 31	0	1	7
18	0 - 31	59	0 - 31	0	1	8
19	0 - 31	60	0 - 31	0	1	9
21	0 - 31	76	0 - 31	4	0	1
22	0 - 31	77	0 - 31	4	0	2
23	0 - 31	78	0 - 31	4	0	3
24	0 - 31	79	0 - 31	4	0	4

Table 6
Digital trunk mapping (Part 3 of 4)

CS 1000S/M		CS 1000E CP PM				
Slot	Channel	Digital Loop	Channel	Superloop	Shelf	Card
25	0 - 31	80	0 - 31	4	0	5
26	0 - 31	81	0 - 31	4	0	6
27	0 - 31	82	0 - 31	4	0	7
28	0-31	83	0-31	4	0	8
29	0-31	84	0-31	4	0	9
31	0-31	85	0-31	4	1	1
32	0-31	86	0-31	4	1	2
33	0-31	87	0-31	4	1	3
34	0-31	88	0-31	4	1	4
35	0-31	89	0-31	4	1	5
36	0-31	90	0-31	4	1	6
37	0-31	91	0-31	4	1	7
38	0-31	92	0-31	4	1	8
39	0-31	93	0-31	4	1	9
41	0-31	116	0-31	8	0	1
42	0-31	117	0-31	8	0	2
43	0-31	118	0-31	8	0	3
44	0-31	119	0-31	8	0	4
45	0-31	120	0-31	8	0	5
46	0-31	121	0-31	8	0	6

Table 6
Digital trunk mapping (Part 4 of 4)

CS 1000S/M		CS 1000E CP PM				
Slot	Channel	Digital Loop	Channel	Superloop	Shelf	Card
47	0-31	122	0-31	8	0	7
48	0-31	123	0-31	8	0	8
49	0-31	124	0-31	8	0	9

XNET and XPEC conversion

Although XNETs and XPECs are not configured by CS 1000 small systems, they are utilized internally by the system and appear in the database. The contents of the XNET blocks must be converted to virtual XNET blocks.

TTY conversion

Any TTYs programmed in the call server chassis must be moved to an equipped Media Gateway. The TTYs from small systems are converted as shown in Table 7.

Table 7
TTY conversion

TTY Port Before Conversion		TTY Port After Conversion		
Cabinet/ Chassis	Port†	Card	IPMG	Port
Main	0	CP PM	N/A	0
	1	MGC	000 0	1
	2	MGC	000 0	2

Table 7
TTY conversion

TTY Port Before Conversion		TTY Port After Conversion		
Cabinet/ Chassis	Port ^(f)	Card	IPMG	Port
Expansion 1	0	MGC	000 1	0
	1	MGC	000 1	1
	2	MGC	000 1	2
Expansion 2	0	MGC	004 0	0
	1	MGC	004 0	1
	2	MGC	004 0	2
Expansion 3	0	MGC	004 1	0
	1	MGC	004 1	1
	2	MGC	004 1	2
Expansion 4	0	MGC	008 0	0
	1	MGC	008 0	1
	2	MGC	008 0	2

Ports on the SSC card^(f)

Only the TTY ports from the SSC cards in the small system are converted while the other TTY ports (for example, TTYs from the SDI card) are deleted.

Tone Receiver Conversion

Tone receivers are converted using the same algorithm as that used for IPE shelf conversion. The tone receivers map to cards 14 and 15 for each of the five IPMGs (see Table 8 on [page 36](#)).

If units 8-11 in the SSCs have MFC, MFE, MFK units provisioned, then these units are provisioned in units 0-3. If these units (8-15) were provisioned as DTRs in the SSC, then these units are provisioned as DTRs in units 0-7.

Note: On CS1000S systems, any DTRs converted to Media Gateway 00 0, will need to be removed unless appropriate hardware is added. Additional DTRs will need to be programmed in the configured Media Gateways.

Table 8
Tone receiver conversion

CS 1000S/M		CS 1000E CP PM			
Slot	Unit	Superloop	Shelf	Card	Unit
0	0-7	0	0	14	0-7
0	8-11 or 8-15	0	0	15	0-3 or 0-7
If these cabinets are populated with MGCs, then these units must be configured. Unit types and unit numbers in each MG will be matched to the configuration that exists in slot 0.		0	1	14	0-7
		0	1	15	0-3 or 0-7
		4	0	14	0-7
		4	0	15	0-3 or 0-7
		4	1	14	0-7
		4	1	15	0-3 or 0-7
		8	0	14	0-7
		8	0	15	0-3 or 0-7

Conference and Tone Generator conversion

All existing Tone and Conference loops are removed and two loops (one for tone and one for conference) are allotted for each IPMG as shown in Table 9.

Table 9
Conference and Tone Generator conversion

IPMG	MG TDS	MG CONF
000 0	124	125
000 1	126	127
004 0	128	129
004 1	130	131
008 0	132	133

IPMG Configuration

The IP address for each of the IPMG must be entered in LD 97. Note that the SIPE IP addresses cannot not be used in this case since the SIPE IP connections are point to point and may not be in the same subnet as the ELAN IP address. As part of conversion the IPMG Type is set to MGC.

Media Card TN Configuration

The small system to large system conversion process will not propagate the card TN information to the media card. This TN value is stored in the bootp.tab file of the media card.

After the conversion process, the card TN value must be entered using TM and transferred to the media card.

DSP Resources for IPMGs

New hardware must be added to media gateways that do not have a media card present to provide the DSP resources required for inter-gateway calls or TDM to IP calls. Note that a media gateway does not require DSP resources for calls within the same media gateway (TDM to TDM calls). The DSP

resources are required for TDM to IP calls. These DSP resources are only available to the media gateway in which the DSP is located.

Once conversion is complete, the DSP resources that were previously configured are now available to the gateway where the media card is located. DSP resources are required in all gateways in order to support inter-gateway calls and TDM to IP calls. The DSP resources can be provided by the MGC DSP daughterboard or the media card. The configuration required for the new DSP resources must be performed manually, as it is not part of the conversion process.

Deleted information

The following information is removed during the conversion process:

- SIPE IP addresses (deleted from the database)
- TDS and Conference configuration
- Redundant serial port information
- Meridian Mail LSL, AML and other TNs.

Note: ACD queues are not deleted. They must be manually deleted following the conversion process.

Note: Although the above items are removed during the conversion process, the data in the compact flash remains intact with the small system database.

Campus Redundancy (High Availability) Package Support

The CP PM Call Server project introduces a package (410) for enabling and disabling the Campus Redundancy or High Availability (HA) feature.

Software determines if the HA package is present in the keycode. If the package is present, the CP PM call server behaves in the same manner as the Release 4.5 CP II or CP IV (for example, it uses the High Speed Pipe (HSP) to detect the presence of the other core). If the other core is detected, then both the cores negotiate to determine which core is active and which core is the standby.

If the CP PM call server is unable to detect the other core, then it comes up as a single core system. If the HA package is not present in the keycode, then the existing call server software is modified to block the HSP connection so that the CP PM call server does not attempt to detect the presence of the core. In the absence of the HA package, the CP PM call server runs as a single core system—even in a system with two cores where the HSP ports on both cores are connected.

Additional factors for consideration

SSC Security Device (dongle) considerations

When upgrading an existing system to Release 5.5 with a CP PM Call Server, the following actions are required:

- For SSC system conversions to CS 1000E or MG 1000E, you must destroy or return the SSC security device to your local Nortel Repair>Returns center
- The CP PM Security Device provided with the software kit must be placed on the CP PM Call Server
- Only those SSC dongles needed for the Media Gateways that are retaining SSC cards in a mixed media environment need to be retained.

IMPORTANT!

Continued use of decommissioned software is in violation of the Nortel Software Licensing Agreement and is not allowed. No further orders will be accepted for the serial number since it is decommissioned and tracked in Nortel's database. The Nortel Software Licensing Agreement details can be found in the Policy and Procedures section of the Enterprise Voice product catalogue.

NARS/BARS/Trunking Considerations

Impacts on customer trunking must be evaluated when designing and planning an upgrade. The MG 1000T is a tandem endpoint that may provide

PRI PSTN access to a standalone CS 1000E and satellite locations. Each upgrade option impacts customer trunking in the following ways:

- **Option 1** - Trunking is out of service for the time it takes to upgrade and transition the Call Server, media gateways and Signaling Server to a CS 1000E
- **Option 2** - Trunking must be transitioned (both hardware and software) to the CS 1000E. A high level of ESN and PRI programming knowledge is required to move the trunking functions from the MG 1000T to the CS 1000E during both the planning and implementation phases of the upgrade. Typically the bulk of ESN programming is done on the MG 1000T and SPN's are used to steer PSTN calls between nodes. The NRS dialing plan entries also must be changed during the upgrade to move existing numbers associated with the MG 1000T endpoint to the CS 1000E endpoint. Special care must be taken to ensure 911 service functions as expected post-upgrade. The out of service time for the trunks vary site to site. Inbound DID/COT/TIE trunk routes could be split and cut over to the CS 1000E in a phased approach. Outbound DOD/COT/TIE trunks could be split and cutover using temporary RLIs to steer NPA, NXX and SPN calls (including 911). Tie routes that are H323/SIP can be redirected in the NRS assuming the ISM parameters have been moved to the CS 1000E and the ESN programming is in place.
- **Option 3** - Trunking impact is minimal or null on the MG 1000T as it is not upgraded in this scenario. Long term support may be an issue if this option is chosen.

Media Gateway considerations

For Options 1 and 2, each existing Media Gateway chassis in the MG 1000T must be upgraded to a MG 1000E. The new MG 1000E must be reprogrammed and joined to the corresponding CS 1000E node. Ethernet connections and IP configurations must be identified prior to conversion.

NRS considerations

If the Primary NRS resides within the original MG 1000T node, the NRS functionality can be moved to the CS 1000E or maintained as a standalone NRS.

Signaling Server considerations

If the MG 1000T is upgraded to a CS 1000E, the Signaling Servers can continue to function and are supported. If the MG 1000T is migrated to the CS 1000E the Signaling Servers can be re-deployed or used as spares.

ELAN, TLAN and IP considerations

If upgrading Media Gateways, the ELAN IP, TLAN IP addresses and switch ports can be re-used if the SSC or media cards are being replaced.

Estimating installation time

When all equipment and software is available, Nortel recommends planning a two to four hour period in which to perform the upgrade. Service interruptions can occur during this period.

System expansions and additional installations require additional time. See *Communication Server 1000E: Installation and Commissioning* (NN43041-310) for details.

Making IP Peer Networking modifications also requires additional time beyond that of an upgrade. It can be performed after completing a standalone configuration upgrade. IP Peer Networking changes can involve interruption of call processing. See *IP Peer Networking: Installation and Commissioning* (NN43001-313) for details.

Upgrade and installation times depend on the following criteria:

- number and availability of technicians
- familiarity with CS 1000E
- physical location of hardware components
- interoperability products (Nortel Messaging Server 500, Symposium, TM)
- unit testing and system testing
- unforeseen issues

Administration tools

Element Manager

Each Signaling Server hosts a web server that enables access to a user-friendly graphical user interface. This management framework, which is called Element Manager, can be accessed directly through a web browser or the Telephony Manager 3.1 navigator. The Telephony Manager 3.1 navigator includes integrated links to each system's Element Manager in a network.

Element Manager increases the speed and efficiency of system management by organizing parameters in logical groups, where single web pages provide access to information that was traditionally spread across multiple overlays. The ability of Element Manager to “hide or show information” helps the user focus on specific information, avoiding the distraction of multiple parameters.

Element Manager reduces configuration errors by providing a full text description of each parameter and acronym. It also reduces errors by simplifying parameter value selection through the use of pre-selected default values and drop-down lists.

Note: The CS 1000E system and MG 1000T platform are managed separately from their own Signaling Servers, which in turn run Element Manager web servers.

The following management tasks can be performed using Element Manager:

- **System Status**
Enables users to perform maintenance actions on Call Server components (D-channel, MSDL, TMDI, Digital Trunk, Clock Controller, Network and Peripheral, Trunk diagnostic) and IP Telephony.
- **Configuration**
Enables users to configure customer data, trunks and routes (traditionally done in LD 14, 15, and 16), D-channel and Common Equipment data (LD 17), digital trunk interface (LD 73), Flexible Code Restriction and Incoming Digit conversion (LD 49), and the IP telephony node.

- **Network Numbering Plan**
Enables users to configure the Network Routing Service, and ESN data blocks for the Call Server (LD 86).
- **Software Upgrade**
Enables users to obtain Call Server software version, License parameters, and packages list. Users can also upgrade Voice Gateway Media Card loadware and IP Phone firmware.
- **Patching**
Enables users to download, activate and deactivate patches for the Call Server and IP Telephony components.
- **System Utilities**
Enables users to backup and restore databases, set time and date, and upload software files and patches to a directory on the Signaling Server.

Configuration procedures for these tasks are in *Communication Server 1000E: Installation and Commissioning* (NN43041-310), and *System Management* (NN43001-600).

For upgrade and configuration procedures that use Element Manager, see “Upgrading Voice Gateway Media Cards” on [page 173](#).

Telephony Manager 3.1 (TM 3.1)

The TM 3.1 application can be used to manage a network-wide view of all telephony equipment. Network management tools allow network-level views and navigation of elements within the network. For more information about TM, refer to *Telephony Manager: System Administration* (NN43050-601).

Web-based management tools

CS 1000E simplifies overall network management through the following web-based management enhancements:

- Support for element-level configuration and maintenance.
- Support for network-wide functions.
- Support for web-based station administration.
- Better integration with Nortel Messaging Server 500 management.

Network-level tools

Network-level tools in the CS 1000E simplify the process of moving users within the network. They also consolidate billing and directory information for network calls.

For more information, see *Telephony Manager: Installation and Commissioning* (NN43050-300). For more information about retrieving Call Detail Recording records, see *Communication Server 1000E: Installation and Commissioning* (NN43041-310).

Upgrading the Signaling Server

To upgrade the Signaling Server to Communication Server 1000 Release 5.5, see “Upgrading and configuring the Signaling Server” on [page 143](#).

Recorded Announcement and Music

IMPORTANT!

Currently, the CS 1000E only supports Recorded Announcement Broadcast and Music Broadcast.

H.323 Gatekeeper database migration

To migrate an H.323 Gatekeeper database to a Communication Server 1000 (CS 1000) Release 5.5 Network Routing Service (NRS) database, see *Signaling Server: Installation and Commissioning* (NN43001-312).

Terminal Servers

Note: For CS 1000 Release 4.5 and earlier, Terminal Servers were a necessary system component. As of CS 1000 Release 5.0, this is no longer the case as serial ports are supported and Terminal Servers are optional.

IMPORTANT!

The CS 1000E system currently supports two Terminal Servers, the MRV LX8020S-102AC-R (ROHS) and the IR-8020M-101 (non-ROHS).

Many third-party applications require serial port interfaces to provide a connection to a PBX. As well, support staff traditionally use serial ports to connect maintenance terminals and modems to a system for maintenance. As the CS 1000E Call Server provides only two local serial ports for these purposes, an IP-based Terminal Server is required to provide the necessary standard serial ports for applications.

The CS 1000E system currently supports two Terminal Servers, the MRV LX8020S-102AC-R (ROHS) and the IR-8020M-101 (non-ROHS). This chapter contains information on connecting the LX8020S-102AC-R. For information on connecting the IR-8020M-101, see *Communication Server 1000M and Meridian 1 Large System Installation and Configuration* (NN43021-310).

Differences between the two Terminal Servers include:

- The IR-8020M-101 Management port is port 20. The LX8020S-102AC-R contains a Diag Port at the front.
- The IR-8020M-101 contains an external PC card slot; the LX8020S-102AC-R does not.
- Commands , command modes and command line interfaces are different
- Default passwords are different for both

The Terminal Servers can be located anywhere on the LAN. One connection from each Call Server COM1 port is connected to the Terminal Server.

Up to 16 TTY ports can be configured with the CS 1000E Call Server. The Terminal Servers can be used as a central point to manage several devices through their serial ports.

Both Terminal Servers are used with the CS 1000E system to provide serial connections for accessing the CS 1000E COM ports. The user can access each COM port from a local PC through telnet sessions or from a remote PC by dialing the on-board modem.

The Terminal Servers provide IP connections to each Pseudo TTY (PTY) ports 0-15 for monitoring CDR and traffic reports.

The LX8020S-102AC-R – LX Series Standalone has 20 Console Ports and a V.90 internal modem. A 19-inch rack-mount kit is provided with the unit.

The DIAG port at the front end of the MRV LX8020S-102AC-R is the default management port. It will be used for primary configuration of the IP address, mask address and gateway address. The 20 Ports at the rear can be configured for Serial Data Interface for CS 1000E system components.

IMPORTANT!

Before connecting a Terminal Server to another component of the CS 1000E system, read and understand the documentation provided by the Terminal Server's manufacturer including the Quick Start Guide for MRV server, LX Series Configuration Guide and MRV LX Series Commands Reference Guide.

Passwords

Two login passwords are key to the upgrade process:

- 1 PWD1
- 2 Limited Access Password (LAPW)

PWD1

PWD1 is the central login defined at the Call Server. If the system is fully functional (that is, the connection is active) between the Call Server,

Signaling Server, MG 1000E Expansions, and Voice Gateway Media Cards, the PWD1 login grants access to all Command Line Interfaces (CLIs) and Element Manager. If the link is not active, the specific login configured for each component must be used.

LAPW

Limited Access Password (LAPW) login can be configured on the Call Server to provide limited access to specified overlays. LAPWs can be used to log into the Call Server or to Element Manager. For more information, see *System Management* (NN43001-600).

First steps

Contents

This section contains information on the following topics:

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CS 1000 Release 5.5 software compatibility	49
Software requirements	53
Keycodes	53
What to have ready	54
Readiness checklist	56
Data checklist	54
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Things to know

CS 1000 Release 5.5 software compatibility

Consult Table 10 for CS 1000 Release 5.5 software compatibility.

Table 10
CS 1000 Release 5.5 CS 1000E compatibility (Part 1 of 4)

Application	CS 1000E compatibility
PC Attendant Console	Supported
Meridian Attendant PC software	Supported
M2250 Attendant Console	Supported

Table 10
CS 1000 Release 5.5 CS 1000E compatibility (Part 2 of 4)

Application	CS 1000E compatibility
M2016S Secure Set (NA Only)	Supported
M39xx	Supported
Telephony Manager (TM)	3.1
Element Manager	EM 5.5
CallPilot	3.0, 4.0
HMS 400	Supported
CallPilot Mini	Not supported
Meridian Mail Modular Option EC	Not supported directly
Meridian Mail Enhanced Card Option	Not supported directly
Meridian Mail reporter R2.x	NA
Companion - Manufacture Discontinued new system packages, January 2003	Not supported
Meridian DECT (DMC4/DMC8 version)	Supported
VoIP – 802.11 Wireless IP Gateway with Symbol	Not supported
IP Phone 2210 / 2211	Supported
IP Phone 2001	Supported
IP Phone 2002	Supported
IP Phone 2004	Supported
IP Softphone 2050	Supported
IP Softphone 2050 V2	Supported
Mobile Voice Client 2050	Supported
IP Phone 2033	Supported
IP Phone ACD Set	Supported
IP Phone 2007	Supported
IP Phones 1120E,1140,1140E, 1150E	Supported

Table 10
CS 1000 Release 5.5 CS 1000E compatibility (Part 3 of 4)

Application	CS 1000E compatibility
Remote Gateway 9150	Supported
Remote Gateway 9115/ IP Adaptor	Supported
Meridian Home Office MHO-II	Not supported
Mini Carrier Remote	Not supported
Carrier Remote	Not supported
Fiber I	Not supported
Fiber II	Not supported
RPE (Remote Intelligent Peripheral Equipment)	Not supported
Meridian MAX [any platform]	Not supported
Network Administration Center [NAC]	Not supported
Meridian Customer Controlled Routing [MCCR]	Not supported
Meridian Link [Mlink]	Not supported.
Symposium Link	Not supported
Symposium Desktop TAPI Service Provider for MCA (Meridian Communicator Adapter)	Not supported
Meridian Link & MCCR Co-residency	Not supported
Symposium TAPI Service Provider	3.0
Symposium Agent	2.3
Symposium Agent Greeting	2.0
Nortel Remote Agent Observe	1.0
Meridian Link Services [MLS]	4.2, 5
Symposium Express Call Center [SECC]	4.2
Symposium Call Center Server [SCCS] incl. Symposium Web Client	4.2, 5
Symposium Web Centre Portal [SWCP]	4.0

Table 10
CS 1000 Release 5.5 CS 1000E compatibility (Part 4 of 4)

Application	CS 1000E compatibility
CTI.next (Nortel Communications Control Toolkit)	5.5
Nortel IVR (VPS/is)	5.4.2
Multimedia Processing Server (MPS) 100	1.0
Multimedia Processing Server (MPS) MPS 500 and MPS 1000	2.1, 3.0
Business Communications Manager	3.7, 4.0
Integrated Call Assistant (MICA)	1.5
Nortel Integrated Conference Bridge (NNICB)	2.1, 3.0x, 4.0
Integrated Recorded Announcement (MIRAN)	2.0.16 and above
Nortel Integrated Personal Call Director	1.0.3 and above, 2.0
Integrated Voice Services (MIVS)	1.17
MCS 5100	3, 3.5
CS 2000	SN09, SN10, SN11
CS 2100	SE08, SE09, SE10
<p>Note 1: In addition to the systems and application compatibility chart above, information at a card and shelf level can be found in the Compatibility Section of <i>Product Compatibility</i> (NN43001-256).</p> <p>Note 2: It is possible for a Main Office Call Server and MG 1000B to temporarily run different software releases, provided the Main Office is running CS 1000 Release 5.0. This allows customers to add a single additional MG 1000B for CS 1000 Release 5.0 without having to upgrade their entire network of MG 1000Bs.</p> <p>Note 3: Mixed software configuration between a CS 1000 Release 5.0 Main Office and a CS 1000 Release 3.0 MG 1000B must be temporary.</p> <p>Note 4: Mixed software configuration between a CS 1000 Release 5.0 Main Office and a CS 1000 Release 4.0/4.5 MG 1000B can be indefinite.</p> <p>Note 5: In Normal mode, IP users use the feature set of the Main Office. In Local mode, IP users use the feature set of the MG 1000B. Analog or Digital users always use the feature set of the MG 1000B.</p>	

Software requirements

Table 11 lists the minimum software requirements for CS 1000 Release 5.5 software. See “Obtaining software” on [page 233](#) for information on how to obtain the latest versions of CS 1000 Release 5.5 software.

Table 11
Software requirements

Item	Version
Call Server	5.x
Signaling Server (see note below)	5.x
IP Line application (see note below)	5.x
TM	3.1
IP Phone firmware (see note below)	Latest released with RIs 5.x
8051XA Controller firmware on Voice Gateway Media Cards	Latest released with RIs 5.x Latest released with RIs 5.x for ITG-P 24-port card (MG 1000T only)
Nortel IP Softphone 2050	Latest released with RIs 5.x
Web browser	Microsoft Internet Explorer v.6.02 Netscape is not supported
Note: The Signaling Server Terminal Proxy Server (TPS), IP Line 5.0 loadware, Gatekeeper, Network Routing Service, MG 1000E, Element Manager and IP Phone firmware are contained on the Signaling Server CD-ROM.	

Keycodes

During an installation or upgrade, valid keycodes are required. A security keycode protects the installation of software, feature set (packages), License parameters, and the system ID. A security device validates the keycodes.

When upgrading a CS 1000E CP PII system to CS 1000 Release 5.5, the key code resides in a keycode file on a floppy disk. The user is prompted to insert the floppy disk with the key code file.

When upgrading the CS 1000E to CP PIV and CS 1000 Release 5.5, the key code resides in a keycode file on a Compact Flash (CF) card. The user is prompted to insert the CF card with the key code file.

If the entered keycode does not validate, take one of the following actions:

- Check the keycodes and make sure the correct keycodes have been entered.
- Check the software and make sure that it is the correct version for this site.
- Check the feature set and make sure the correct data has been entered.
- Check the License parameters and make sure the correct data has been entered.
- End the installation and contact your Nortel service team.

The system limits the validation of keycodes to three consecutive attempts. After the third unsuccessful attempt, the Software Installation Program returns to the main menu. Any data entered during the session is lost.

Note: If an invalid keycode is entered, the software and databases on the present system are not affected.

When the keycode validation passes, the software is installed on the system.

What to have ready

This section contains the following topics:

- “Data checklist” on [page 54](#)
- “Readiness checklist” on [page 56](#)

Data checklist

Data network planning is crucial to obtain good voice quality. For important information regarding the data and IP telephony network configuration needs, consult *Converging the Data Network with VoIP* (NN43001-260) and *IP Peer Networking: Installation and Commissioning* (NN43001-313).

The following data is required:

- **IP addresses for system components.**
Refer to *Communication Server 1000E: Installation and Commissioning* (NN43041-310) for more information.
- **IP addresses for the IP Phones.**
DHCP can be used to distribute IP addresses and network information to the IP Phones. Refer to *IP Line: Description, Installation, and Operation* (NN43100-500) for more detail.
- **Trunk, routing, and network zone data** (numbering plan, standard and IP trunks, Network Routing Service data).
Refer to *IP Peer Networking: Installation and Commissioning* (NN43001-313) for more detail.
- **System, telephony and voice data** (customer configuration, virtual loop and TN assignments, feature data).

Note 1: If there are BRI in the system, ensure that the **MISP and SILC/UILC** are located in the same cabinet or chassis prior to the small system to large system upgrade. The only supported configuration requires that the MISP and SILC/UILC are provisioned in the same IPMG following the upgrade.

Note 2: If there are **MFC cards** in the system, it is recommended that the MFC card reside in the same cabinet or chassis as the TDM trunk card.

Readiness checklist

As part of the upgrade process, complete the Upgrade readiness checklist.

Table 12
Upgrade readiness checklist (Part 1 of 2)

Action	✓
<p>Make sure that all the software that was ordered has been received.</p> <ul style="list-style-type: none"> • New version and patches / DEP lists • Current version • Compatibility and Planning • Ensure you can perform a direct upgrade, otherwise plot the intervening path required or have Nortel do the database conversion • If there are any external applications that have CS1000 with a Small System TN format (Card - Unit) configured as part of their interop with the CS1000 or M1 solutions, the existing TNs will map to new Large System based TNs that are in the format of SUPL- Shelf-Card-Unit. These applications may need to be changed in order to interop with the new TN that is generated as part of the conversion process. 	
Compact Flash and PCMCIA adapter	
<p>Provide a PC or workstation that runs the web browser for Element Manager.</p> <p>The web browser can access the Element Manager web server on either the ELAN subnet or TLAN subnet. Use Microsoft Internet Explorer 6.x or higher. Make sure that the cache settings are enabled to check for new pages every time, and to empty the cache when browser is closed.</p>	

Table 12
Upgrade readiness checklist (Part 2 of 2)

Action	✓
Prepare the network data, such as new IP addresses, as suggested in “Data checklist” on page 54 and in: <ul style="list-style-type: none"> • <i>Converging the Data Network with VoIP</i> (NN43001-260) • <i>IP Peer Networking: Installation and Commissioning</i> (NN43001-313) • <i>Communication Server 1000E: Installation and Commissioning</i> (NN43041-310) 	
Obtain the correct keycodes for the software.	

First steps

This section summarizes the steps to prepare for and initiate an upgrade to the CS 1000 Release 5.5 software.

Note: Data backup and restore is discussed in “Archive the database” on [page 222](#) and “Restore a database” on [page 225](#) respectively, in case there are difficulties with the upgrade and it is necessary to revert to the old configuration.

To install new hardware in a system expansion, refer to *Communication Server 1000E: Installation and Commissioning* (NN43041-310).

As a general rule, follow the order of the chapters.

Procedure 1

Preparing for upgrade

- 1 Read the safety instructions.
- 2 Review the “Data checklist” on [page 54](#).
- 3 Complete the “Readiness checklist” on [page 56](#).
- 4 Verify compliance with system and site requirements.

- 5 Verify compliance with network requirements for system expansions (adding MG 1000Es, IP Phones, new sites). Refer to *Converging the Data Network with VoIP* (NN43001-260).
- 6 Connect the RS-232 cable to the DB-9 male connector marked COM 1 on the face plate of the Terminal Server to the Call Server. In the case of a MG 1000E upgrade, connect the three-port SDI cable to DB-9 port to the back of the MG 1000E. Connect the serial cable to connector 0.



WARNING

On the MG 1000E, do not connect a serial port to the AUX connector. It can damage the port.

- 7 Perform a data dump.



WARNING

Both before and after an upgrade, perform a data dump on the Call Server.

- 8 Archive the system database on the Call Server and save it to removable media. Refer to Procedure 41 "Archiving the database" on [page 222](#).

End of Procedure

Upgrading Call Server software (CP PII, CP PIV, CP PM)

Contents

This section contains information on the following topics::

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Performing the upgrade	74
Upgrading to CS 1000E Release 5.5 (CP PII)	78
Upgrading to CS 1000E Release 5.5 (CP PIV)	94
Upgrading to CS 1000E Release 5.5 (CP PM)	112
Upgrading the software on Call Server 0	136
Completing the upgrade on the Call Servers	136

Introduction

This section provides instructions for upgrading CS 1000 Release 5.5 software on a CP PII, CP PIV or CP PM CS 1000E system. This NTP assumes all appropriate hardware has been upgraded according to procedures in *Option 11C Cabinet (TDM) to Communication Server 1000E Upgrade Procedures* (NN43041-464).

Have the following items available before proceeding

- Software Install Kits (see page 74)
- required Dependency list patches for the target system

A capture file should be maintained during all processes.

Software pre-conversion



IMPORTANT!

Upgrades to CS 1000 Release 5.5 are supported on Release 23 or later.

Database conversion for Meridian 1 Options 21E, 51, 61, 71, STE, NT and XT must be completed by Nortel Networks Software Conversion Lab. Consult the current Nortel Networks price book for cost and contact information.

If the system is equipped with IOP/CMDU cards the database must be converted with the Database Transfer utility.

All systems can be converted by Nortel Networks in the software conversion lab.



IMPORTANT!

Database backup information should be preserved for a minimum of 5 days.

Preparing for the upgrade

This document implements a “source- to-target” approach to performing an upgrade. It is important to correctly identify the source platform, target platform, and maintenance window required to perform the upgrade.

This chapter features check boxes indicating what condition the system should be in at that stage of the upgrade. If the system is not in the proper condition steps should be taken to correct this.

This section is written to maintain Dial Tone where possible and limit service interruptions.

Before attempting any software or hardware upgrade field personnel should follow the steps in Table 13 below:

Table 13
Prepare for upgrade steps

Procedure Step	Page
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Preparing	62
Connecting a terminal	66
Printing site data	67
Performing a template audit	70
Backing up the database (CP PII data dump)	71
Backing up the database (CP PIV and CP PM data dump)	72
Performing the upgrade	74

Planning

Planning for an upgrade involves the following tasks:

- Conduct a site inspection to determine proper power and grounding.
- Review the site profile to determine proper foot space if adding new columns or modules.
- Identify all applications currently installed on the source platform.
- Identify and correct outstanding service problems.
- Verify the site log is updated with current trunking, call routing, application notes, and site contact information.
- Review all product bulletins and Nortel Alerts that impact the site.
- Prepare a contingency plan for backing out of the upgrade.

Upgrade Checklists

Engineers may print this section in order to facilitate the upgrade.

Preparing



IMPORTANT!

In a Campus configuration, as both cores may be physically separate, it is important to plan for required attendance at both core sites at some point in the upgrade.

Preparing for an upgrade involves the following tasks:

- Identify and become familiar with all procedures.
- Verify that all installed applications meet the minimum software requirements for the target platform.
- Determine and note current patch or Dep lists installed at the source platform.
- Determine required patch or Dep lists at the target platform for all system-patchable components (Call Server, Voice Gateway Media Cards, Signaling Servers and so on).
- Determine the required patches or DEP lists installed on all applications (CallPilot, Symposium Call Center Server, TM, and so on).
- Determine and communicate the required maintenance window, contingency plan and the impact to the customer to complete the procedure.
- Perform an inventory on required software and hardware.
- Secure the source software and key code.
- Secure the target software and key code.
- Verify the new key code using the DKA program.
- Print site data.

Pre-upgrade checklists

Note: If you have N-Way Redundancy, you need to upgrade the redundant location first. See *System Redundancy* (NN43001-507) for details.

Procedure 2

Perform the following activities 5 to 7 days prior to the night of the software upgrade



IMPORTANT!

Do not continue with the upgrade if any of the pre-upgrade checks below fails. Please contact your next level of support. Upgrade pre-checks involving system maintenance will need to be performed during the maintenance window

- 1 Verify that you have the latest version of this document. The latest version of this document is available "[Finding the latest updates on the Nortel web site](#)" on page 17.
- 2 Verify Hardware compatibility prior to upgrade and upgrade any hardware that does not meet the minimum requirements for Release 5.5 Please refer to the Communication Server 1000 Release 5.5 Product Bulletin (P-2008-0088-Global).
- 3 Verify the system meets the Memory Requirements for Release 5.5 as specified in the Communication Server 1000 Release 5.5 Product Bulletin (P-2008-0088-Global).
- 4 Verify that a functioning spare CPU is available on site during upgrade.
- 5 Ensure you have spare cards for the following when upgrading:
 - a. •SUPL cards- If applicable.
 - b. •XPEC cards - If applicable.
 - c. •FIJI cards - If applicable.
 - d. •3PE cards- If applicable.
- 6 Verify that there is a pre-tested working core modem with a direct line connected for Remote Technical Support.

- 7 Verify that all software necessary for the source and target release for all systems to be upgraded is available. Before the upgrade, check that all items on the order form are also on the packing slip. Check that all items been received. **If any items are missing, contact your supplier for replacements before you begin the upgrade.** See [“Software Install Kits” on page 74.](#)
- 8 Review Keycode Data Sheet - (SDID, PKGS, License, TID) and ensure that you have all the necessary Keycodes for both the source and target software. See “Keycodes” on [page 53.](#)
- 9 Verify that system is patched current for all patchable elements on the system using the **“Upgrades”** - Meridian ISSP Report and Conflict Checker (**MIRCC**) Tool, Paste in an ISSP (MDP ISSP) Output and get a Detailed Patch Report.

Note: Upgrades MIRCC TOOL is available via Enterprise Solutions Patch Library (ESPL): <http://www.nortel.com/espl> .**Access to the Enterprise Solutions Patch Library requires a Distributor account and password.**Once logged onto ESPL, go to: **“Upgrades” - Meridian ISSP Report and Conflict Checker (MIRCC).**

Note: Please refer to Bulletin: 2006007126 available on the Nortel Technical Support Portal for further details on the use of the Upgrades MIRCC Tool. Apply any missing Patches and remove any Obsolete Patches.

- 10 Verify that all required patches at the target platform (Release 5.5) as generated by the Upgrades MIRCC for all system-patchable components (Call Server, Voice Gateway Media Cards, Signaling Servers and so on) are available on site.
- 11 Print Site Data – See [“Printing site data” on page 67.](#)
- 12 Perform a Template Audit -See [“Performing a template audit” on page 70.](#)
- 13 Perform midnight test routines and ensure any errors addressed prior to upgrade. Verify that 5 days prior to the upgrade there are not:
 - a. Any type of system triggered restart (Warm, Cold, or Sysload).
 - b. Swd watchdog timeouts (e.g. BUG7058 SWD: Swd watchdog timer expired on task tSL1).
 - c. Semtake memory issues (e.g. BUG0584 SeaWeed memory library semTake failed memory).

- d. Hardware Watchdog Interrupts (e.g. BUG7060 SWD: HARDWARE WATCHDOG INTERRUPT EVENT).
 - e. Disk Cache Errors (e.g. 0x22bb3dd8 (tSysPhase1): disk cache error: device 371ab80 block 1279235 errno c0003, disk read failed).
 - f. ELAN issues (e.g. ELAN009 ELAN 0 host IP=10.60.78.4 disabled, write to socket fail due to far end disconnect or Ethernet problems, ELAN0028 The following server failed to register it's pbxLink).
 - g. Hardware Diag Failures (e.g. DIAG0002 Diagnostic: Faulty Hardware watchdog diag).
 - h. IP Link Failures to MGCs (e.g. SRPT0016 OMM: IP link is DOWN between Call Server and Media Gateway, GC0018 MGC ELAN heart-beat connection to Call Server is down. Switching to alternate - port number, SRPT0016 OMM: IP link is DOWN between Alternate Call Server 1 and IPMG[0 0]).
 - i. QoS errors (e.g. QOS0019 QoS unacceptable packet loss: [98.5] % in zone [1]).
 - j. CMDU Failures (e.g. BUG7339 ROM OS 0: ERROR "CMDU VOL Init". Restarting with code: 52).
- 14** Enable System monitoring tool (AHST). This task will collect the following system outputs (they are not enabled by default):
- Configuration changes
 - Alarms reports (AUD, SSH)
 - Error reports
 - BUG captures

LD 135**STAT CPU****STAT CNI****STAT HEALTH****LD 137****STAT**

LD 60

STAT

LD 17

REQ CHG

TYPE ADAN

ADAN NEW HST

SIZE (0)-65534

**USER BUG, MCT,
MTC, SCH**

- 15 Prior to System Upgrade, make two current backups to external media:

LD 143

BKO

- 16 Create 2 bootable flash cards for site upgrade. for more information see, [Clone to *Making the RMD bootable* Section on page 105 of NN43021-458 Standard 01.06 June 2008.](#)
- 17 Perform a sysload to and verify no abnormal messages appear before the upgrade.

Connecting a terminal

Procedure 3 Connecting a terminal

A maintenance terminal is required to access the Call Servers during the upgrade procedure.

- 1 Connect a terminal to the COM 1 port on the faceplate of CP PII/CP PIV card or the Serial Port 0 on the CP PM card of the *inactive* Call Server.
- 2 The settings for the terminal are:

- a. Terminal type: VT100
- b. 9600 Baud
- c. Data bits: 8
- d. Parity: none
- e. Stop bits: 1
- f. Flow control: none

End of Procedure

Printing site data

Print site data to preserve a record of the system configuration (Table 14 on [page 67](#)). Verify that all information is correct. Make corrections as necessary.

Note: Items marked with an asterisk (*) are required. Other items are recommended for a total system status.

Table 14
Print site data (Part 1 of 4)

Site data	Print command	
Terminal blocks for all TNs	LD 20	
	REQ	PRT
	TYPE	TNB
	CUST	<cr>
Directory Numbers	LD 20	
	REQ	PRT
	TYPE	DNB
	CUST	<cr>
Attendant Console data block for all customers	LD 20	LD 20
	REQ	PRT
	TYPE	ATT, 2250
	CUST	<cr>

Table 14
Print site data (Part 2 of 4)

Site data	Print command	
*Customer data block for all customers	LD 21 REQ TYPE CUST	LD 21 PRT CDB <cr>
Route data block for all customers	LD 21 REQ TYPE CUST ROUT ACOD	PRT RDB Customer number <cr> <cr>
*Configuration Record	LD 22 REQ TYPE	PRT CFN
*Software packages	LD 22 REQ TYPE	PRT PKG
*Software issue, ROM and tape ID	LD 22 REQ REQ REQ	ISS ROM TID
* Peripheral software versions	LD 22 REQ TYPE	PRT PSWV

Table 14
Print site data (Part 3 of 4)

Site data	Print command	
ACD data block for all customers	LD 23	
	REQ	PRT
	TYPE	ACD
	CUST	Customer Number
	ACDN	ACD DN (or <CR>)
Superloop card IDs and software version (peripheral controller, superloop network and controller cards)	LD 32	IDC loop
Multi-purpose ISDN Signaling Processor (MISP) card	LD 27	
	REQ	PRT
	TYPE	MISP
	LOOP	loop number (0-158)
	APPL	<cr>
	PH	<cr>
DTI/PRI data block for all customers	LD 73	
	REQ	PRT
	TYPE	DDB
Print the configured host information	LD 117	PRT HOST (provides system IP addresses)

Table 14
Print site data (Part 4 of 4)

Site data	Print command
Superloops and XPEs	LD 97 REQ CHG TYPE SUPL SUPL Vxxx V stands for a virtual superloop and xxx is the number of the virtual superloop. xxx = 0-252 in multiples of four for MG 1000E xxx = 96-112 in multiples of four for MG 1000T (See Table 29)
<p>Note: Items marked with asterisks (*) are required printout for conversion. Other items are recommended for a total system status.</p>	

Performing a template audit

A template audit (LD 01) reviews the templates in your system. Corrupted and duplicate templates are cleaned up. An example of the information generated during the audit is listed below.

Note: The template audit may take an extended period of time on large systems. Run the audit during a low traffic period.



CAUTION

Loss of Data

Do not abort this overlay until the audit is complete. If the overlay is interrupted, data will be corrupted.

LD 01 The audit begins as soon as LD 01 is entered.

CONFIRM TEMPLATE AUDIT NOW? (Y/N) Y

STARTING PBX TEMPLATE SCAN

STARTING SL1 TEMPLATE SCAN

TEMPLATE 0001 USER COUNT OK CHECKSUM OK

TEMPLATE 0002 USER COUNT OK CHECKSUM OK

Backing up the database (CP PII data dump)

To back up system data, perform a data dump to save all system memory to the hard disk.

Procedure 4 Performing a data dump

- 1 Log into the system.
- 2 Insert a floppy disk into the active Core/Net floppy drive to back up the database.
- 3 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:
LD 43 Load program
- 4 When "EDD000" appears on the terminal, enter:
EDD Begin the data dump
- 5 When the server restarts, press F to force the board to boot from the faceplate drive.



Press F before dots have completely underlined the textual prompt to ensure that the Signaling Server boots from the CF drive.



CAUTION

Loss of Data

If the data dump does not succeed, do not continue. Contact your technical support organization. You must correct a data dump problem before the system can be upgraded.

- 6 The messages “DATADUMP COMPLETE” and “DATABASE BACKUP COMPLETE” will appear once the data dump is complete.

**** Exit program

- 7 Remove and label the floppy disk.



IMPORTANT!

Database backup information should be preserved for a minimum of 5 days.

End of Procedure

Backing up the database (CP PIV and CP PM data dump)

Procedure 5

Performing a data dump to backup the customer database:

- 1 Log into the system.
- 2 Insert a CF card into the active Core/Net RMD slot to back up the database.
- 3 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program.

. EDD

- 4 When “EDD000” appears on the terminal, enter:

EDD Begin the data dump.



CAUTION — Service Interruption

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

- 5 When “DATADUMP COMPLETE” and “DATABASE BACKUP COMPLETE” appear on the terminal, enter:

**** Exit program

- 6 Remove and label the CF card.

End of Procedure

Note: Before attempting any upgrade, the loop, shelf, and side must be verified.

Performing the upgrade

Reviewing upgrade requirements

This section describes the *minimum* software required for CS 1000 Release 5.5. Verify that *all* software has been received.

Before the upgrade, check that items on the order form are also on the packing slip. Check that all items been received. If any items are missing, contact your supplier for replacements before you begin the upgrade.



WARNING

Service Interruption

DO NOT proceed with the upgrade if any of the required items are missing. All items must be received to complete the upgrade.

Software Install Kits

The Software Install Kits are generic sets of software and utility programs that are specific to a single release and issue of software. Obtain a new kit when upgrading to a new release or issue of software.

Table 15 lists the contents of the Software Install Kits for CPPII, CP PIV, and CP PM.

Table 15
Contents of the Software Install Kits (Part 1 of 2)

CP PII CD-ROM Software Install Kit		
Item	Quantity	Description
Software CD-ROM	1	Each CD contains all nine generics for a given release and issue of software.
Install Program diskette (1.44-Mbyte media, created from the installation CD ROM)	1	Used to launch the Install Program and to download software from the CD-ROM. Each 1.44-Mbyte diskette supports one processor type.
Distributor Keycode Application diskette (1.44-Mbyte media)	1	A Windows 95 utility that supports download of keycodes from a keycode server.
Database diskettes (blank, 1.44-Mbyte media)	2	Blank 1.44-Mbyte diskettes that can be used to archive the customer database.
Keycode diskette (blank, 1.44-Mbyte media)	1	A blank 1.44-Mbyte diskette that can be used to store a back-up copy of the keycode file.
Documentation CD-ROM	1	Nortel CS 1000 Release 5.5 Documentation CD

Table 15
Contents of the Software Install Kits (Part 2 of 2)

CP PIV Compact Flash Software Install Kit		
Item	Quantity	Description
CF card (512 MByte)	1	A CF card containing the Install Software files, CS 1000 Release 5.5 software, Dep. Lists (PEPs), and the keycode file.
CF card (128 MByte)	1	Blank for backup
Documentation CD-ROM	1	Nortel CS 1000 Release 5.5 Documentation CD
CP PM Compact Flash Software Install Kit		
CF card (512 MByte)	1	A CF card containing the Install Software files, CS 1000 Release 5.5 software, Dep. Lists (PEPs), and the keycode file.
CF card (128 MByte)	1	Blank for backup
CF card (1 GByte)	1	Hard drive for CP PM card
Documentation CD-ROM	1	Nortel CS 1000 Release 5.5 Documentation CD

Splitting the Call Servers on the CP PII, CP PIV, and CP PM Call Servers

Note: Procedure 6 and Procedure 7 are not applicable to an SA CS 1000E system.

Procedure 6**Checking that Call Server 0 is active**

To upgrade Call Server 1, verify that Call Server 0 is the active side performing call processing:

- 1 Verify that Call Server 0 is active.

LD 135 Load program

STAT CPU Get the status of the CPUs

- 2 If Core 1 is active, make Core 0 active:

SCPU Switch to Call Server 0 (if necessary)

******** Exit program

- 3 Stat Health of the CPU and memory:

LD 135

STAT HEALTH Get status of CPU and memory

******** Exit the program

Note: If there is a health mismatch, take steps to correct the issue, including contacting Nortel Technical Support, before proceeding with the upgrade.

Procedure 7
Splitting the Call Servers

- 1 In Call Server 0, enter the SPLIT command from LD 135.

LD 135	Load program
SPLIT	Split the Call Servers
****	Exit program



The system is now in split mode, with call processing on Call Server 0.

Upgrading to CS 1000E Release 5.5 (CP PII)

Upgrading the software

Note: Procedure 8 outlines the steps involved in upgrading a CP PII system to CS 1000E Release 5.5.

Procedure 8
Upgrading the software (CP PII)

- 1 Check that a terminal is connected to COM 1 port in CP 1. The settings for the terminal are:
 - a. Terminal type: VT100
 - b. 9600 Baud
 - c. Data bits: 8
 - d. Parity: none
 - e. Stop bits: 1
 - f. Flow control: none
- 2 Insert the CD-ROM into the CD-ROM drive in the Disk Carrier:

- a. Press the button on the CD-ROM drive to open the CD-ROM disk holder.
- b. Place the CD-ROM disk into the holder with the disk label showing.
- c. Press the button again to close the CD-ROM disk holder. Do not push the holder in by hand.

Note: The CD-ROM must be in the CD-ROM drive for the installation to continue.

- 3 Place the CP PII Install floppy disk into the floppy drive on the Disk Carrier.

- 6 Disable all TNs configured on PE/EPE shelves. This message does not apply to the CS 1000E platform and is generic to the install utility.

WARNING:

This software does not support TNs configured on PE/EPE shelves. Upgrading to this software release will permanently disable all TNs configured on PE/EPE and will not allow new TNs to be configured.

Proceed with the upgrade? (Y/N) y

WARNING:

Upgrading from pre-Release 4.5 software to Release 4.5 or higher will result in the system PDT passwords being reset to default.

Proceed with the upgrade? (Y/N) y

- 7 Validate hard drive partition number and size.

Validate hard drive partition number and size ...

There are 3 partitions in disk 0:

The size of partition 0 of disk 0 is 305 Mb.

The size of partition 1 of disk 0 is 305 Mb.

The size of partition 2 of disk 0 is 305 Mb.

Disk partitions and sectors checking is completed!

>Copying "/f0/disk3221.sys" to "/u/disk3221.sys" -

>Copying "/f0/disk3321.sys" to "/u/disk3321.sys" -

>System date and time is: Friday 04-07-2004, 16:12:49

- 8 Indicate if a Signaling Server is being used.

Communication Server 1000 Software/Database/ BOOTROM CDROM Install Tool =====
Does this system have a Signaling Server.....? (Default - No)
Please enter:
CR> -> <n> - No <y> - Yes
Enter choice> y

- 9 Proceed to Install Menu.

Communication Server 1000 Software/Database/BOOTROM CDROM Install Tool =====
M A I N M E N U
The Software Installation Tool will install or upgrade Succession Enterprise System Software, Database and the CP-BOOTROM. You will be prompted throughout the installation and given the opportunity to quit at any time.
Please enter:
CR> -> <u> - To Install Menu. <t> - To Tools Menu. <q> - Quit.
Enter choice>u

10 Insert the Keycode diskette.

```
Communication Server 1000 Software/Database/  
BOOTROM CDROM Install Tool  
=====
```

Please insert the diskette with the keycode file into the floppy drive.

Please enter:

CR> -> <a> - Continue with the keycode validation.

(The keycode diskette is in the floppy drive on Core 0.)

<q> - Quit.

Enter choice> a

>Validating keycode ...

Copying "/f0/keycode.kcd" to "/u/keycode" -

>The provided keycode authorizes the install of xxxx software (all subissues) for machine type xxxx (CP PII processor on CS 1000E System).

11 Confirm the Keycode matches the software release on the CD-ROM.

```
Communication Server 1000 Software/Database/  
BOOTROM CDROM Install Tool  
=====
```

Please confirm that this keycode matches the CDROM release.

Please enter:

CR> -> <y> - Yes, the keycode matches. Go on to Install Menu.

<n> - No, the keycode does not match. Try another keycode diskette.

Enter choice> y

Obtaining database file names ...

- 12 Continue with software installation.
Option <a> will convert the database from the hard drive.
Option will convert the database from floppy.
Both databases should be the same from the previous EDD. Select option <a> if you do not wish to transfer the database from the floppy disk.

```
Communication Server 1000 Software/Database/  
BOOTROM CDROM Install Tool  
  
=====
```

```
INSTALL MENU
```

```
The Software Installation Tool will install or upgrade  
Succession Enterprise System Software, Database and the  
CP-BOOTROM.  
  
You will be prompted throughout the installation and given  
the opportunity to quit at any time.  
  
Please enter:
```

```
CR> -> <a> - To install Software, CP-BOOTROM.  
      <b> - To install Software, Database, CP-  
      BOOTROM.  
      <c> - To install Database only.  
      <d> - To install CP-BOOTROM only.  
      <t> - To go to the Tools Menu.  
      <k> - To install Keycode only.  
For Feature Expansion, use OVL143.  
      <p> - To install 3900 Set Languages.  
      <q> - Quit.  
  
Enter choice> a
```

- 13** Insert the software CD into the CD-ROM drive if not already inserted from step 2.

```

Communication Server 1000 Software/Database/
BOOTROM CDROM Install Tool

=====

Please insert the Software CDROM into the drive on Core
0.

The labeled side of the CDROM should be side up in the
CDROM tray.

Please enter:

CR> -> <a> - CDROM is now in drive. Continue with s/w
checking.
<q> - Quit.

Enter choice> a
    
```

- 14** Check the software version.

```

Communication Server 1000 Software/Database/
BOOTROM CDROM Install Tool

=====

The Software CDROM contains version xxxx.

Please enter:

CR> -> <y> - Yes, this is the correct version. Continue.
<n> - No, this is not the correct version. Try
another CDROM or keycode disk.

Enter choice> y

>Copying "/cd0/0370_GMR.N33/target/p/sl1/
direct.rec" to "/u/direct.rec" -
>Updating "/u/direct.rec"
    
```

15 Choosing Yes for the Dependency Lists installation.

Do you want to install Dependency Lists?
Please enter:
<CR> -> <y> - Yes, Do the Dependency Lists installation
<n> - No, Continue without Dependency Lists installation
Enter choice>
The default choice is YES as shown in the prompt.
If the choice is no, then the following prompt will appear for the confirmation:
Are you sure?
Please enter:
<CR> -> <n> - No, Go to the Dependency List menu
<y> - Yes, Go to the next menu
Enter choice>
The default choice is NO which will return the user to deplist menu.
The Installation Status Summary appears:

16 Enable Centralized Software Upgrade.

Note: Dependent on user preference for managing MG 1000Es, Centralized Software Upgrade does not have to be enabled at this time. It can be enabled from Overlay 143 when desired.

```

Communication Server 1000 Software/Database/
BOOTROM CDROM Install Tool
=====

Enable Automatic Centralized Software Upgrade
(CSU) Feature ? (Default - YES)

Please enter:

CR> -> <y> - Yes
      <n> - No

Enter choice> y

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool
=====

Set Automatic Centralized Software Upgrade
Mode to:

Please enter:

CR> -> <1> - Sequential
      <2> - Simultaneous

Enter choice> 1

Processing the install control file ...
Installing release 4.x
    
```

17 Confirm Installation status.

Communication Server 1000 Software/Database/
BOOTROM CDROM Install Tool

=====

Software release x.x was installed successfully on Core 0.
All files were copied from CDROM to the hard disk.
Please press <CR> when ready ...

```
-----  
INSTALLATION STATUS SUMMARY  
-----  
+-----+-----+-----+-----+  
| Option | Choice | Status | Comment |  
+-----+-----+-----+-----+  
| SW: CD to disk | yes | ok | |  
+-----+-----+-----+-----+  
| Dependency Lists | yes | | |  
+-----+-----+-----+-----+  
| AUTO-CSU Feature | SEQ | | SEQ-CSU Enabled |  
+-----+-----+-----+-----+  
| IPMG Software: | yes | ok | install for rel 05xx |  
+-----+-----+-----+-----+  
| Database | no | | |  
+-----+-----+-----+-----+  
| CP-BOOTROM | yes | ok | |  
+-----+-----+-----+-----+
```

Please press <CR> when ready ...

- 18** Enter <CR> to accept installation choices and install software.

<p>Please enter:</p> <p>CR> -> <y> - Yes, start installation. <n> - No, stop installation. Return to the Main Menu.</p> <p>Enter choice> y</p> <p>>Checking system configuration</p>
<p>You selected to install Software release: 5.x on the new system. This will erase all old system files.</p> <p>This will create all necessary directories and pre-allocate files on the hard disk.</p> <p>You may continue with software install or quit now and leave your software unchanged.</p>
<p>Please enter:</p> <p>CR> -> <a> - Continue with new system install. <q> - Quit.</p> <p>Enter choice> a</p>

19 Select Language PSDL choice.

```
*****  
PSDL INSTALLATION MENU  
The PSDL contains the loadware for all downloadable  
cards in the system and loadware for M3900 series sets.  
*****  
Select one of the six PSDL files:  
1. Global 10 Languages  
2. Western Europe 10 Languages  
3. Eastern Europe 10 Languages  
4. North America 6 Languages  
5. Spare Group A  
6. Spare Group B  
7. Packaged Languages  
[Q]uit, <CR> - default  
By default option 1 will be selected.  
Enter your choice ->x
```

- 20 Continue with upgrade when prompted. Select a database to install. Confirm database transfer.

```
You selected to transfer the database from the
floppy disk - release: XXXX to the hard disk on
Core X. release: XXXX.

This will erase the database on the hard disk.

The database diskette has been inserted into the
floppy disk drive.

        If you quit now, the database will be left
unchanged.

        Please enter:

<CR> -> <a> - Continue with Database Install.

<q> - Quit.

Enter Choice> <CR>
```

The system then informs you of the database details and prompts you to confirm.

```
You have chosen to restore database dated:
Month Day Hour:Min:Sec:Year

        Please confirm.

        Please enter:

<CR> -> <y> - Yes, load.

        <n> - No, DO NOT load.

Enter Choice> <CR>
```

- 21 The system restores the database and provides a status summary.

Note: The hard drive on a new system displays an error message that no database is found on hard drive. This message can be ignored.

- 22 Enter <CR> when prompted, returning the system to the Install Menu.

23 Enter **q** to quit.

```
                I N S T A L L   M E N U

The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database, CP-
BOOTROM.
        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools menu.
        <k> - To install Keycode only.

                For Feature Expansion, use OVL143.
        <p> - To install 3900 set Languages.
        <q> - Quit.

Enter Choice> q
```

24 The system then prompts you to confirm and reboot.

```
You selected to Quit the Software Installation
Tool.

You may reboot the system or return to the Main
Menu.

Remove all disks from the system before rebooting.

-----

DO NOT REBOOT USING BUTTON!!!

-----

Please enter:

<CR> -> <a> - Reboot the system.
      <m> - Return to the Main menu.
Enter Choice> <CR>

>Removing (temporary files)

>Rebooting system ...
```

Before completing the next procedure, wait for Core/Net 1 to INI.

**WARNING****DO NOT REBOOT USING RESET BUTTON!!!**

- 25 After the system has rebooted and initialized, log in to Call Server 1.
- 26 Enter LD 22 and issue the ISSP and SLT commands to ensure the software conversion was successful.

LD 22

REQ PRT

TYPE PSWV

ISSP Print System, DepList, and Patch information

SLT Print System Limit

******** Exit program

End of Procedure

At this point in the CP PII upgrade, proceed to Procedure 11 on [page 133](#).

Upgrading to CS 1000E Release 5.5 (CP PIV)

Upgrading the software

Procedure 9 outlines the steps involved in upgrading to CS 1000E Release 5.5 for the CP PIV processor.

Procedure 9

Upgrading the software (CP PIV)

- 1 Check that a terminal is connected to COM 1 port in CP 1. The settings for the terminal are:
 - a. Terminal type: VT100
 - b. 9600 Baud
 - c. Data bits: 8

- d. Parity: none
 - e. Stop bits: 1
 - f. Flow control: none
- 2 Insert the RMD into the CF card slot on Call Processor 1 (inactive).
 - 3 Press the manual RESET button on the Call Processor 1 (inactive) card faceplate.
 - 4 Call up the Software Installation Program during a SYSLOAD. During SYSLOAD, the following prompt appears:

```
Read boot parameters from:
```

```
F: Faceplate compact flash
```

```
H: Hard Drive
```

```
0 [H]
```

Press F to boot from the compact flash (which contains the software).

- 5 Enter <CR> at the Install Tool Menu.

Note: Blank CF prompts begin here.

```
Mounting /cf2
Found /cf2/nvram.sys
Mounting /boot|
Found /boot/nvram.sys

                               Selecting nvram file from 2
sources

Read boot parameters from:
F: Faceplate compact flash
H: Hard Drive

10 [F]

Press <CR> when ready

Reading boot parameters from /boot/nvram.sys

Press any key to stop auto-boot...
```


6 The system then enters the Main Menu for keycode authorization.

```

                M A I N   M E N U

The Software Installation Tool will install or
upgrade Communication Server 1000 Software,
Database and the CP-BOOTROM. You will be
prompted throughout the installation and given
the opportunity to quit at any time.

Please enter:

<CR> -> <u> - To Install menu
        <t> - To Tools menu.
        <q> - Quit.

Enter Choice> <u>
    
```

The system searches for available keycode files in the “keycode” directory on the RMD. If no keycode file is found, the system displays the following menu:

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool
=====
=====

No keycode files are available on the removable
media.

Please replace the RMD containing the keycode
file(s).

Please enter:

        <CR> -> <a> - RMD is now in the drive.
        <q> - Quit.

Enter choice>
    
```

At this point, either replace the RMD or quit the installation. If you select option "<q> - Quit.", the system requires confirmation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You selected to quit. Please confirm.

Please enter:

<CR> -> <y> - Yes, quit.

<n> - No, DON'T quit.

Enter choice>

If "y" (quit) is selected, the system prints "INST0127 Keycode file is corrupted. Check Keycode file." and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```
The following keycode files are available on the  
removable media:  
  
Name                Size   Date       Time  
-----
```

<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min

<2> - KCport60430m.kcd 1114 mon-d-year hr:min

<q> - Quit

Enter choice> 2

Note: A maximum of 20 keycode files can be stored under the "keycode" directory on the RMD. The keycode files must have the same extension ".kcd".

- 7 Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```

Validating keycode ...

Copying "/cf2/keycode/KCport60430m.kcd" to "/u/
keycode" -

Copy OK: 1114 bytes copied

The provided keycode authorizes the install of
xxxx software (all subissues) for machine type
xxxx (CP PIV processor on <system>).
    
```

Note: The software release displayed depends on the keycode file content. The system requests keycode validation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

        <CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

        <n> - No, the keycode does not match.
Try another keycode.

Enter choice>
    
```

- 8 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
=====
```

I N S T A L L M E N U

 The Software Installation Tool will
install or upgrade Communication Server 1000
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

 Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
 - To install Software, Database, CP-
BOOTROM.
 <c> - To install Database only.
 <d> - To install CP-BOOTROM only.
 <t> - To go to the Tools menu.
 <k> - To install Keycode only.

 For Feature Expansion, use OVL143.

<p> - To install 3900 set Languages.
<q> - Quit.

Enter Choice> ****

- 9** The system requires the insertion of the RMD containing the software to be installed.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please insert the Removable Media Device into the drive on Core x.

Please enter:

 <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

 <q> - Quit.

Enter choice> **<CR>**

- 10** If the RMD containing the software is already in the drive, select option “<a> - RMD is now in drive. Continue with s/w checking.” (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 11 The system displays the release of the software found on RMD under the “swload” directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

 <CR> -> <y> - Yes, this is the correct
version. Continue.

 <n> - No, this is not the correct version.
Try another RMD or a different keycode.

Enter choice> <CR>

Note: If the RMD contains the correct software release, select option “<y> - Yes, this is the correct version. Continue.” (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option “<n> - No, this is not the correct version”.

12 Choosing Yes for the Dependency Lists installation.

Do you want to install Dependency Lists?

Please enter:

<CR> -> <y> - Yes, Do the Dependency Lists installation

<n> - No, Continue without Dependency Lists installation

Enter choice>

The default choice is YES as shown in the prompt.

If the choice is no, then the following prompt will appear for the confirmation:

Are you sure?

Please enter:

<CR> -> <n> - No, Go to the Dependency List menu

<y> - Yes, Go to the next menu

Enter choice>

The default choice is NO which will return the user to deplist menu.

Enable Automatic Centralized Software Upgrade (CSU) Feature?

Please enter:

<CR> -> <y> - Yes

<n> - No

Enter choice>

```

Set Automatic Centralized Software Upgrade Mode to:

Please enter:
<CR> -> <1> - Sequential
        <2> - Simultaneous
Enter choice>
>Processing the install control file ...
>Installing release 0491L

The Installation Status Summary appears:
    
```

13 The Installation Status Summary appears.

```

-----
                    INSTALLATION STATUS SUMMARY
-----

```

Option	Choice	Status	Comment
SW: RMD to FMD	yes	OK	install for rel 05.xx.xx
Dependency Lists	yes		
AUTO-CSU Feature	SEQ	OK	SEQ-CSU Enabled
IPMG Software:	yes	OK	install for rel 05.xx.xx
Database	yes	OK	
CP-BOOTROM	yes	OK	

- 14 Enter <CR> to confirm and continue upgrade.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed).

```
Please enter:
<CR> -> <y> - Yes, start upgrade.
          <n> - No, stop upgrade. Return to the Main
Menu.

          Enter choice>
>Checking system configuration
You selected to upgrade Software release: XXXX to
release: xxxx. This will erase all old system
files.

This will create all necessary directories and
pre-allocate files on the hard disk.

You may continue with software upgrade or quit
now and leave your software unchanged.

Please enter:
          <CR> -> <a> - Continue with upgrade.
          <q> - Quit.
          Enter choice>
```

- 15 The PSDL files menu appears. Enter the appropriate choice for the site's geographic location.

```
*****
PSDL INSTALLATION MENU

The PSDL contains the loadware for all
downloadable cards in the system and loadware for
M3900 series sets.

*****
Select ONE of the SEVEN PSDL files:

1. Global 10 Languages
2. Western Europe 10 Languages
3. Eastern Europe 10 Languages
4. North America 6 Languages
5. Spare Group A
6. Spare Group B
7. Packaged Languages
[Q]uit, <CR> - default

By default option 1 will be selected.
Enter your choice ->x

>Copying new PSDL ...
```

- 16 Successful installation confirmation appears, enter <CR> to continue.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...
```

- 17** Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You will now perform the database installation.
Please enter:

    <CR> -> <a> - Install CUSTOMER database.
    (The Removable Media Device containing the
    customer database must be in the drive.

    <b> - Install DEFAULT database.
    (The System S/W media must be in drive.)

    <e> - Check the database that exists on
    the Fixed Media Device.

    <q> - Quit.

Enter choice> a or <CR>
    
```

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```

The following databases are available on the
removable media:

    <CR> -> <s> - Single database
    created: mon-day-year hour:min

    <q>-Quit

Enter choice> s or <CR>
    
```

18 Continue with database installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.

If you quit now, the database will be left
unchanged.

Please enter:

 <CR> -> <a> - Continue with database
install.

 <q> - Quit.

Enter choice> **a or <CR>**

You have chosen to restore database.

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

----- INSTALLATION STATUS SUMMARY -----			
option	Choice	Status	Comment
SW: RMD to FMD	yes	OK	install for rel 05.xx.xx
Dependency Lists	yes		
AUTO-CSU Feature	SEQ	OK	SEQ-CSU Enabled
IPMG Software:	yes	OK	install for rel 05.xx.xx
Database	yes	OK	
CP-BOOTROM	yes	OK	

19 Upon returning to the main install menu, enter **q** to quit.

```

                I N S T A L L   M E N U

    The Software Installation Tool will
    install or upgrade Succession Enterprise System
    Software, Database and the CP-BOOTROM. You will be
    prompted throughout the installation and given the
    opportunity to quit at any time.

    Please enter:

    <CR> -> <a> - To install Software, CP-BOOTROM.

    <b> - To install Software, Database, CP-
    BOOTROM.

    <c> - To install Database only.

    <d> - To install CP-BOOTROM only.

    <t> - To go to the Tools menu.

    <k> - To install Keycode only.

    For Feature Expansion, use OVL143.

    <p> - To install 3900 set Languages.

    <q> - Quit.

    Enter Choice> q
```

- 20** The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

    Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.

    Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.

-----

DO NOT REBOOT USING BUTTON!!!

-----

    Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

    Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

At this point the system reloads and initializes.

End of Procedure

At this point in the CP PIV upgrade, proceed to Procedure 11 on [page 133](#).

Upgrading to CS 1000E Release 5.5 (CP PM)

Upgrading the software

Procedure 10 outlines the steps involved in installing CS 1000E Release 5.5 for the CP PM processor.

Procedure 10

Upgrading the software (CP PM)

- 1 Check that a terminal is connected to COM 1 port in CP 1. The settings for the terminal are:
 - a. Terminal type: VT100
 - b. 9600 Baud
 - c. Data bits: 8

- d. Parity: none
 - e. Stop bits: 1
 - f. Flow control: none
- 2 Insert the RMD into the CF card slot on Call Processor 1 (inactive).
 - 3 Press the manual RESET button on the Call Processor 1 (inactive) card faceplate.
 - 4 Press F to force board to boot from faceplate drive.
 - 5 Call up the Software Installation Program during a SYSLOAD. During SYSLOAD, the following prompt appears:

```
Read boot parameters from:
```

```
F: Faceplate compact flash
```

```
H: Hard Drive
```

```
0 [H]
```

Press F to boot from the compact flash (which contains the software).

- 6 Enter <CR> at the Install Tool Menu.

Note: Blank CF prompts begin here.

```
Mounting /cf2
Found /cf2/nvram.sys
Mounting /boot|
Found /boot/nvram.sys

                               Selecting nvram file from 2
sources

Read boot parameters from:
F: Faceplate compact flash
H: Hard Drive

 10 [F]

Press <CR> when ready

Reading boot parameters from /boot/nvram.sys
Press any key to stop auto-boot...
```


7 The system then enters the Main Menu for keycode authorization.

```

                M A I N   M E N U

The Software Installation Tool will install or
upgrade Communication Server 1000 Software,
Database and the CP-BOOTROM. You will be
prompted throughout the installation and given
the opportunity to quit at any time.

Please enter:

<CR> -> <u> - To Install menu
        <t> - To Tools menu.
        <q> - Quit.

Enter Choice> <u>
    
```

The system searches for available keycode files in the “keycode” directory on the RMD. If no keycode file is found, the system displays the following menu:

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool
=====
=====

No keycode files are available on the removable
media.

Please replace the RMD containing the keycode
file(s).

Please enter:

        <CR> -> <a> - RMD is now in the drive.
        <q> - Quit.

Enter choice>
    
```

At this point, either replace the RMD or quit the installation. If you select option "<q> - Quit.", the system requires confirmation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

<pre>You selected to quit. Please confirm. Please enter: <CR> -> <y> - Yes, quit. <n> - No, DON'T quit. Enter choice></pre>

If “y” (quit) is selected, the system prints “INST0127 Keycode file is corrupted. Check Keycode file.” and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```
The following keycode files are available on the  
removable media:  
  
Name                                   Size   Date            Time  
-----                               -----            -----  
  
<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min  
<2> - KCport60430m.kcd   1114 mon-d-year hr:min  
  
<q> - Quit  
  
Enter choice> 2
```

Note: A maximum of 20 keycode files can be stored under the “keycode” directory on the RMD. The keycode files must have the same extension “.kcd”.

- 8 Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```
Validating keycode ...

Copying "/cf2/keycode/KCport60430m.kcd" to "/u/
keycode" -

Copy OK: 1114 bytes copied

The provided keycode authorizes the install of
xxxx software (all subissues) for machine type
xxxx (CPPM processor on <system>).
```

Note: The software release displayed depends on the keycode file content. The system requests keycode validation.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

        <CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

        <n> - No, the keycode does not match.
Try another keycode.

Enter choice>
```

- 9 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
=====
```

I N S T A L L M E N U

The Software Installation Tool will
install or upgrade Communication Server 1000
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
 - To install Software, Database, CP-
BOOTROM.

 <c> - To install Database only.
 <d> - To install CP-BOOTROM only.
 <t> - To go to the Tools menu.
 <k> - To install Keycode only.

For Feature Expansion, use OVL143.

<p> - To install 3900 set Languages.
<q> - Quit.

Enter Choice>

Note: If option a is selected above, the existing customer database is carried forward automatically. If option b is selected, a new database may be installed or a back up database must be used. Nortel recommends selecting option a as the existing database is carried forward.

10 The system requires confirmation of CP PM location.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

This CS 1000 Call Processor is set to side 0 (side
1 for HA systems)

Please confirm that the side information is
correct.

Please enter:

<CR> -> <y> - Yes, the side information is
correct.

 <n> - No, the side information is
incorrect. Go on to Side Setting Menu.

Enter choice> **<CR>**

11 Confirm IPMG loop/shelf location.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

This CS 1000 Call Processor is currently located
in the IPMG configured as:

```
loop 0  
shelf 0
```

Please confirm that the IPMG loop and shelf
information is correct.

Note: If the IPMG has not been configured
yet, the IPMG loop and shelf information can be
left as the current value. To update the loop and
the shelf information later, use OVL117.

Please enter:

```
<CR> -> <y> - Yes, the IPMG loop and shelf  
information is correct.
```

<n> - No, the IPMG loop and shelf
information is incorrect. Go on to Loop/Shelf
Setting Menu.

Enter choice>

- 12** The system requires the insertion of the RMD containing the software to be installed.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please insert the Removable Media Device into the drive on Core x.

Please enter:

 <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

 <q> - Quit.

Enter choice> **<CR>**

- 13** If the RMD containing the software is already in the drive, select option “<a> - RMD is now in drive. Continue with s/w checking.” (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 14 The system displays the release of the software found on RMD under the "swload" directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

 <CR> -> <y> - Yes, this is the correct
version. Continue.

 <n> - No, this is not the correct version.
Try another RMD or a different keycode.

Enter choice> <CR>

Note: If the RMD contains the correct software release, select option "<y> - Yes, this is the correct version. Continue." (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option "<n> - No, this is not the correct version".

15 Choosing Yes for the Dependency Lists installation.

Do you want to install Dependency Lists?

Please enter:

<CR> -> <y> - Yes, Do the Dependency Lists installation

<n> - No, Continue without Dependency Lists installation

Enter choice>

The default choice is YES as shown in the prompt.

If the choice is no, then the following prompt will appear for the confirmation:

Are you sure?

Please enter:

<CR> -> <n> - No, Go to the Dependency List menu

<y> - Yes, Go to the next menu

Enter choice>

The default choice is NO which will return the user to deplist menu.

Enable Automatic Centralized Software Upgrade (CSU) Feature?

Please enter:

<CR> -> <y> - Yes

<n> - No

Enter choice>

```

Set Automatic Centralized Software Upgrade Mode to:

Please enter:
<CR> -> <1> - Sequential
        <2> - Simultaneous
Enter choice>
>Processing the install control file ...
>Installing release 05.xx

The Installation Status Summary appears:
    
```

16 The Installation Status Summary appears.

```

-----
                        INSTALLATION STATUS SUMMARY
-----
+-----+-----+-----+-----+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| SW: RMD to FMD | yes | OK | install for rel 05.xx.xx |
+-----+-----+-----+-----+
| Dependency Lists | yes | | |
+-----+-----+-----+-----+
| AUTO-CSU Feature | SEQ | OK | SEQ-CSU Enabled |
+-----+-----+-----+-----+
| IPMG Software: | yes | OK | install for rel 05.xx.xx |
+-----+-----+-----+-----+
| Database | yes | OK | |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | OK | |
+-----+-----+-----+-----+
    
```

17 Enter <CR> to confirm and continue upgrade.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed). This file copy takes between 5 and 10 minutes to complete.

```
Please enter:
<CR> -> <y> - Yes, start upgrade.
           <n> - No, stop upgrade. Return to the Main
Menu.

           Enter choice>
>Checking system configuration
You selected to upgrade Software release: XXXX to
release: xxxx. This will erase all old system
files.
This will create all necessary directories and
pre-allocate files on the hard disk.
You may continue with software upgrade or quit
now and leave your software unchanged.
Please enter:
           <CR> -> <a> - Continue with upgrade.
           <q> - Quit.
           Enter choice>
```

- 18** The PSDL files menu appears. Enter the appropriate choice for the site's geographic location.

```
*****
PSDL INSTALLATION MENU

The PSDL contains the loadware for all
downloadable cards in the system and loadware for
M3900 series sets.

*****
Select ONE of the SEVEN PSDL files:

1. Global 10 Languages
2. Western Europe 10 Languages
3. Eastern Europe 10 Languages
4. North America 6 Languages
5. Spare Group A
6. Spare Group B
7. Packaged Languages
[Q]uit, <CR> - default

By default option 1 will be selected.
Enter your choice ->x

>Copying new PSDL ...
```

- 19** Successful installation confirmation appears, enter <CR> to continue.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...
```

- 20** Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You will now perform the database installation.
Please enter:

        <CR> -> <a> - Install CUSTOMER database.
        (The Removable Media Device containing the
        customer database must be in the drive.

        <b> - Install DEFAULT database.
        (The System S/W media must be in drive.)

        <e> - Check the database that exists on
        the Fixed Media Device.

        <q> - Quit.

Enter choice> a or <CR>
    
```

Note: If choice A was selected at the beginning of this menu you will not get the following prompt.

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```

The following databases are available on the
removable media:

        <CR> -> <s> - Single database
        created: mon-day-year hour:min

        <q>-Quit

Enter choice> s or <CR>
    
```

21 Continue with database installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.
If you quit now, the database will be left
unchanged.

Please enter:

 <CR> -> <a> - Continue with database
install.

 <q> - Quit.

Enter choice> **a or <CR>**

Copying "/u/db/hi/hi.db" to "/u/db/hi_tmp/hi.db" -

Copying "/u/db/hi/cnib.db" to "/u/db/hi_tmp/
cnib.db" -

Copying "/u/db/hi/cp.db" to "/u/db/hi_tmp/cp.db" -

Copying "/u/db/hi/ipb.db" to "/u/db/hi_tmp/
ipb.db" -

Copying "/u/db/hi/sutl.db" to "/u/db/hi_tmp/
sutl.db" -

Copying "/u/db/hi/cnib368.db" to "/u/db/hi_tmp/
cnib368.db" -

```
Copying "/u/db/hi/hsp.db" to "/u/db/hi_tmp/
hsp.db" -
Copying "/u/db/hi/inet.db" to "/u/db/hi_tmp/
inet.db" -
Copying "/u/db/hi/ipmgconf.db" to "/u/db/hi_tmp/
ipmgconf.db" -
Copying "/u/db/hi/ipmgconf.bak" to "/u/db/hi_tmp/
ipmgconf.bak" -

You have chosen to restore database dated: Feb 20
06:51:00 2008

Please confirm.

Please enter:
<CR> -> <y> - Yes, load.
      <n> - No, DO NOT load.

Enter Choice>          Y

>Restoring "/"
C.....
.....
```

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

----- INSTALLATION STATUS SUMMARY -----			
option	Choice	Status	Comment
Sw: RMD to FMD	yes	OK	install for rel 05.xx.xx
Dependency Lists	yes		
AUTO-CSU Feature	SEQ	OK	SEQ-CSU Enabled
IPMG Software:	yes	OK	install for rel 05.xx.xx
Database	yes	OK	
CP-BOOTROM	yes	OK	

22 Upon returning to the main install menu, enter **q** to quit.

```

                I N S T A L L   M E N U

The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database, CP-
BOOTROM.
        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools menu.
        <k> - To install Keycode only.

                For Feature Expansion, use OVL143.
        <p> - To install 3900 set Languages.
        <q> - Quit.

Enter Choice> q
```

- 23 The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.

Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.

-----

DO NOT REBOOT USING BUTTON!!!

-----

Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

Note: If CSU is turned on, the MGC cards automatically begin their upgrade procedure at this time.

At this point the system reloads and initializes.

End of Procedure

Verifying the upgraded database on the CP PII, CP PIV, and CP PM Call Servers

Procedure 11

Verifying the upgraded database

- 1 Log into the Call Server database.
- 2 Print the system configuration record in LD 22 and compare the output with the pre-upgraded configuration record.

LD 22 Load program

REQ PRT

TYPE ISSP

******** Exit program

- 3 Print the customer data block(s) in LD 21.

LD 21 Load program

REQ PRT

TYPE CDB

CUST xx

Press enter until returned to the REQ prompt.

Then **** to Exit program

- 4 Perform a datadump. For CP PIV and CP PM, see “Performing a data dump to backup the customer database:” on [page 140](#).

Reconfiguring I/O parameters and call registers

Procedure 12

Reconfiguring I/O ports and call registers

- 1 Evaluate the number of call registers and 500 telephone buffers that are configured for the system (suggested minimum values are 20,000 and 1000 respectively). If changes are required, reconfigure the values in LD 17:

LD 17 Load program

CHG

CFN

PARM YES

500B 1000 Use 1000 as a minimum value

NCR 20000 Use 20000 as a minimum value

Press enter until returned to the REQ prompt.

Then **** to Exit program

- 2 Print the Configuration Record to confirm the changes made above:

LD 22 Load program

REQ PRT Set the print Option

TYPE CFN Print the configuration

Press enter until returned to the REQ prompt.

Then **** to Exit program



At this point, all applications must be shut down (CallPilot, Symposium, and so on).

Switching call processing to Call Server 1

Note: Procedure 13 is not applicable to an SA CS 1000E system.

Procedure 13

Switching call processing

- 1 Enter LD 135 on Call Server 0 and issue the CUTOVR command. Call processing switches to Call Server 1 and service is interrupted.

LD 135

CUTOVR Transfer call processing from active Call Server to standby Call Server

**** Exit program

- 2 After Call Server 1 initializes. log in to Call Server 1 and verify that the cutover was successful and that all hardware is operational. Perform acceptance testing as required.

End of Procedure

Upgrading the software on Call Server 0

To upgrade the software on Call Server 0 for CP PII, complete Procedure 8 on [page 78](#) (assume all references to Call Server 1 are now Call Server 0). To upgrade the software on Call Server 0 for CP PIV, complete Procedure 9 on [page 94](#) (again, assume all references to Call Server 1 are now Call Server 0). To upgrade the software on Call Server 0 for CP PM, complete Procedure 10 on [page 112](#) (assume all references to Call Server 1 are now Call Server 0).

Making the system redundant

Note: Procedure 14 is not applicable to an SA CS 1000E system.

Procedure 14 Making the system redundant

LD 135	Load program
JOIN	Join the 2 CPUs together to become redundant



Call Server 1 is now the active CP.

Note: Please ensure the proper PEPs and Deplists are applied to the Call Servers at this point. Please visit the ESPL website for more details at <https://app91.nortelnetworks.com/espl>

Completing the upgrade on the Call Servers

Testing the Call Servers

Note: Procedure 15 is not applicable to an SA CS 1000E system.

Procedure 15
Testing Call Server 0

At this point in the upgrade, the inactive Call Server is tested from the active Call Server. Upon successful completion of these tests, call processing is switched and the same tests are performed again.

From the active Call Server , perform the following tests on the inactive Call Server:

- 1 Perform a redundancy sanity test:

LD 135

STAT CPU Get status of CPU and memory

TEST CPU Test the CPU

- 2 Check the LCD states

- a. Perform a visual check of the LCDs.

- b. Test and LCDs:

LD 135**DSPL ALL**

- c. Check that the LCD display matches the software check.

- 3 Test the System Utility card

LD 135 Load program

STAT SUTL Get the status of the System Utility card

TEST SUTL Test the System Utility card

- 4 Test system redundancy and media devices:

LD 137 Load program

TEST RDUN Test redundancy

5 Clear the display and minor alarms on both Call Servers:

LD 135	Load program
CDSP	Clear the displays on the cores
CMAJ	Clear major alarms
CMIN ALL	Clear minor alarms

6 Check dial tone.

7 Check applications (CallPilot, Symposium, Meridian Mail, etc.)

Check health of the CPU and memory

Stat Health of the CPU and memory:

LD 135	
STAT HEALTH	Get status of CPU and memory
****	Exit the program

End of Procedure

Switch call processing

Note: Procedure 16 is not applicable to an SA CS 1000E system.

Procedure 16

Switching call processing

LD 135	Load program
SCPU	Switch call processing from Call Server x to Call Server x

End of Procedure

Note: Procedure 17 is not applicable to an SA CS 1000E system.

Procedure 17
Testing the Call Server

From the active Call Server , perform these tests on the inactive Call Server:

- 1 Perform a redundancy sanity test:

LD 135	Load program
STAT CPU	Get status of CPU and memory
TEST CPU	Test the CPU

- 2 Check the LCD states.

- a. Perform a visual check of the LCDs.

- b. Test LCDs:

LD 135	Load program
---------------	--------------

DSPL ALL

- c. Check that the LCD display matches the software check.

- 3 Test the System Utility card:

LD 135	Load program
STAT SUTL	Get the status of the System Utility card
TEST SUTL	Test the System Utility card

- 4 Test system redundancy and media devices:

LD 137	Load program
TEST RDUN	Test redundancy
****	Exit the program

- 5 Clear the display and minor alarms on both Call Servers:

LD 135	Load program
CDSP	Clear the displays on the Call Servers

CMAJ Clear major alarms

CMIN ALL Clear minor alarms

6 Check dial tone.

7 Check applications (CallPilot, Symposium, Meridian Mail, etc.)

End of Procedure

Switching call processing

Note: Procedure 18 is not applicable to an SA CS 1000E system.

Procedure 18 Switching call processing

LD 135 Load program

SCPU Switch call processing from the active
Call Server the inactive Call Server

End of Procedure

Performing a customer backup CP PIV/CP PM data dump (upgraded release)

Procedure 19 Performing a data dump to backup the customer database:

1 Log into the system.

2 Insert a CF card into the active Call Server RMD slot to back up the database.

3 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program.

. EDD

- 4 When “EDD000” appears on the terminal, enter:

EDD Begin the data dump.



CAUTION

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

- 5 When “DATADUMP COMPLETE” and “DATABASE BACKUP COMPLETE” appear on the terminal, enter:

**** Exit program

End of Procedure



The upgrade is now complete.

Upgrading and configuring the Signaling Server

Contents

This section contains information on the following topics:

Upgrading and reconfiguring the software	144
Nortel ISP1100 Signaling Server memory upgrades	144
Overview	144
Upgrading the CS 1000 Release 4.0, CS 1000 Release 4.5 or CS 1000 Release 5.0 Signaling Server	149
Re-installing the previous software release	170

Upgrading and reconfiguring the software

CS 1000 Release 5.5 supports the following Signaling Servers:

- Nortel CP PM Signaling Server
- IBM X306m Signaling Server
- HP DL320-G4 Signaling Server
- ISP1100 Signaling Server

This chapter contains instructions for upgrading the Signaling Server software from CS 1000 Release 4.0, 4.5 or 5.0 to CS 1000 Release 5.5. In addition, it explains how to install the previous release of Signaling Server software. All Signaling Servers can be re-configured once installed and connected to the system. This chapter also contains the instructions for re-configuring a Signaling Server.

Nortel ISP1100 Signaling Server memory upgrades

CS 1000 Release 5.5 requires a Signaling Server to have at least 1 GB of memory configured. If your Nortel ISP1100 Signaling Server contains less than 1 GB of memory, you must upgrade the memory before upgrading the Signaling Server software to CS 1000 Release 5.5.

To enable customers to configure 1 GB of memory on their legacy Nortel ISP1100 Signaling Server, a Nortel ISP1100 Memory Upgrade Kit (NTDU80CA) is available. Two NTDU80CA Upgrade Kits are required to configure 1 GB of memory on any Nortel ISP1100 Signaling Server. Refer to the *Signaling Server: Installation and Commissioning* (NN43001-312) NTP for instructions on using the NTDU80CA memory upgrade kit to upgrade the memory of a Nortel ISP1100 Signaling Server.

Overview

The upgrade process recognizes the existence of IP configuration data and application databases on the Signaling Server and does not impact on them during the upgrade. However, Nortel recommends that you back up the application databases prior to the upgrade as a precautionary measure. The application databases consist of the IP Phone database and the NRS database.

If you do not know whether the Signaling Server being upgraded has an NRS, use Procedure 20, “Verifying the presence of an NRS,” on [page 145](#) to make this determination.

If you have an NRS database on the Signaling Server and wish to back it up prior to the upgrade, you must use the back up tool in NRS Manager. It is recommended that you download the backup file to your local PC after the back up. After the Signaling Server is upgraded, NRS Manager is used to restore the NRS database (from your local PC) and activate it for use by the NRS. For instructions on backing up and restoring an NRS database, refer to *Signaling Server: Installation and Commissioning* (NN43001-312).

For instructions on backing up and restoring the IP Phone database, refer to *IP Line Fundamentals* (NN43001-500).

Procedure 20 **Verifying the presence of an NRS**

- 1 Open Internet Explorer.
- 2 Enter the ELAN or TLAN network interface IP Address of the primary Signaling Server as the URL.

Note: If the NRS is stand alone and not on release 5.5 it must be upgraded. The Signaling Server will not register to a lower release of NRS.

Note: Note: Do not assign the same IP address for the Node ID and the TLAN network interface IP address. This must be verified manually. The Node IP address must be on the same subnet as the TLAN network interface IP addresses of the Media Cards. In addition, the TLAN and ELAN network interfaces of the Media Card must reside on separate logical subnets.

If additional configuration parameters were entered during installation, the node IP address can also be used as the URL.

The Element Manager logon web page appears.

Figure 1
Element Manager logon page



Initially, you can be prompted to enter the Call Server IP address, because the Call Server is used for web logon authorization. The Call Server IP address is a requirement, because unless you entered additional configuration parameters during the Signaling Server installation, the node configuration data file containing the Call Server IP address does not yet exist.

- 3** Enter a Level 1 or Level 2 user ID and password. If configured, you can also use a Limited Access Password (LAPW) user ID and password.

If this is the first time the Call Server is accessed, the default Level 1 or Level 2 user ID and password must be used.

If the logon is successful, the Element Manager “Home - System Overview” screen appears (see Figure 2 on [page 147](#)).

Figure 2
Element manager: Home - System Overview

The screenshot shows the 'Home - System Overview' page in the Nortel CS 1000 Element Manager. The interface is divided into a left-hand navigation menu and a main content area. The navigation menu includes sections like Home, Links, System, Customers, Routes and Trunks, Dialing and Numbering Plans, Tools, and Security. The main content area displays the following information:

- Managing:** [Navigation System Name \(192.167.102.3\)](#)
Home - System Overview
- Home - System Overview**
- System Identification (SNMP)
 - Site Name: Navigation Site Name
 - System Name: Navigation System Name
 - Contact Name: System Contact
 - SNMP System Name: System Name
 - SNMP Location: System Location
- Call Server**
 - IP Address: 192.167.102.3
 - Type: Nortel Communication Server 1000E PIV
 - Version: 3621
 - Release: 491C
 - Redundancy State: SINGLE
 - CPU and Health State:

cp 1	Active	HEALTH = 20
cp 0	Standby	HEALTH = 0
 - Backup Archives:
 - Last Backup Archive: Not Available
 - Status: Not Available
 - Backup Archive Initiation: Not Available
 - Geographic Redundancy:
 - Role of CS: Primary
 - Last FTP to Secondary CS: None
 - Number of IP phones registered locally: 4
- + Signaling Server**
- + Web Server**
- + Users Logged into this Signaling Server**

This screen identifies the components of your CS 1000 system.

- 4 Click the "+" symbol in front of the Signaling Server component.

The Signaling Server component expands to display the properties of the Signaling Server (see Figure 3 on [page 148](#)).

Figure 3
Signaling Server properties

- Signaling Server

Host Name CS1000E_PIV
Type ISP1100
H323 ID CS1000E_PIV
Software version sse-4.91.06
Role Leader
Element Manager Equipped
Line TPS (UNISTim) Equipped
IP Peer Gateway (Virtual Trunk TPS) Equipped
SIP Proxy/Redirect Server Enabled
SIP Gateway Enabled
Gatekeeper configuration Primary

- 5 View the contents of the "Gatekeeper configuration" property.

If the Gatekeeper configuration property indicates Primary (as is the case here), Alternate or Failsafe, the Signaling Server hosts an NRS. If the property indicates nothing, the Signaling Server does not host an NRS.

Note: By using SIP Proxy/Redirect instead of a gatekeeper, you can have an NRS and only run SIP.

End of Procedure

Before you begin

Before upgrading the software, you must do the following:

- Connect the Signaling Server — see *Signaling Server: Installation and Commissioning* (NN43001-312)
- Take a precautionary backup of the IP Phones application database (Personal Directory, Redial List and Callers List).

- Take a precautionary backup of the NRS database.
- Obtain the CS 1000 Release 5.5 version of the Signaling Server Software Install CD-ROM— see *Signaling Server: Installation and Commissioning* (NN43001-312)
- Ensure that there is 1 GB of RAM configured on your legacy Nortel ISP1100 server

Upgrading the CS 1000 Release 4.0, CS 1000 Release 4.5 or CS 1000 Release 5.0 Signaling Server



IMPORTANT!

The Signaling Server is out-of-service during software upgrades.

Use the following procedure to upgrade the Signaling Server software.

Procedure 21

Upgrading the Signaling Server software

Note: You must backup the NRS database before beginning the following upgrade procedure.

- 1 Insert the CS 1000 Release 5.5 Signaling Server Software media into the Removable Media Device (RMD) of the CP PM Signaling Server and trigger a cold boot.
 - On IBM X306m, HP DL320-G4, or Nortel ISP1100 Signaling Servers, insert the CS 1000 Release 5.5 Signaling Server Software CD into the CD drive and press the RST button on the front panel of the Signaling Server or enter the `reboot -1` command on the CLI of the Signaling Server.

Note: You cannot issue the `reboot -1` command unless you have PDT2 level access.

The VxWorks™ system boot screen appears (see Figure 4 on [page 150](#)).

Figure 4
VxWorks system boot

```
VxWorks System Boot
Copyright 1984-2004 Wind River Systems, Inc.

CPU: PC PENTIUM
Version: VxWorks5.5.1
BSP version: 1.2/3
Creation date: Oct 6 2006, 15:44:38

Mounting /cd0
Found /cd0/nvram.sys
Mounting /boot
Found /boot/nvram.sys

Selecting nvram file from 2 sources

Read boot parameters from:

C: CDROM Drive
H: Hard Disk
10 [H] c
```

- 2 Enter c at the prompt to force the Signaling Server to boot from the Signaling Server Software CD.

Note: Enter c within ten seconds to ensure that the Signaling Server boots from the CD drive.

- On Nortel CP PM Signaling Servers, insert the CS 1000 Release 5.5 Signaling Server Software CF card into the faceplate CF drive and press the RST button on the faceplate of the Signaling Server.

The CP PM System BIOS Configuration screen appears (see Figure 5 on [page 151](#)).

Figure 5
Nortel CP PM system BIOS

```
+-----+
|   System BIOS Configuration, (C) 2005 General Software, Inc.   |
+-----+-----+
| System CPU      : Pentium M          | Low Memory      : 632KB    |
| Coprocessor    : Enabled            | Extended Memory : 1011MB  |
| Ide 0 Type     : 3                  | Serial Ports 1-2 : 03F8 02F8 |
| Ide 1 Type     : 3                  | ROM Shadowing   : Enabled  |
| Ide 2 Type     : 3                  | BIOS Version    : NTDU74AA 15 |
+-----+-----+

Press F to force board to boot from faceplate drive.
.....
```

- 3 Press F to force the Signaling Server to boot from the CF drive.

Note: Press F before dots have completely underlined the textual prompt to ensure that the Signaling Server boots from the CF drive.

Regardless of the type of Signaling Server being upgraded, the next screen to appear that requires an action is the Signaling Server Installation Tool banner screen (Figure 6 on [page 152](#)).

Press <CR> or enter q to quit the Install Tool. You must upgrade the RAM and restart the upgrade process.

- b.** The Install Tool verifies the file systems on the Signaling Server.
- If upgrading from CS 1000 Release 4.5 or later, the system displays the following messages:

```
Verifying filesystems ...
```

```
Filesystems verification succeeded.
```

Note: The file systems for CS 1000 Release 4.5 and later, are the same as those for CS 1000 Release 5.5, therefore the hard disk is not repartitioned.

The System Information screen appears (see Figure 8 on [page 154](#)).

Figure 8
System Information

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

-----
                        SYSTEM INFORMATION
-----

+-----+
| Hostname: CS1000E_PIV                S/W Ver: 4.50.88 |
| Location: N/A                        |
|                                     |
|      Role: Leader                    Set TPS: Enabled |
|      Node ID: 9                      Vtrk TPS: Enabled |
|      Node IP: 192.167.103.3          NRS Config: Primary GK + SIP |
|      H.323 ID: CS1000E_PIV          CS IP: 192.167.102.3 |
|                                     |
|      ELAN IP: 192.167.102.4          TLAN IP: 192.167.103.2 |
|      ELAN SM: 255.255.255.0          TLAN SM: 255.255.255.0 |
|      ELAN GW: 192.167.102.1          TLAN GW: 192.167.103.1 |
|      ELAN MAC: 00:02:b3:ee:28:be     TLAN MAC: 00:02:b3:ee:28:bf |
+-----+

Please enter:
<CR> -> <a> - Continue with Install Tool.
        <q> - Quit.

Enter Choice>

```

Enter **a** to continue the upgrade.

- 5** When the Install Tool banner appears, press <CR> to perform system checks and begin software installation.

The system verifies the file systems.

The following message appears:

```

WARNING: Make sure the NRS database is already
backed up. At this point, you should quit if you
don't have a NRS database backup. Option <a> will
only allow you to backup the IP configuration, and
the hard disk will be partitioned and all unsaved
data will be lost.

```

Figure 9
Copy IP configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
IP configuration backup only when upgrading from release 4.0
and earlier to release 4.5 and after, or hit <b> to continue.

Please insert a DOS formatted blank diskette in the floppy drive.

      Please enter:
<CR> -> <a> - Diskette is now in the floppy drive.
          Continue.
      <b> - Continue without copying IP configuration
      <q> - Quit.

Enter Choice>
```

6 Do one of the following:

- If you want to back up the IP configuration, insert a blank floppy disk in the floppy drive (ensure that the floppy is not write-protected) and enter **a** at the menu shown in Figure 9.

Do one of the following:

- If the following message displays, followed by the menu in Figure 9 again, the backup operation failed. Go to step 7 on [page 157](#):

```
Change volume Id from 0x0 to 0x320d2
Please Wait
```

```
Failed to copy the IP configuration
The floppy is write-protected.
```

- If the following message displays, followed by the menu in Figure 10, the backup succeeded. Remove the floppy from the drive and change it to write-protected. Go to step 9 on [page 157](#):

```
/p/ - Volume is OK
Please wait
/f0/ - Volume is OK
/u/ - Volume is OK

Change volume Id from 0x0 to 0x125b

Done backing up IP configuration to the floppy

Keep the floppy write-protected throughout the rest of the
upgrade procedure to ensure the integrity of its data.
```

Figure 10
First boot of a new system

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The filesystems verification failed! (This is normal for a new
system.)

The hard disk must be (re)partitioned and (re)initialized. This will
erase all data on the hard disk. The system will then reboot and
the Install Tool will restart.

Please enter:
<CR> -> <a> - Partition and initialize the hard disk, then reboot.

Enter Choice> a
```

- If you want to continue without backing up the IP configuration, enter **b** at the menu shown in Figure 9 on [page 155](#).

The system asks for confirmation:

```
IP configuration will be lost. Are you sure you
want to continue?
```

Enter **b** at the menu shown in Figure 9 on [page 155](#) to confirm that you want to continue. Go to step 8 on [page 157](#).

- If you want to quit the upgrade and restore the previous release of software, remove the Install Tool CD and the floppy from the drives and enter **q** at the menu shown in Figure 9 on [page 155](#).
- 7** Reset the write permission on the floppy and try again:
 - a.** Remove the floppy from the drive and slide the permission tab up and down.
 - b.** Go back to step 6 on [page 155](#).
 - 8** When the Install Tool banner appears, press <CR> to perform system checks and begin software installation.

The system verifies the file systems. The disk check reports:

```
Filesystems verification succeeded.
```

The menu shown in Figure 10 on [page 156](#) appears.

- 9** Enter **a** at the menu shown in Figure 10 on [page 156](#).

The following messages appear:

```
Testing hard disk ...
Testing partition /u (4194241 blocks) ...
xxx% complete

Testing partition /p (4194241 blocks) ...
xxx% complete

Hard disk testing succeeded.

Where xxx = 0 to 100.
```

If the physical check did not pass, contact your technical support group.

The Install Tool Main Menu appears (see Figure 11 on [page 158](#)).

Figure 11
Install Tool Main Menu

```
CS 1000 Signaling Server Software Install Tool (sse-5.50.xx)
=====

                M A I N   M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
          Server s/w, Internet Telephone f/w, Voice Gateway Media
          Card l/w, basic Signaling Server configuration).
        <b> - To install/upgrade Signaling Server software only.
        <c> - To copy Internet Telephone firmware only.
        <d> - To copy Voice Gateway Media Card loadware only.
        <e> - To perform basic Signaling Server configuration only.
        <f> - To selectively change initial system parameters.
        <g> - To change board location information (CPPM only).
        <t> - To go to the Tools Menu.
        <q> - Quit.

Enter Choice>

Copying "/cf2/sse550xx.p/disk.sys" to "/u/disk.sys".

Processing the install control file ...
"/cf2/sse550xx.p/install.dat" parsed.

CS 1000 Signaling Server Software Install Tool (sse-5.50.xx)
```

10 Do one of the following:

- Enter **a** to upgrade the Signaling Server software, IP Phone firmware, and Voice Gateway Media Card loadware.
- Enter **b** to upgrade only the Signaling Server software.

Note: If option b is chosen, options c and d must be executed manually, otherwise Phones and VGMC cards may not function.

Regardless of the option chosen, the Dependency list installation screen appears (see Figure 12 on [page 159](#)).

Figure 12
Dependency list

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Do you want to install Dependency Lists?

Please enter:
<CR> -> <y> - Yes, Do the Dependency Lists installation
      <n> - No, Continue without Dependency Lists installation

Enter Choice>
```

11 Do one of the following:

- Press **<CR>** or enter **<y>** to install dependency lists and continue with the upgrade.
- Enter **<n>** to continue the upgrade without installing the dependency lists.

If upgrading from Succession 3.0 or CS 1000 Release 4.0, the following Installation Status Summary screen appears (see Figure 13 on [page 160](#)).

Figure 13
Installation status summary (Succession 3.0 or CS 1000 Release 4.0)

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
-----
                        INSTALLATION STATUS SUMMARY
-----
+-----+-----+-----+-----+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| software | yes | | upgrade x.xx.xx to x.xx.xx |
+-----+-----+-----+-----+
| Dependency Lists | yes | | copy ALL |
+-----+-----+-----+-----+
| firmware | yes | | copy ALL |
+-----+-----+-----+-----+
| loadware | yes | | copy ALL |
+-----+-----+-----+-----+
| configuration | yes | | |
+-----+-----+-----+-----+

Please enter:
CR> -> <y> - Yes, start complete installation.
      <n> - No, cancel complete installation and return to the Main
      Menu.

Enter Choice>
    
```

If upgrading from CS 1000 Release 4.5 or later, the following Installation Status Summary screen appears (see Figure 14 on [page 161](#))

Figure 14
Installation Status Summary (CS 1000 Release 4.5 or later)

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

-----
                    INSTALLATION STATUS SUMMARY
-----

+=====+=====+=====+=====+
|   Option   | Choice | Status |           Comment           |
+-----+-----+-----+-----+
| software   |  yes  |       | upgrade x.xx.xx to x.xx.xx |
+-----+-----+-----+-----+
| Dependency Lists |  yes  |       | copy ALL                    |
+-----+-----+-----+-----+
| firmware   |  yes  |       | copy ALL                    |
+-----+-----+-----+-----+
| loadware   |  yes  |       | copy ALL                    |
+-----+-----+-----+-----+
| configuration |  no   |       |                               |
+-----+-----+-----+-----+

Please enter:
<CR> -> <y> - Yes, start complete installation.
        <n> - No, cancel complete installation and return to the Main
            Menu.

Enter Choice>

```

12 Press **<CR>** or enter **y** to start the upgrade.

The following screens and messages appear in succession (beginning with Figure 15: “Software upgrade start” on [page 162](#))

Figure 15
Software upgrade start

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You have selected to upgrade the system from version x.xx.xx to
version x.xx.xx. THIS WILL ERASE ALL OLD SYSTEM FILES. Data files
will be preserved.

Starting upgrade from version x.xx.xx to version x.xx.xx.

Backed up "/boot/nvram.sys".

Initializing protected partition ...
Retrieved old volume params with %95 confidence:
Volume Parameters: FAT type: FAT32, sectors per cluster 8
  2 FAT copies, 0 clusters, 4096 sectors per FAT
  Sectors reserved 32, hidden 0, FAT sectors 8192
  Root dir entries 0, sysId (null), serial number 9166bc15
  Label:"
Disk with 4194304 sectors of 512 bytes will be formatted with:
Volume Parameters: FAT type: FAT32, sectors per cluster 8
  2 FAT copies, 523260 clusters, 4096 sectors per FAT
  Sectors reserved 32, hidden 0, FAT sectors 8192
  Root dir entries 0, sysId VX5DOS32, serial number 9166bc15
  Label:"
"/p" initialized
/p/ - Volume is OK
Creating directory "/p/data".
Attempting to install bootstrap on primary sector of device /dev/hda1
Found cbio device /dev/hda1 [0x1a001ddc] with sector size 512
Installing bootstrap on device /dev/hda1
Installing image /p/load/bootrom.bin on /boot
Found cbio device 0x1a001ddc with sector size 512
Copying /p/load/bootrom.bin to /boot/bootrom.sys
Boot ROM "/p/load/bootrom.bin" installed.

Erasing /u/patch/reten/reten.pch.
Erasing /u/patch/reten/mdp.ini.
Erasing /u/patch/reten/p22473_1.ss1.
```

Figure 16
Software upgrade success

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Software version x.xx.xx was installed successfully.

All files were copied to the hard disk.

/p/ - Volume is OK
```

Figure 17
IP Phone firmware upgrade

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The installation source contains multiple Internet Telephone firmware
files.

Delete previous registered F/W files:
Deleting F/W file - /u/fw/x00.fw...
Deleting F/W file - /u/fw/x01.fw...
Deleting F/W file - /u/fw/x02.fw...
Deleting F/W file - /u/fw/x21.fw...
Deleting F/W file - /u/fw/x24.fw...
Deleting F/W file - /u/fw/x25.fw...
Copying "/cd0/0603B76.bin" to "/u/fw/0603B76.bin
Copying "/cd0/0602B76.bin" to "/u/fw/0602B76.bin
Copying "/cd0/0604B76.bin" to "/u/fw/0604B76.bin
Copying "/cd0/0621C44.bin" to "/u/fw/0621C44.bin
Copying "/cd0/0624C44.bin" to "/u/fw/0624C44.bin
Copying "/cd0/0625C44.bin" to "/u/fw/0625C44.bin
Copying "/cd0/0627C44.bin" to "/u/fw/0627C44.bin
```

Figure 18
Voice Gateway Media Card loadware upgrade

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The installation source contains multiple Voice Gateway Media Card
loadware files.

Copying "/cd0/IPLxxxxx.p2" to "/u/fw/IPLxxxxx.p2".
Copying "/cd0/IPLxxxxx.sa" to "/u/fw/IPLxxxxx.sa".
Copying "/cd0/IPLxxxxx.mc32s" to "/u/fw/IPLxxxxx.mc32s".
```

The system then echoes the ELAN network interface MAC address for the Signaling Server:

```
For future reference, the ELAN MAC address is:
"00:02:b3:c5:51:c6"
```

Note: The value in the above example is for illustrative purposes only.

The next screen(s) to appear depend on which Signaling Server software release you are upgrading from:

- If upgrading from Succession 3.0 or CS 1000 Release 4.0, the Restore IP configuration screen appears (see Figure 19: "Restore IP configuration" on [page 165](#))

Figure 19
Restore IP configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please insert the database diskette in the removable drive
to restore the IP configuration to the hard disk

      Please enter:
<CR> -> <a> - Diskette is now in the removable drive.
          Continue.
      <b> - Continue without restoring the IP configuration
      <q> - Quit.

Enter Choice> b
```

Do one of the following:

- To restore the IP configuration from the floppy, insert the write-protected floppy in the floppy drive, and press <CR> or enter **a** at the prompt.

The following message appears:

Done copying IP configuration to disk

- To continue the upgrade without restoring the IP configuration, enter **b** or **q** at the prompt.

Note: You will have to manually re-enter the IP configuration.

- If upgrading from CS 1000 Release 4.5 or later, the Retain existing IP configuration screen appears (see Figure 20: “Retain existing IP configuration” on [page 166](#)).

Figure 20
Retain existing IP configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Since this is a system upgrade, the existing configuration files will
be retained.

If you need to re-configure this Signaling Server, then please
select the basic configuration option from the Main Menu.
```

The Installation Staus Summary screen appears (see Figure 21: “Installation Status Summary” on [page 167](#)).

Figure 21
Installation Status Summary

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

-----
                        INSTALLATION STATUS SUMMARY
-----

+=====+=====+=====+=====+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| software | yes | ok | upgrade x.xx.xx to x.xx.xx |
+-----+-----+-----+-----+
| Dependency Lists | yes | ignore | copy NONE |
+-----+-----+-----+-----+
| firmware | yes | ok | copy i2002 version 1.76 |
| firmware | yes | ok | copy i2002 version 1.76 |
| firmware | yes | ok | copy PhaseII IP Firmware v. 3.B6 |
| firmware | yes | ok | copy i2007 IP Firmware v. 2.44 |
| firmware | yes | ok | copy 1120E IP Firmware v. 2.44 |
| firmware | yes | ok | copy 1140E IP Firmware v. 2.44 |
| firmware | yes | ok | copy 1150E IP Firmware v. 2.44 |
+-----+-----+-----+-----+
| loadware | yes | ok | copy IP Line x.xx.xx for P2 |
| loadware | yes | ok | copy IP Line x.xx.xx for SA |
| loadware | yes | ok | copy IP Line x.xx.xx for MC32S |
+-----+-----+-----+-----+
| configuration | no | ignore |
+-----+-----+-----+-----+

Please press <CR> when ready ...
    
```

13 Press **<CR>** and the Install Tool Main Menu screen appears (see Figure 22: "Install Tool Main Menu" on [page 168](#)).

Figure 22
Install Tool Main Menu

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

                M A I N   M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
          Server s/w, Internet Telephone f/w, Voice Gateway Media
          Card l/w, basic Signaling Server configuration).
<b> - To install/upgrade Signaling Server software only.
<c> - To copy Internet Telephone firmware only.
<d> - To copy Voice Gateway Media Card loadware only.
<e> - To perform basic Signaling Server configuration only.
<f> - To go to the Tools Menu.
<q> - Quit.

Enter Choice>
```

14 Enter q to quit the Install Tool.

The Install Tool quit confirmation screen appears (see Figure 23 on [page 169](#)).

Figure 23
Install Tool quit confirmation

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You have selected to quit the Install Tool.

Before quitting and rebooting the system, remove all disks (floppy,
CDROM) from the drives.

    Please enter:
<CR> -> <m> - Return to previous menu.
    <q> - Quit and reboot the system.

    Enter Choice>

Removing temporary file "/u/disk.sys".

Rebooting system
```

- 15 Remove the Signaling Server Software media from the RMD of the Signaling Server and enter q to quit the Installation Tool and reboot the system.

The following system messages appear:

```
Removing temporary file "/u/disk.sys".
```

```
Rebooting system ...
```

End of Procedure

Note: Please ensure the proper PEPs and Deplists are applied to the Call Servers at this point. Please visit the ESPL website for more details at <https://app91.nortelnetworks.com/espl>.

If you are upgrading from Succession 3.0, you must reconfigure the Signaling Server to obtain and configure the NRS. If you do not reconfigure the Signaling Server, you cannot use a SIP Redirect Server. Refer to *Signaling Server: Installation and Commissioning* (NN43001-312) for instructions on reconfiguring a Signaling Server.

Re-installing the previous software release



IMPORTANT!

The length of time to restore an IP Phone Application Server database depends on the amount of records.



IMPORTANT!

Nortel CP PM, IBM X306m, and HP DL320-G4 Signaling Servers can not run software older than CS 1000 Release 5.0.

Procedure 22

Re-installing the previous software release

- 1 Enter **t** at the Installation Tool Main Menu screen (see Figure 24).

Figure 24

Installation Tool Main Menu

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

                M A I N   M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
Server s/w, Internet Telephone f/w, Voice Gateway Media
Card l/w, basic Signaling Server configuration).
<b> - To install/upgrade Signaling Server software only.
<c> - To copy Internet Telephone firmware only.
<d> - To copy Voice Gateway Media Card loadware only.
<e> - To perform basic Signaling Server configuration only.
<f> - To selectively change initial system parameters.
<g> - To change board location information (CPPM only).
<t> - To go to the Tools Menu.
<q> - Quit.

Enter Choice>
```

The Tools Menu appears (see Figure 25).

Figure 25
Tools Menu

```

CS 1000 signaling server Software Install Tool (sse-x.xx.xx)
=====
                T O O L S   M E N U

This is the Tools Menu. Please select one of the options below.

Please enter:
<CR> -> <a> - To set system date and time.
        <b> - To re-partition and re-initialize the hard disk.
        <c> - To reload Default Accounts.
        <d> - To test the hard disk.
        <e> - To change the web server security flag.
        <f> - To initialize unprotected (/u) partition.
        <g> - Clear the boot sector to allow re-installation of the previous release.
        <h> - Copy the IP configuration from the removable media to the hard disk.
        <i> - Backup the IP configuration from the hard disk to the removable media.
        <j> - To replace CPU board BIOS.
        <m> - To return to the Main Menu.

Enter Choice>
    
```

- 2** Enter g to Clear the boot sector to allow the re-installation of the previous release.

After the boot sector is cleared, the following system messages appear:

The boot sector is cleared.

Insert the installation CD and restart the system.

- 3** Insert the Signaling Server Software CD or CF card for the previous release, and install the software accordingly.

End of Procedure

For more information on upgrading or installing Signaling Servers, refer to *Signaling Server: Installation and Commissioning* (NN43001-312).

Upgrading Voice Gateway Media Cards

Contents

This section contains information on the following topics:

Things to know	173
Task summary	174
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Determine Voice Gateway Media Card loadware version	175
Determine the IP Phone firmware version	179
Obtain and upload loadware and firmware files	182
Upgrade the Voice Gateway Media Card loadware	184
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Upgrade the IP Phone firmware	192

Things to know

During the Signaling Server upgrade, the Install Tool copied Voice Gateway Media Card loadware files and IP Phone firmware files to the Signaling Server. Element Manager uses these files to upgrade the Voice Gateway Media Cards and to distribute the IP Phone firmware files to the other components in the IP Telephony nodes. This allows administrators to then upgrade the firmware on the IP Phones.

For more information about telephone operation during firmware download, see *IP Line Fundamentals* (NN43100-500) or *Branch Office: Installation and Commissioning* (NN43001-314).

To upgrade loadware and software, be sure to have the Signaling Server CD-ROM from the Upgrades kit on hand.

If an Upgrade kit was not purchased, refer to *Signaling Server: Installation and Commissioning* (NN43001-312) for information on how to create a Signaling Server CD-ROM.

Alternatively, download the software from the Nortel web site and upload new loadware and firmware from the management workstation to Element Manager. Refer to “Obtain and upload loadware and firmware files” on [page 182](#).

Task summary

To upgrade loadware and software, perform the following tasks:

- 1 Verify the Voice Gateway Media Card loadware and IP Phone firmware versions.
- 2 Upgrade the software on all of the Voice Gateway Media Cards from IP Line 4.x to IP Line.

Note: If upgrading from a VGMC version BB, release 4.50, apply the current patch prior to performing the upgrade. This will allow release 5.5 to load into the old equipment. Failure to do this will prevent the updating of the loadware.

- 3 Distribute the IP Phone firmware to all components (Signaling Server and Voice Gateway Media Cards) in an IP telephony node.

Verify current loadware and firmware versions

Write down the loadware and firmware version for each Voice Gateway Media Card. Compare the loadware and firmware version with the latest recommended software release on the Nortel web site.

If the card’s software and firmware are not up-to-date, upgrade the Voice Gateway Media Card with the latest software and firmware files.

Determine Voice Gateway Media Card loadware version

To determine the version of loadware on the Voice Gateway Media Card, follow the steps in Procedure 23, Procedure 24, or Procedure 25 on [page 178](#).

Procedure 23

Determining loadware version during boot sequence

- 1 Attach a serial cable from the workstation to the maintenance port of the Voice Gateway Media Card.
- 2 Reset the card.
- 3 Observe the boot sequence and look for a software version message similar to the following example:

```
Software Version: IPL-5.xx  
Management IP: 192.167.100.5  
Host Type: Voice Gateway Media Card  
Firmware Version: MC Firmware Rls 6.7
```

End of Procedure

Procedure 24

Determining the loadware version through Element Manager

- 1 Select **Software** from the System portion of the Element Manager Navigation Tree.
- 2 Click **Voice Gateway Media Card** from the expanded Software menu. The **Voice Gateway Media Card (VGMC) Loadware Upgrade** page appears. See Figure 26 on [page 176](#).

Figure 26
Voice Gateway Media Card (LW) Upgrade window

NORTEL CS 1000 ELEMENT MANAGER Help | Logout

Managing: **192.167.100.3**
 System » Software » Voice Gateway Media Card (VGMC) Loadware Upgrade

Voice Gateway Media Card (VGMC) Loadware Upgrade

Select Card(s)

Open all nodes Close All nodes Clear all

+ Node ID: 5 Node IP: 192.167.101.3 Total elements: 3

Click a button to invoke a command.

Select File	File Name	Type	Create Time
<input type="radio"/>	IPL50031.p2	ITG Pentium	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.p2	ITG Pentium	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.p2	ITG Pentium	THU SEP 13 12:12:42 2007
<input type="radio"/>	IPL52503.p2	ITG Pentium	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.p2	ITG Pentium	WED OCT 24 11:06:12 2007
<input type="radio"/>	IPL52509.p2	ITG Pentium	WED OCT 31 11:31:06 2007
<input type="radio"/>	IPL50031.sa	Voice Gateway Media Card	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.sa	Voice Gateway Media Card	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.sa	Voice Gateway Media Card	THU SEP 13 12:12:44 2007
<input type="radio"/>	IPL52503.sa	Voice Gateway Media Card	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.sa	Voice Gateway Media Card	WED OCT 24 11:06:12 2007
<input type="radio"/>	IPL52509.sa	Voice Gateway Media Card	WED OCT 31 11:31:08 2007
<input type="radio"/>	IPL52511.sa	Voice Gateway Media Card	WED NOV 14 11:18:22 2007
<input type="radio"/>	IPL52512.sa	Voice Gateway Media Card	WED NOV 21 10:18:50 2007
<input type="radio"/>	IPL55002.sa	Voice Gateway Media Card	THU DEC 06 14:45:32 2007
<input type="radio"/>	IPL50031.mc32s	MC32S Card	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.mc32s	MC32S Card	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.mc32s	MC32S Card	THU SEP 13 12:12:44 2007
<input type="radio"/>	IPL52503.mc32s	MC32S Card	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.mc32s	MC32S Card	WED OCT 24 11:06:14 2007
<input type="radio"/>	IPL52509.mc32s	MC32S Card	WED OCT 31 11:31:08 2007
<input type="radio"/>	IPL52511.mc32s	MC32S Card	WED NOV 14 11:18:22 2007
<input type="radio"/>	IPL52512.mc32s	MC32S Card	WED NOV 21 10:18:50 2007
<input type="radio"/>	IPL55002.mc32s	MC32S Card	THU DEC 06 14:45:34 2007

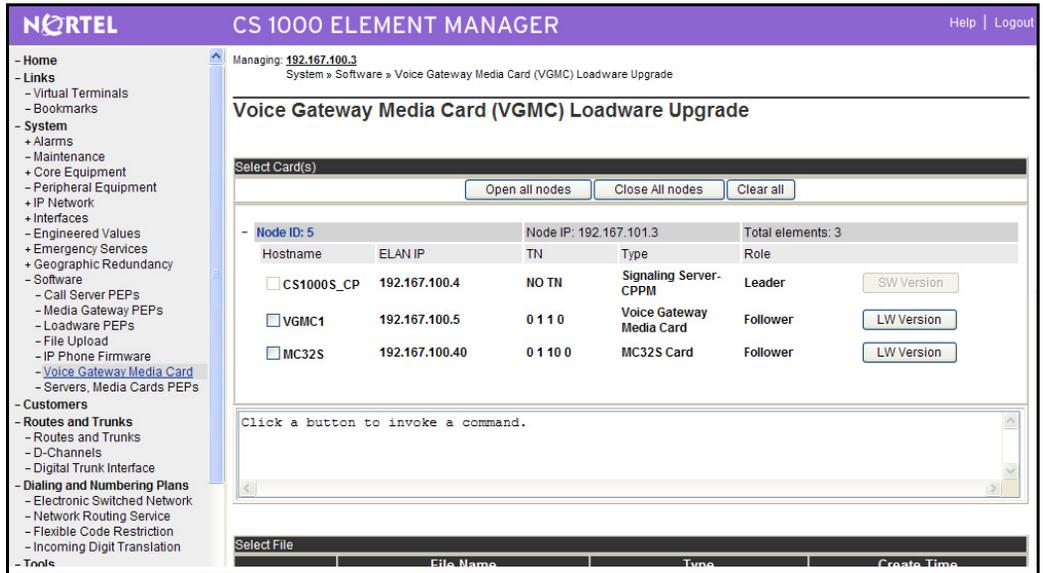
Start Loadware Upgrade

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- 3 Expand a node and select a card in the node.

See Figure 27.

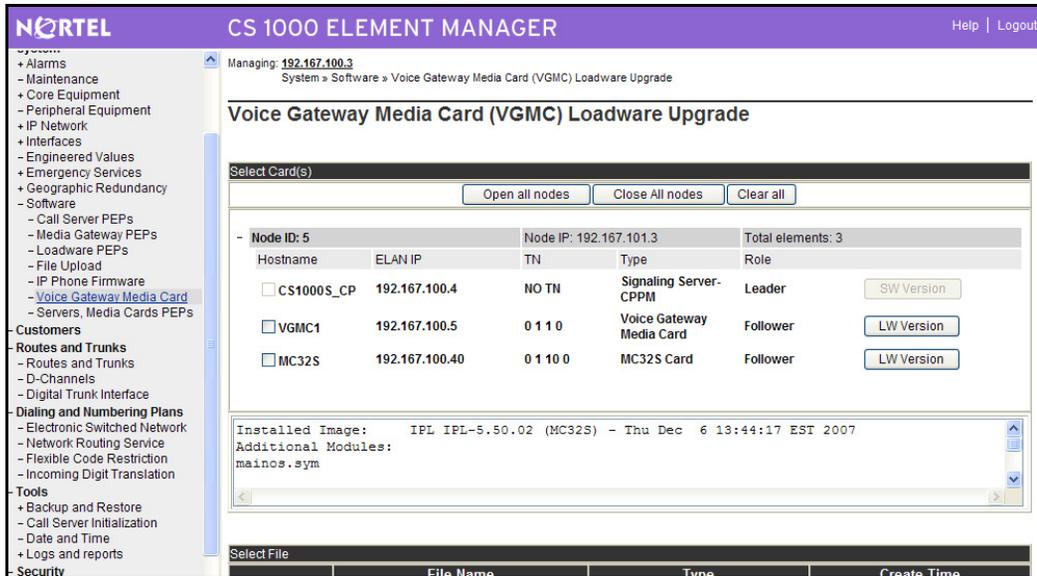
Figure 27
LW Version



- 4 Click the **LW Version** button located to the right of the card information.

The loadware version running on the card is displayed in the pane in the center of the Voice Gateway Media Card (LW) page, as shown in Figure 28 on [page 178](#).

Figure 28
Loadware version displayed



5 Note the loadware version for the card.

End of Procedure

Procedure 25
Determining the loadware version through the CLI

Detailed procedures can be found in *IP Line Fundamentals* (NN43100-500).

- 1 Telnet to a Voice Gateway Media Card.
- 2 Log in with a user name and password.
- 3 View the login banner, and look for a software version message similar to the following example:

```
Software Version: IPL-5.xx
Management IP: 192.167.100.5
Host Type: Voice Gateway Media Card
Firmware Version: MC Firmware Rls 6.7
```

- 4 Alternatively, view the syslog and look for a software version message.

Note: The Voice Gateway Media Card syslog is also available for viewing from Element Manager.

End of Procedure

Determine the IP Phone firmware version

To determine the version of the IP Phone firmware that is stored on the Voice Gateway Media Card, follow the steps in Procedure 26. To view the firmware version currently running on the IP Phones, use Procedure 27 on [page 182](#).

Procedure 26

Determining the IP Phone firmware version on a Voice Gateway Media Card

- 1 Select **Software** from the System portion of the Element Manager Navigation Tree.
- 2 Click **IP Phone Firmware** from the expanded Software menu..

The **IP Phone Firmware** window opens. See Figure 29 on [page 180](#). Firmware for the selected node appears under **Current Firmware**

Figure 29
IP Telephone (FW) Upgrade window

NORTEL CS 1000 ELEMENT MANAGER Help | Logout

Managing: [192.167.100.3](#)
 System » Software » IP Phone Firmware

IP Phone Firmware

Compare firmware on each IP Telephony Node with the latest recommended, and update as required. After distribution, individual phones must be reset to load new firmware.

Recommended firmware list dated: March 1, 2005 2:59:30PM.

Current Firmware

View firmware on IP Telephony Node:

	Phone Type	TPS Firmware	Recommended
1	IP Audio Conference Phone 2033	S74	Not Available
2	IP Phone 1110	C4G	3.4B
3	IP Phone 1120E	C4G	2.4B
4	IP Phone 1140E	C4G	2.4B
5	IP Phone 1150E	C4G	2.4C
6	IP Phone 2001 Phase 2	DBI	3.A6
7	IP Phone 2002 Phase 1	B76	1.76
8	IP Phone 2002 Phase 2	DBI	3.BG
9	IP Phone 2004 Phase 0/1	B76	1.76
10	IP Phone 2004 Phase 2	DBI	3.BG
10	IP Phone 2004 Phase 2	DBI	3.BG
11	IP Phone 2007 Phase 2	C4L	2.4J
12	IP Phone 2033	Not Available	S.68
13	IP Phone Orion 1210	C5H	Not Available
14	IP Phone Orion 1220	C5H	Not Available
15	IP Phone Orion 1230	C5H	Not Available

Note: All the listed IP phones may not be applicable to the selected IP Telephony Node.

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- In the drop down menu, select the desired IP Telephony Node to show the current firmware level for the sets. The phone type, current TPS firmware and Recommended firmware versions are shown. See Figure 30.

Figure 30
FWVersionShow

The screenshot shows the Nortel CS 1000 Element Manager interface. The main content area is titled "IP Phone Firmware" and includes instructions to compare and update firmware. A "Refresh..." button is present. Below this, a dropdown menu is set to "5". An "Update..." button and a "Refresh" link are also visible. A table lists 15 IP phones with their types, current TPS firmware, and recommended versions.

Phone Type	TPS Firmware	Recommended
1 IP Audio Conference Phone 2033	S74	Not Available
2 IP Phone 1110	C4G	3.4B
3 IP Phone 1120E	C4G	2.4B
4 IP Phone 1140E	C4G	2.4B
5 IP Phone 1150E	C4G	2.4C
6 IP Phone 2001 Phase 2	DBI	3.A6
7 IP Phone 2002 Phase 1	B76	1.76
8 IP Phone 2002 Phase 2	DBI	3.BG
9 IP Phone 2004 Phase 0/1	B76	1.76
10 IP Phone 2004 Phase 2	DBI	3.BG
10 IP Phone 2004 Phase 2	DBI	3.BG
11 IP Phone 2007 Phase 2	C4L	2.4J
12 IP Phone 2033	Not Available	S.68
13 IP Phone Orion 1210	C5H	Not Available
14 IP Phone Orion 1220	C5H	Not Available
15 IP Phone Orion 1230	C5H	Not Available

Note: All the listed IP phones may not be applicable to the selected IP Telephony Node.

End of Procedure

Procedure 27

Determining firmware version on an IP Phone

An alternative method to determine the IP Phone firmware version is through the keypad and display interface.

- 1 Press the **Configuration** key on the IP Phone (it looks like a small globe with arrows).
- 2 Press the down arrow key until the “**Set Info**” menu is reached. Press the **Select** key.
- 3 Press the down arrow key until “**FW Version**” is displayed.
- 4 Press the **Cancel** key to exit each menu.

End of Procedure

Obtain and upload loadware and firmware files

This information is provided in the event that a Signaling Server Software CD-ROM is not available. It provides information on how to download the necessary files from the Nortel Software Download web site to a management workstation, and how to upload the Voice Gateway Media Card loadware and IP Phone upgrade firmware from the management workstation to the Signaling Server.

Refer to “Obtaining software” on [page 233](#) for information on how to download the software to a management workstation.

Procedure 28 on [page 183](#) describes how to upload the Voice Gateway Media Card loadware and IP Phone firmware from the management workstation to the Signaling Server. Firmware and loadware upgrade files come with the Signaling Server Software CD-ROM included in the Upgrade kit, or from the Nortel Software Download web site.

If the latest Voice Gateway Media Card loadware and IP Phone firmware files were copied from the CD to the Signaling Server hard drive during the Signaling Server installation, there is no need to follow Procedure 28. The files appear in the Element Manager **Software > Voice Gateway Media Card and Software > IP Phone Firmware** window. If the latest versions of the loadware and firmware are already installed on the Signaling Server, then go to “Upgrading Voice Gateway Media Card loadware” on [page 185](#).

Follow the steps in Procedure 28 to upload the Voice Gateway Media Card loadware and IP Phone firmware from the management workstation to the Signaling Server.

To complete this procedure, use a management PC that is on the same network as the Signaling Server for Element Manager.

Procedure 28

Obtaining and uploading loadware and firmware

- 1 Obtain the latest software installation files for the Voice Gateway Media Card loadware and IP Phone firmware. Download the files from the Nortel Electronic Software Download site to the management PC, as described in "Obtaining software" on [page 233](#).

- 2 Locate the saved files and double-click the *.zip file.

The zipped file opens in a compression utility program and the decompressed files are listed.

For Phase 1 IP Phone 2004, the IP Phone firmware files have the format '**0602BNN.BIN**'

For Phase 1 IP Phone 2002, the IP Phone firmware files have the format '**0603BNN.BIN**'

For Phase 2 IP Phones 2001, 2002 and 2004, the IP Phone firmware files have the format '**0604DNN.BIN**'

where:

06 is the design site location code

02 or 03 is the IP Phone type:

B is the release: {B = 1, C = 2, D = 3 ...}

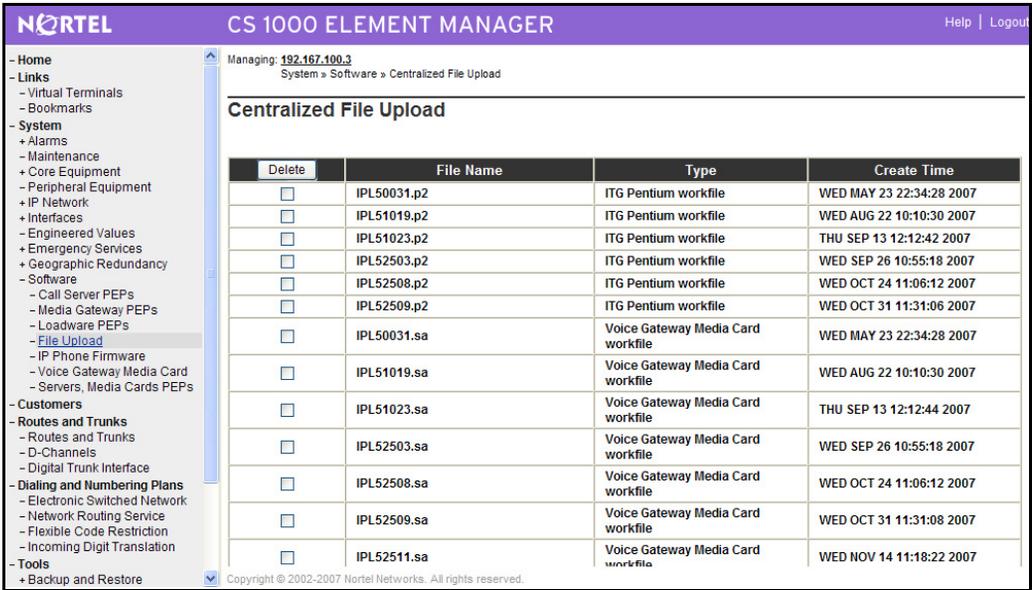
xx is the firmware version

The Voice Gateway Media Card loadware files have the format '**IPL500xx.p2**' and '**IPL500xx.sa**'.

- 3 Log into Element Manager.
- 4 Using **Software> File upload** (see Figure 31 on [page 184](#)), browse to the software files on the workstation and upload them to the Signaling Server.

Initially, the Voice Gateway Media Card loadware and IP Phone firmware files are stored in the Signaling Server's **/u/fw** directory.

Figure 31
Upload firmware, software, and loadware



Note 1: After uploading the file to Element Manager, the file remains on this Signaling Server.

Note 2: If there is more than one Signaling Server, the software files uploaded to a specific Signaling Server are not copied to another Signaling Server. It is unnecessary to copy files to other node components, as having a Leader Signaling Server enables central management.

— End of Procedure —

Upgrade the Voice Gateway Media Card loadware

This section describes how to upgrade Voice Gateway Media Card loadware from 3.x to a later version using Element Manager. The cards obtain their loadware from the Signaling Server.

Follow the steps in Procedure 29 to upgrade Voice Gateway Media Card loadware.

This procedure assumes the Voice Gateway Media Card upgrade loadware has already been uploaded to the Signaling Server. See “Obtain and upload loadware and firmware files” on [page 182](#).

Procedure 29**Upgrading Voice Gateway Media Card loadware**

- 1 Log into Element Manager.
- 2 For the remote Voice Gateway Media Card upgrade, choose **Software> Voice Gateway Media Card**
- 3 The **Voice Gateway Media Card (VGMC) Loadware Upgrade** window opens. See Figure 32 on [page 186](#).

Figure 32
Voice Gateway Media Card (LW) upgrade

The screenshot displays the Nortel CS 1000 Element Manager interface for a Voice Gateway Media Card (VGMC) Loadware Upgrade. The interface is divided into several sections:

- Navigation Menu (Left):** A tree view showing system components such as Home, Links, System, Alarms, Maintenance, Core Equipment, Peripheral Equipment, IP Network, Interfaces, Engineered Values, Emergency Services, Geographic Redundancy, Software, Call Server PEPs, Media Gateway PEPs, Loadware PEPs, File Upload, IP Phone Firmware, Voice Gateway Media Card, Servers, Media Cards PEPs, Customers, Routes and Trunks, D-Channels, Digital Trunk Interface, Dialing and Numbering Plans, Electronic Switched Network, Network Routing Service, Flexible Code Restriction, Incoming Digit Translation, Tools, and Backup and Restore.
- Header:** Displays 'Nortel CS 1000 ELEMENT MANAGER' and 'Help | Logout'. Below this, it shows 'Managing: 192.167.100.3' and 'System > Software > Voice Gateway Media Card (VGMC) Loadware Upgrade'.
- Main Title:** 'Voice Gateway Media Card (VGMC) Loadware Upgrade'.
- Select Card(s):** A section with buttons for 'Open all nodes', 'Close All nodes', and 'Clear all'. Below this, it shows '+ Node ID: 5' and 'Node IP: 192.167.101.3' with 'Total elements: 3'.
- Command Area:** A text box with the instruction 'Click a button to invoke a command.'
- Select File Table:** A table listing files for selection. The table has columns for 'File Name', 'Type', and 'Create Time'.

Select File	File Name	Type	Create Time
<input type="radio"/>	IPL50031.p2	ITG Pentium	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.p2	ITG Pentium	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.p2	ITG Pentium	THU SEP 13 12:12:42 2007
<input type="radio"/>	IPL52503.p2	ITG Pentium	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.p2	ITG Pentium	WED OCT 24 11:06:12 2007
<input type="radio"/>	IPL52509.p2	ITG Pentium	WED OCT 31 11:31:06 2007
<input type="radio"/>	IPL50031.sa	Voice Gateway Media Card	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.sa	Voice Gateway Media Card	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.sa	Voice Gateway Media Card	THU SEP 13 12:12:44 2007
<input type="radio"/>	IPL52503.sa	Voice Gateway Media Card	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.sa	Voice Gateway Media Card	WED OCT 24 11:06:12 2007
<input type="radio"/>	IPL52509.sa	Voice Gateway Media Card	WED OCT 31 11:31:08 2007
<input type="radio"/>	IPL52511.sa	Voice Gateway Media Card	WED NOV 14 11:18:22 2007
<input type="radio"/>	IPL52512.sa	Voice Gateway Media Card	WED NOV 21 10:18:50 2007
<input type="radio"/>	IPL55002.sa	Voice Gateway Media Card	THU DEC 06 14:45:32 2007
<input type="radio"/>	IPL50031.mc32s	MC32S Card	WED MAY 23 22:34:28 2007
<input type="radio"/>	IPL51019.mc32s	MC32S Card	WED AUG 22 10:10:30 2007
<input type="radio"/>	IPL51023.mc32s	MC32S Card	THU SEP 13 12:12:44 2007
<input type="radio"/>	IPL52503.mc32s	MC32S Card	WED SEP 26 10:55:18 2007
<input type="radio"/>	IPL52508.mc32s	MC32S Card	WED OCT 24 11:06:14 2007
<input type="radio"/>	IPL52509.mc32s	MC32S Card	WED OCT 31 11:31:08 2007
<input type="radio"/>	IPL52511.mc32s	MC32S Card	WED NOV 14 11:18:22 2007
<input type="radio"/>	IPL52512.mc32s	MC32S Card	WED NOV 21 10:18:50 2007
<input type="radio"/>	IPL55002.mc32s	MC32S Card	THU DEC 06 14:45:34 2007
- Buttons:** At the bottom, there are 'Start' and 'Loadware Upgrade' buttons.
- Footer:** Copyright © 2002-2007 Nortel Networks. All rights reserved.

Note: Since components can run different versions of loadware, click the **LW Version** button for a given element to obtain the current loadware version.

- 4 Select the loadware file appropriate to the type of Voice Gateway Media Card that is being upgraded. The filename begins with "**IPL**". A sample list of files available is shown in Figure 32.
- 5 Open the node and select the Voice Gateway Media Cards to be upgraded. Select the same type of Voice Gateway Media Card as the loadware file.

For instance:

- a. If the loadware file has the extension ".p2", only select ITG-P cards to upgrade.
- b. If the loadware file has the extension ".sa", only select Media Cards to upgrade.
- c. If the loadware file has the extension ".mc32s", only select MC32S cards to upgrade.

Note: The maximum number of Voice Gateway Media Cards or other components that can be upgraded at a time is four, as all files are simultaneously transferred by FTP.

- 6 Click the **Loadware Upgrade** button on the bottom of the Voice Gateway Media Card (LW) Upgrade window.
- 7 Click **OK** for the confirmation messages as shown in Figure 33.

A Loadware Upgrade Progress page is displayed. When the loadware upgrade is complete, a completion message appears. Generally, it takes three minutes for each ITG-P 24-port card to upgrade, and one minute for each Media Card.

Figure 33
Work file

The screenshot shows the Nortel CS 1000 Element Manager interface. On the left is a navigation tree with categories like Home, Links, System, Interfaces, and Tools. The main area displays a table of elements. A dialog box from Microsoft Internet Explorer is overlaid on the table, asking for confirmation to use a work file for upgrading loadware on specific elements.

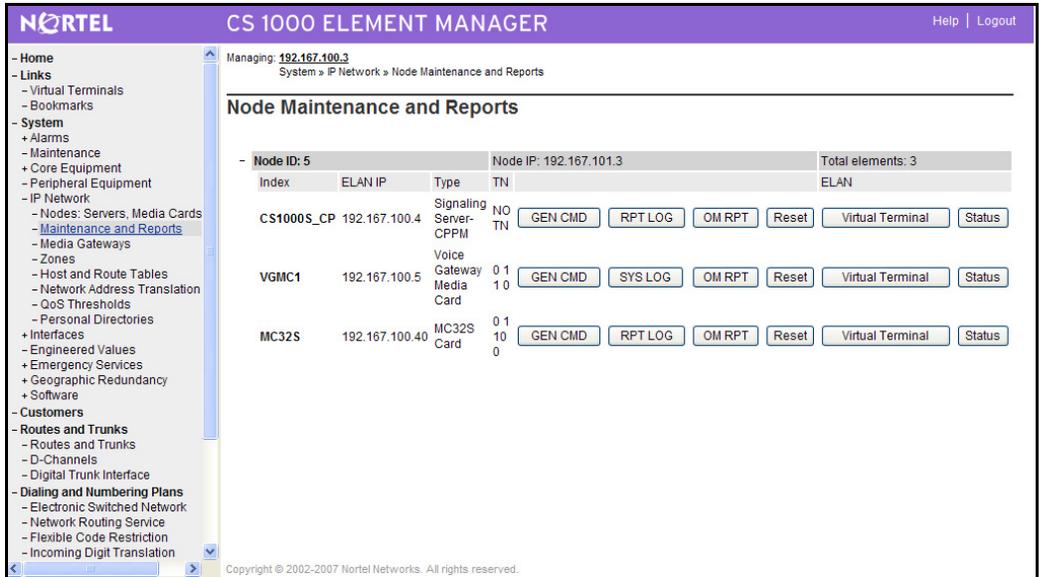
Element ID	Hardware Type	Last Update
IPL51023.p2	ITG Pentium	THU SEP 13 12:12:42 2007
IPL52503.p2	ITG Pentium	WED SEP 26 10:55:18 2007
IPL52508.p2	ITG Pentium	WED OCT 24 11:06:12 2007
IPL52509.p2	ITG Pentium	WED OCT 31 11:31:06 2007
IPL50031.sa	Voice Gateway Media Card	WED MAY 23 22:34:28 2007
IPL51019.sa	Voice Gateway Media Card	WED AUG 22 10:10:30 2007
IPL55002.sa	Voice Gateway Media Card	THU DEC 06 14:45:32 2007
IPL50031.mc32s	MC32S Card	WED MAY 23 22:34:28 2007
IPL51019.mc32s	MC32S Card	WED AUG 22 10:10:30 2007
IPL51023.mc32s	MC32S Card	THU SEP 13 12:12:44 2007
IPL52503.mc32s	MC32S Card	WED SEP 26 10:55:18 2007
IPL52508.mc32s	MC32S Card	WED OCT 24 11:06:14 2007
IPL52509.mc32s	MC32S Card	WED OCT 31 11:31:08 2007
IPL52511.mc32s	MC32S Card	WED NOV 14 11:18:22 2007
IPL52512.mc32s	MC32S Card	WED NOV 21 10:18:50 2007
IPL55002.mc32s	MC32S Card	THU DEC 06 14:45:34 2007

Dialog Box Text: You are about to use work file IPL55002.mc32s to upgrade loadware on elements ip=192.167.100.40 TYPE=MC32S. Are you sure you want to do this?

Buttons: OK, Cancel

- 8 If the card did not successfully receive the loadware, return to step 2 on [page 185](#). If the upgrade was successful, proceed to step 9.
- 9 Click **IP Network > Maintenance and Reports**. The Node Maintenance and Reports window opens. See Figure 34.
- 10 Click the node to expand it.

Figure 34
IP Telephony information



- 11 Click the **Transfer/Status** button of the Voice Gateway Media Card to be rebooted.

Make sure that the display in the window pane (result box) says:

xx.xxx.xxx.xxx: Disabled.

If this is not displayed, disable the Voice Gateway Media Card. Refer to *IP Line: Description, Installation, and Operation* (NN43100-500). Repeat step 8 again.

- 12 Reboot the card by clicking the **Reset** button for the Voice Gateway Media Card in the Node Maintenance and Reports window (**System > IP Network > Maintenance and Reports**).

See Figure 34 on [page 189](#).

- 13 Look at the faceplate display to determine when the card is finished booting.
- 14 Click the **Status** button for the Voice Gateway Media Card in the IP Telephony Information window and make sure that the message in the window pane (result box) says:

xx.xxx.xxx.xxx: Enabled.

- 15 Repeat from step 9 on [page 188](#) to step 14 for each Voice Gateway Media Card that received the loadware upgrade.

After the card reboots, transfer IP Telephony node information using Element Manager. Refer to *IP Line: Description, Installation, and Operation* (NN43100-500).

End of Procedure

Upgrade loadware using a Software Delivery card

An alternative procedure to using Element Manager for the Voice Gateway Media Card loadware upgrade is using the advanced Command Line Interface (CLI) procedure to upload the files from a Software Delivery Card. For more detailed information, refer to *IP Line: Description, Installation, and Operation* (NN43100-500).

Follow the steps in Procedure 30 on [page 190](#) to upgrade the loadware using a Software Delivery Card.

This procedure assumes that the loadware was verified from the CLI as outlined in Procedure 23 on [page 175](#), where a serial cable connects the Voice Gateway Media Card to a workstation.

Procedure 30

Upgrading loadware using a Software Delivery card

- 1 Download the loadware, as described in “Obtaining software” on [page 233](#). For a first-time Voice Gateway Media Card upgrade after a system upgrade, use the files that are present on the Signaling Server Software CD-ROM.
- 2 Format a Software Delivery card (or delete the old files from the Software Delivery Card) and save the relevant loadware files to the card.

The Voice Gateway Media Card loadware files have the format 'IPL-----p2' for the double-slot ITG-P 24-port card and 'IPL-----sa' for the single-slot Media Card.

IMPORTANT!

Do not format the Software Delivery card through Windows or DOS. The file allocation size does not match that of the Voice Gateway Media Card. Use the operating system of the card itself to format the Software Delivery card. Alternatively, simply delete the old files on the Software Delivery Card.

- 3 Reset the card.
- 4 Observe the boot sequence and enter **jkI** when prompted. Be alert as this prompt times out within a few seconds.
- 5 Insert the Software Delivery Card into the Voice Gateway Media Card slot.
- 6 Enter the command:

```
copy "/A: /<filename>" , "/C: /exec"
```

where <filename> is the name of the file saved to the Software Delivery Card in step 2.
- 7 Remove the Software Delivery Card from the slot of the Voice Gateway Media Card.
- 8 Reset the card.
- 9 Watch the boot messages to confirm the loadware version. Check the release notes to confirm it is the initial version or later.

End of Procedure

Once the Voice Gateway Media Card loadware has been upgraded, verify whether or not the IP Phone firmware also requires an upgrade. Check the loadware release notes to determine which IP Phone firmware versions are compatible with the Voice Gateway Media Cards. If an upgrade is required, refer to "Upgrade the IP Phone firmware" on [page 192](#).

Upgrade the IP Phone firmware

This section describes how to distribute IP Phone firmware to the Signaling Server(s) and Voice Gateway Media Cards through Element Manager. However, performing this procedure does not upgrade the IP Phones directly.

To receive the firmware that is distributed to the Signaling Server(s) and Voice Gateway Media Cards, the IP Phones must be reset. Once reset, they register with the TPS and obtain the latest firmware upgrade.

The IP Phones can be reset manually or using the **umsUpgradeAll** command through the CLI on the Signaling Server. The **UmsUpgradeAll** command updates the firmware on all phones registered to the TPS. It also redirects the Virtual Office IP Phones to their home TPS and the MG 1000B IP Phones to their MG 1000B TPS to obtain the firmware upgrade.

Note: When a firmware upgrade is required for a MG 1000B system, install the firmware to the MG 1000B TPS before the Main Office TPS. Refer to *Branch Office: Installation and Commissioning* (NN43001-314) for more information.

UFTP

Previously, IP Phones on Communication Server (CS) 1000 and Meridian 1 systems had their firmware downloaded using Trivial File Transfer Protocol (TFTP). Firewalls often have their well-known TFTP port (port 69) disabled to maintain security. When port 69 is blocked, IP Phones cannot obtain firmware downloads. This situation prevents the IP Phone from registering and coming into service.

In order to eliminate the file transfer problem with the firewalls and TFTP, CS 1000 Release 4.x implements a Unistim File Transfer Protocol (UFTP) download solution. UFTP shares the existing Unistim signaling port (5000) at the IP Phone and RUDP stream; it is a separate protocol on top of the RUDP layer.

UFTP enhances security, because it is a proprietary protocol, as opposed to TFTP which is an open protocol. It enables customers to improve their firewall security by closing port 69 to block TFTP in their firewall and policy-based switches and routers.

For the UFTP IP Phone firmware download to work, it is necessary to explicitly open port 5100 (Unistim signaling) and port 5105 (UFTP signaling).

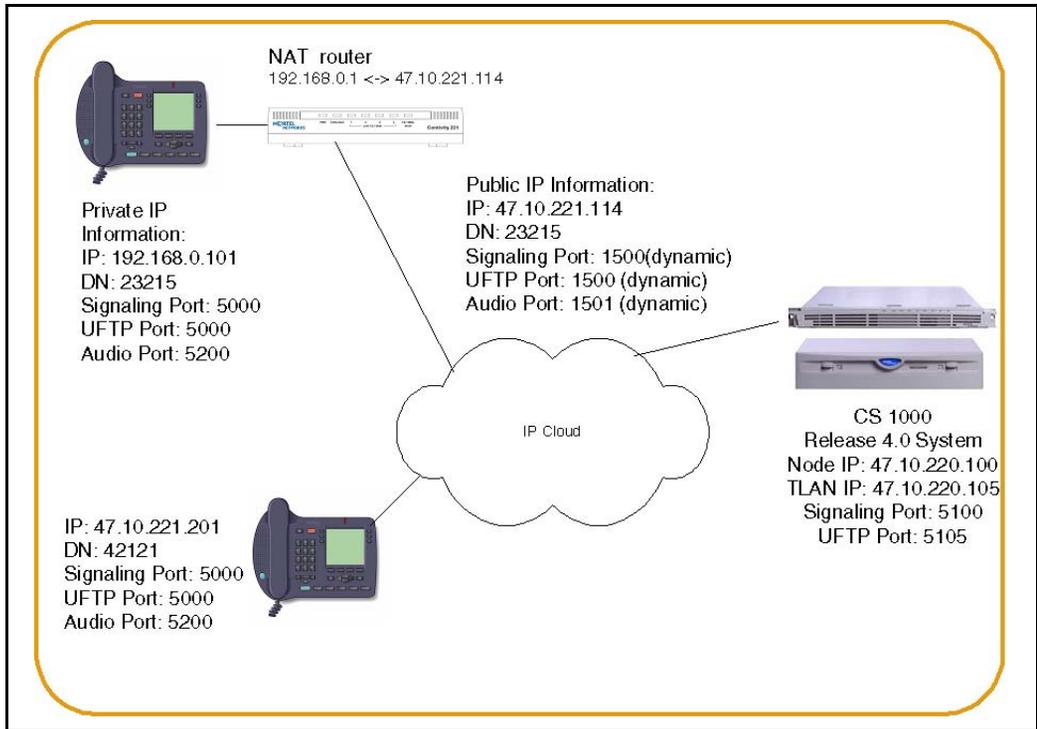
UFTP uses the same IP Phone UDP signaling port (port 5000) as the Unistim messages currently use for the IP Phone messages. UFTP uses port 5105 as the UFTP server port to communicate between the IP Phone and the UFTP server. Both of these ports can be safely enabled by firewalls. See Table 16.

Table 16
Source/destination port usage on either side of the connection

Port	IP Phone signaling	IP Phone UFTP	UFTP Server
Source port	5000 (see note)	5000 (see note)	5105
Destination port	5100	5105	5000 (see note)

If the IP Phone is behind a Network Address Translation (NAT) device, then a different public signaling port is used. The public signaling port is assigned dynamically. See Figure 35 on [page 194](#).

Figure 35
Using NAT with UFTP



Follow the steps in Procedure 31 to distribute IP Phone firmware.

Procedure 31
Distributing IP Phone firmware

- 1 Log into Element Manager.
- 2 Choose **Software > IP Phone Firmware**. The **IP Phone Firmware** window opens. See Figure 36 on [page 195](#).

Figure 36
Firmware upgrade

The screenshot shows the 'IP Phone Firmware' management page in the Nortel CS 1000 Element Manager. The interface includes a navigation sidebar on the left and a main content area. The main content area displays the current firmware for selected IP Telephony Nodes. A dropdown menu is set to '5', and an 'Update...' button is visible. Below the table, a note states: 'Note: All the listed IP phones may not be applicable to the selected IP Telephony Node.'

Phone Type	TPS Firmware	Recommended
1 IP Audio Conference Phone 2033	S74	Not Available
2 IP Phone 1110	C4G	3.4B
3 IP Phone 1120E	C4G	2.4B
4 IP Phone 1140E	C4G	2.4B
5 IP Phone 1150E	C4G	2.4C
6 IP Phone 2001 Phase 2	DBI	3.A6
7 IP Phone 2002 Phase 1	B76	1.76
8 IP Phone 2002 Phase 2	DBI	3.BG
9 IP Phone 2004 Phase 0/1	B76	1.76
10 IP Phone 2004 Phase 2	DBI	3.BG
10 IP Phone 2004 Phase 2	DBI	3.BG
11 IP Phone 2007 Phase 2	C4L	2.4J
12 IP Phone 2033	Not Available	S.68
13 IP Phone Orion 1210	C5H	Not Available
14 IP Phone Orion 1220	C5H	Not Available
15 IP Phone Orion 1230	C5H	Not Available

- 3 Select the **IP Telephony Node** where the firmware is to be upgraded
- 4 Select the firmware file of the IP Phone model to be upgraded. Only one firmware file can be upgraded at a time.
- 5 Click the **Update** button. The **Update Phone Firmware** window appears. Select the Firmware File from the dropdown list and click **Update**. This distributes the firmware file to all elements of the Node according to the IP Phone firmware version specified.

- 6 Click **Done**. The **Current Firmware** is displayed..

Note: This procedure only distributes IP Phone firmware on the Signaling Server or Voice Gateway Media Card. It does not upgrade the IP Phone firmware directly until the IP Phones are reset or the Ethernet Diagnostics tool is used to reset the IP phones within Element Manager.

End of Procedure

Installing a new keycode

Contents

This section contains information on the following topics:

Introduction	197
Feature operation	198
Reverting to the previous keycode with the KRVR command	212

Introduction

Adding new features and/or modifying License limits requires the installation of a new keycode. Keycodes are delivered by a portable media appropriate for the processor type (floppy diskette for CP PII, Compact Flash [CF] for CP PIV) or electronic file transfer. They are installed using the keycode management commands in LD 143 or the Software Installation Tool.

The following procedures outline the steps to install a new keycode (using the keycode commands in LD 143) that can be activated “instantly” or that requires a Sysload (Cold Restart). More information on the “Instant License” feature can be found in *Features and Services* (NN43001-106).

This section describes how to install a keycode using the commands listed below:

Table 17
Keycode installation

Keycode delivery	Keycode Installation command
Diskette for CP PII	Use the KNEW F0 command for both Core 0 and Core 1 in LD 143.
CF card for CP PIV	Use the KNEW RMD command for both Core 0 and Core 1 in LD 143.
Electronic file on a PC	Use the KUPL command in LD 143, followed by the KNEW HD (CP PII) or KNEW FMD (CP PIV and CP PM) command (see note).
Faxed to the customer site (paper-based keycode)	Use the KMAN command in LD 143, followed by the KNEW HD (CP PII) or KNEW FMD (CP PIV and CP PM) command.
<p>Note 1: For a CP PIV and CP PM RMD, the new keycode must be in a file directory called keycode. The CF card used for this purpose must be formatted using the PC utility (mkbootrmd.exe) found in the utilities folder of a CP PIV downloaded software image.</p> <p>Note 2: If the keycode is downloaded from the Keycode Distributor Server (KDS), use the KUPL command to install the keycode. Refer to <i>CS 1000M and Meridian 1 Large System Upgrades Overview</i> (NN43021-458) for more information about KDS.</p>	

Feature operation

Feature operation is further broken down into five options:

- Feature and License parameter upgrade using a keycode delivered on a floppy diskette (CP PII)
- Feature and License parameter upgrade using a keycode delivered on a CF card (CP PIV and CP PM)

- Upgrade feature and License parameter using HyperTerminal
- Upgrade feature and License parameter entered manually
- Revert to the previous keycode with the KRVR command

Feature and License parameter upgrade using a keycode delivered on a floppy diskette

Follow the steps in Procedure 32 on [page 199](#) to perform a feature and License parameter upgrade using a floppy diskette. The floppy diskette must be a standard 2 MB floppy diskette IBM formatted to 1.44 MB.

Leave the system in full redundant mode (hard-disk and CPU redundancy).

Procedure 32 Performing a feature and License parameter upgrade

- 1 Log in on a system terminal and load LD 143.

```
>LD 143  
CCBR000
```

```
.
```

- 2 Insert the new keycode floppy diskette into the floppy drive on the active Core.
- 3 Print the pending keycode contents.

KSHO F0, F1

print the contents of the candidate keycode in the floppy drive on the active Core. Where:

F0 = Core 0 (CPT)

F0 = Core 0 or 1 (CP PII only)

F1 = Core 1 (CPT only)

- 4 Enter the KDIF command and select keycode comparison options.

Note: Ensure that the new keycode does not lower License limits or reduce features compared with the existing keycode. If it has been determined that the keycode lowers License limits or reduces features, do not continue with the KNEW command. Contact the Nortel order management representative.

. KDIF

Please use: KDIF <param1> <param2> with the following parameters:

NEW	Accepted new keycode
REC	Currently used keycode
OLD	Previously used keycode
F0	Candidate keycode on diskette in /f0 floppy drive
F1	Candidate keycode on diskette in /f1 floppy drive
HD	Candidate keycode which was uploaded to hard disk

Enter the keycode comparison option. The new keycode option is shown in **bold**.

Note: In the following example, the (REC) currently used keycode will be compared with the new keycode disk in floppy drive F0. The limits shown are for example purposes only.

.KDIF REC F0

Validating Keycode File /p/install/keycode.rec... OK

Validating Keycode File /f0/keycode.kcd... OK

System parameters	1st keycode	2nd keycode
System Serial Number	: 46XX	46XX
Software Version	: 2511	2511
System Type	: Meridian 1 Option 61C	Meridian 1 Option 61C
Call Processor	: CP68060	CP68060
Release	: CS 1000 Release 5.5	CS 1000 Release 5.5
Issue	: XX	XX
NTI Order Number	:	
NT SDID - 1	:	
NT SDID - 2	:	
Date and Time of Manufacture	:	

Note: (:) indicates that information is not available

License Limits	1st keycode	2nd keycode
Loop Limit	: 32	32
Sys TNs Limit	: 0	200
ACD Agt Limit	: 10	10
ACD DNs Limit	: 10	10
AST Limit	: 10	10

.....

Common packages for both keycodes:
0-2 4-5 7-25 28-29 32-55 58-65

.....

Additional packages in the 2nd keycode:

< **30-31**

.

- 5 Select the new keycode for activation using the KNEW command.

KNEW F0 (KNEW F1 if Core 1 is active on CPT only)

The uploaded keycode is validated against the security device.

If the following system message is displayed:

CCBR020 New Keycode accepted and activated successfully.

Sysload is not needed!

This means that the new keycode is eligible for instant activation and no further user action is required. Go to steps 6 and 7.

If the keycode is not eligible for instant activation, a Sysload is needed to activate the new keycode and the following system message is displayed:

CCBR009 New Keycode accepted. New License limits and feature packages will be activated during the next Sysload (Cold Restart).

Go to step 8.

- 6 Load LD 22 and confirm that the new License parameters have been updated.

```
>LD 22  
REQ SLT
```

```
....
```

If License limits are correct, then the keycode installation is complete.

See “Reverting to the previous keycode with the KRVR command” on [page 212](#) if License limits are not increased or problems exist.

- 7 Once it is confirmed that the keycode changes taken effect as expected, perform a data dump in LD 43.
- 8 For keycodes that are not eligible for Instant License, place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

For CP PII, CP PIV and CP PM use [Procedure 37](#).

End of Procedure

Feature and License parameter upgrade using a keycode delivered on a CF card (CP PIV and CP PM)

A directory must be created on the CF card (RMD) named “keycode”. The following rules apply:

- All keycode files must reside in this directory
- The directory can contain up to 20 different keycodes
- The keycode filenames must be unique
- The keycode filenames can contain up to eight characters, and must end with a .kcd extension.

Follow the steps in Procedure 33 on [page 204](#) to perform a feature and License parameter upgrade using a keycode delivered on a CF card (CP PIV and CP PM).

Leave the system in full redundant mode (hard-disk and CPU redundancy).

Procedure 33
Performing a feature and License parameter upgrade
using a keycode delivered on a CF card (CP PIV and CP PM).

- 1 Log in on a system terminal and load LD 143.

```
>LD 143
CCBR000
.
```

- 2 Insert the new keycode CF card into the CF drive on the active Core.
- 3 Print the pending keycode contents.

KSHO RMD print the contents of the candidate keycode in the CF drive on the active Core. Where:
RMD = Core 0 or 1 (CP PIV and CP PM)

- 4 Enter the KDIF command and select keycode comparison options.

Note: Ensure that the new keycode does not lower License limits or reduce features compared with the existing keycode. If it has been determined that the keycode lowers License limits or reduces features, do not continue with the KNEW command. Contact the Nortel order management representative.

```
. KDIF
Please use: KDIF <param1> <param2> with the following parameters:
```

NEW	Accepted new keycode
REC	Currently used keycode
OLD	Previously used keycode
RMD	Candidate keycode on removable CF card
FMD	Candidate keycode on fixed CF card

Enter the keycode comparison option. The new keycode option is shown in **bold**.

Note: In the following example, the (REC) currently used keycode will be compared with the new keycode file on the CF card. If choosing from multiple keycode files, ensure you select the correct keycode file. The system limits shown are for example purposes only.

.KDIF REC RMD

Validating Keycode File /p/install/keycode.rec ... OK

The following keycode files are available on the removable media:

Name	Size	Date	Time
-----	-----	-----	-----
<CR> -> <1> - site_A.kcd	1114	Apr-06-2006	10:09
<2> - KEYCODE.KCD	1114	Mar-28-2006	11:11

<q> - Quit

Enter choice>

Validating Keycode File /cf2/keycode/KEYCODE.KCD ... OK

System parameters	1st keycode	2nd keycode
System Serial Number	: 46379	46379
Software Version	: 3521	3521
System Type	: Option 61C	Option 61C
Call Processor	: CP PIV	CP PIV
Release	: 4	4
Issue	: 50	50
NTI Order Number	:	
NT SDID - 1	:	
NT SDID - 2	:	
Date and Time of Manufacture	:	

Note: (:) indicates that information is not available

License Limits	1st keycode	2nd keycode
Loop Limit	: 32	32
Sys TNs Limit	: 0	200
ACD Agt Limit	: 10	10
ACD DNs Limit	: 10	10
AST Limit	: 10	10

.....

Common packages for both keycodes:

0-2 4-5 7-25 28-29 32-55 58-65

.....

Additional packages in the 2nd keycode:

< **30-31**

.

- 5 Select the new keycode for activation using the KNEW command.

KNEW RMD**CAUTION**

A menu appears prompting the user to choose from multiple keycode files. Ensure you select the correct keycode file.

The uploaded keycode is validated against the security device.

If the following system message is displayed:

CCBR020 New Keycode accepted and activated successfully.

Sysload is not needed!

This means that the new keycode is eligible for instant activation and no further user action is required. Go to steps 6 and 7.

If the keycode is not eligible for instant activation, a Sysload is needed to activate the new keycode and the following system message is displayed:

CCBR009 New Keycode accepted. New License limits and feature packages will be activated during the next Sysload (Cold Restart).

Go to step 8.

- 6 Load LD 22 and confirm that the new License parameters have been updated.

```
>LD 22  
REQ SLT
```

....

If License limits are correct, then the keycode installation is complete.

See “Reverting to the previous keycode with the KRVR command” on [page 212](#) if License limits are not increased or problems exist.

- 7 Once it is confirmed that the keycode changes taken effect as expected, perform a data dump in LD 43.

- 8 For keycodes that are not eligible for Instant License, place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

For CP PII, CP PIV and CP PM use [Procedure 37](#).

End of Procedure

Feature and License parameter upgrade using HyperTerminal®

Follow the steps in Procedure 34 to perform a feature and License parameter upgrade using HyperTerminal®. Leave the system in full redundant mode (hard-disk and CPU redundancy).

Procedure 34 Performing a feature and License parameter upgrade

- 1 On a PC, access the system (through a modem) with HyperTerminal®:
Click the Start button | Programs | Accessories | HyperTerminal.
- 2 Double-click the HyperTerminal client to the system.
- 3 Log into the system.
- 4 Load the Keycode Management Program (LD 143).
LD 143 Load program
KUPL Upload keycodes to the hard disk or FMD on the target system
- 5 Click the **Transfer** menu in HyperTerminal and select **Send Text File**.
- 6 From the **Files of type** pull-down menu, select **All Files (*.*)**.
- 7 Locate and select the keycode file on the PC. Use the **Look in** pull-down menu to select the drive on which the keycode is located.
- 8 Click **Open**.

The keycode is displayed after the KUPL prompt.

Example:

```
KUPL 0001PBX 0101
9FPAMSRHNN17KRUQAFFSPREQEVMTHIDHRKDJHRKEJR56
```

- 9 Press the Enter key.

The Keycode is checked for CRC errors and is uploaded to the hard disk or Fixed Media Device (FMD).

Enter the following command:

KDIF REC HD Compare the existing keycode with the new keycode on the hard disk
KDIF REC FMD Compare the existing keycode with the new keycode on the FMD

Ensure that the new keycode does not lower License limits or reduce features compared with the existing keycode. If it is determined that the keycode lowers License limits or reduces features, do not continue with the KNEW command. Contact the Nortel order management representative.

- 10 Select the new keycode for activation using the KNEW command.

KNEW (refer to Table 17 on page 198 for correct command syntax)

The uploaded keycode is validated against the security device.

If the following system message is displayed:

CCBR020 New Keycode accepted and activated successfully. Sysload is NOT needed!

This means that the new keycode is eligible for instant activation and no further user action is required. Go to steps 11 and 12.

If the keycode is not eligible for instant activation, a Sysload is needed to activate the new keycode. The following system message is displayed:

CCBR009 New Keycode accepted. New License limits and feature packages will be activated during the next Sysload (Cold Restart).

Go to step 13.

- 11 Load LD 22 and confirm that the new License parameters have been updated.

```
>LD 22  
REQ SLT  
....
```

If License limits are correct, then the keycode installation is complete.

See “Reverting to the previous keycode with the KRVR command” on [page 212](#) if License limits are not increased or problems exist.

- 12 Once it is confirmed that the keycode changes taken effect as expected, perform a data dump in LD 43.
- 13 For keycodes that are not eligible for Instant License, place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

For CP PII, CP PIV and CP PM use [Procedure 37](#).

End of Procedure

Feature and License parameter upgrade entered manually

Before beginning this procedure, obtain a copy of the keycode. The keycode can reside on paper or as an electronic file. To enter the keycode manually, type the keycode in LD 143 as 21 lines, 16 characters per line.

Follow the steps in Procedure 35 on [page 210](#) to perform a feature and License parameter upgrade manually.

Procedure 35

Performing a feature and License parameter upgrade manually

- 1 Log into the system.
- 2 Load the Keycode Management Program (LD 143).

LD 143	Load program
KMAN	Manually enter the keycode to the target system
- 3 Type the keycode file, 21 lines of 16 characters each. Press **Return** to go to the next line.

Note: When entering the keycode, do not enter the header information that proceeds the keycode.
- 4 Type “end” at line 22 to end the process.
- 5 Press **Enter**. The new keycode file is saved on the hard disk or FMD.

Enter the following command:

KDIF REC HD	Compare the existing keycode with the new keycode on the hard disk.
KDIF REC FMD	Compare the existing keycode with the new keycode on the FMD

Ensure that the new keycode does not lower License limits or reduce features compared with the existing keycode. If it is determined that the keycode lowers License limits or reduces features, do not continue with the KNEW command. Contact the Nortel order management representative.

- 6 Select the new keycode for activation using the KNEW command.

KNEW (refer to Table 17 on [page 198](#) for correct command syntax)

The uploaded keycode is validated against the security device.

If the following system message is displayed:

CCBR020 New Keycode accepted and activated successfully. Sysload is NOT needed!

This implies that the new keycode is eligible for instant activation and no further user action is required. Go to step 7 and 8.

If the keycode is not eligible for instant activation, a Sysload is needed to activate the new keycode. The following system message is displayed:

CCBR009 New Keycode accepted. New License limits and feature packages will be activated during the next Sysload (Cold Restart).

Go to step 9.

- 7 Load LD 22 and confirm that the new License parameters have been updated.

```
>LD 22
REQ SLT
....
```

If License limits are correct, then the keycode installation is complete.

See "Reverting to the previous keycode with the KRVR command" on [page 212](#) if License limits are not increased or problems exist.

- 8 Once it is confirmed that the keycode changes have taken effect as expected, perform a data dump in LD 43.
- 9 For keycodes that are not eligible for Instant License, place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

For CP PII, CP PIV and CP PM use [Procedure 37](#).

End of Procedure

Reverting to the previous keycode with the KRVR command

The terms “old” and “new” keycode, as discussed here, refer to the most recent previous KNEW command. The “old” keycode is the former keycode, prior to the KNEW command. The “new” keycode is the keycode that was activated by the KNEW command. Use KRVR command (as shown in Procedure 36) to revert to the old keycode.

Procedure 36 **Revert to old keycode**

- 1 Log in to the system.
- 2 Load the Keycode Management Program (LD 143).

LD 143	Load program
KRVR	Replaces the keycode.rec with the keycode.old file.

The old keycode is eligible for instant activation with the KRVR command if the only difference between the old keycode and the new keycode is that some or all of the License parameters in the old keycode are *higher*.

If the old keycode is eligible for instant activation, it is activated without further user action. The following system message is displayed:

**CCBR020 New Keycode accepted and activated successfully.
Sysload is NOT needed!**

If the keycode is not eligible for instant activation, a Sysload is needed to activate the old keycode and the following system message is displayed:

CCBR009 New Keycode accepted. New License limits and feature packages will be activated during the next Sysload (Cold Restart).

Go to step 5.

- 3 Load LD 22 and confirm that the new License parameters have been updated.

```
>LD 22
REQ SLT
....
```

If License limits are correct, then the keycode installation is complete.

- 4 Once it is confirmed that the keycode changes taken effect as expected, perform a data dump in LD 43.
- 5 For keycodes that are not eligible for Instant License, place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

For CP PII, CP PIV and CP PM use [Procedure 37](#).

End of Procedure

Procedure 37

Parallel reload for CP PII, CP PIV and CP PM

Place the system in split mode. This puts a redundant (shadowed) system into single (non-shadowed) mode.

- 1 Connect a terminal to J25 of Core 1 to monitor reload. Terminal settings are:
 - 9600 BAUD, 8 bits, no parity and 1 stop bit (8N1)
- 2 Ensure CP 0 is active and CP 1 is standby. It might be necessary to switch CPs and split the Cores:

LD 135

STAT CPU

SCPU

Switch CPs if necessary

SPLIT Split CPs (CP 1 reloads)
**** Exit program

- 3 Wait until sysload and INI have completed.
- 4 In the inactive core (Core 1), load Overlay 143 and confirm that the new License parameters have been updated.

>LD 143
KSHO REC (show currently used keycode)
....

- 5 Compare license parameters from memory to keycode.rec.

>LD 22
SLT (show current license limits active on system)
....

- 6 Compare package parameters from memory to keycode.rec

>LD 22
PRT
PKG (show current software packages active on system)
...

- 7 Switch call processing from the active core (Core 0) to the inactive core (Core 1). This command must be issued from active Core 0.



CAUTION — Service Interruption

Service Interruption

Call Processing will be interrupted!

LD 135
CUTOVR Force Core 1 to become active
**** Exit program



The previously inactive core (Core 1) with the new keycode now becomes active.

- 8 Return the system to redundant mode, synchronizing the memory and hard drive of the inactive core with the active core. From the active Core (Core 1) enter LD 135:

LD 135**STAT CPU****JOIN**

Synchronize CPs with CP 1 as master

Exit program

- 9 Wait until synchronization of memory drives is completed.
- 10 From the active Core (Core 1) enter LD 135 and obtain the health status of the Cores:

LD 135**STAT CPU****STAT HEALTH**

CP 1 and 0 should have identical health

Exit program

- 11 Perform a datadump. The messages “DATADUMP COMPLETE” and “DATABASE BACKUP COMPLETE” will appear once the data dump is complete.

LD 43	
EDD	Begin the data dump
****	Exit program

End of Procedure

Appendix A: System upgrade utilities

Contents

This section contains information on the following topics:

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Introduction

This chapter contains utilities that are useful during a system upgrade on an SSC card. To access these utilities, follow Procedure 38 "Accessing the Utilities menu" on [page 218](#).

Access the Utilities menu

This procedure can, where specified, require a Software Delivery card inserted into the slot of the SSC card. Each subsequent procedure contains

this procedure in short form. This procedure applies to the MG 1000E and to the MG 1000T platform.

Procedure 38
Accessing the Utilities menu

- 1 Start the Software Installation Program.
 - a. On the MG 1000E and the MG 1000T Expansion, reboot the SSC and enter **Ctrl-I** during the boot sequence to bring up the Software Installation Menu.

Note: The bootROM version is displayed on the workstation screen during the bootup process.

- b. On the MG 1000T Core, enter:

```
>LD 143
UPGRADE
```

Note: Using the CLI enables menu selections to be made while call processing is active. When the selections and changes are completed, the system reboots and installs the software components.

The installation menu appears.

```
SOFTWARE INSTALLATION PROGRAM
*****
Verify
Security ID: xxxxxxxx
*****

Software Installation Main Menu

1. New System Installation or Upgrade - From
Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery
Card

[q]uit, [p]revious, [m]ain menu, [h]elp or [?],
<cr> - redisplay
```

- 2 From within the Installation menu, choose **Utilities** (item 3). The screen displays the following:

Utilities Menu:

1. Restore Backed Up Database
2. Archive Database Utilities
3. Install Archived Database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash bootROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages
10. IP FPGA Utilities

[q]uit, [p]revious, [m]ain, [h]elp, or [?],
<cr>- redisplay

End of Procedure

Verify and upgrade bootROM

Although bootROM is upgraded with a standard install, bootROM verification is useful prior to upgrading the MG 1000E and the MG 1000T Expansion. Always upgrade to the latest version of bootROM. For more information, see “Centralized Software Upgrade” on [page 235](#).

The bootROM version must be verified to use certain features. This procedure is performed from a maintenance terminal connected to the MG 1000E maintenance terminal port 0 (the SSC card).

Note: If the MG 1000T Expansion or MG 1000E is rebooted, the bootROM version is displayed on the workstation screen during the bootup process. Go to Step 4 on [page 220](#).

Procedure 39 **Verifying and upgrading boot ROM**

- 1 From the **Utilities** menu (Procedure 38 on [page 218](#)), select the **Flash bootROM Utilities** (item 7).

The **Flash bootROM Utilities** menu displays:

Flash BootROM Utilities Menu:

1. List Flash Boot ROM
 2. Upgrade Flash Boot ROM
 3. Restore Flash Boot ROM
- [q]uit, [p]revious, [m]ain, [h]elp or [?],
<cr>- redisplay

- 2 Choose **List Flash bootROM** (item 1). This option displays the bootROM on the Software Delivery card, if one is present.

Flash Boot ROM Summary:

Active -- NTDK34FA_r09
Backup -- NTDK34AA_r08

Note: If the release number is lower than r08, the system cannot be downgraded.

- 3 Compare the Flash bootROM displayed in Step 2 to the base bootROM for the software release to which it is being upgraded (check the product's release notes to determine the base). If the bootROM is current, this procedure is completed.
- 4 Continue with Procedure 40 on [page 221](#) when upgrading the software on the MG 1000E with the Centralized Software Upgrade feature ([page 235](#)).

IMPORTANT!

If the release number and bootROM version on the Software Delivery Card is greater than the active version shown, perform the upgrade.

If the release number and bootROM version on the Software Delivery Card is less than the active version shown, do not perform the upgrade.

End of Procedure

Upgrade the bootROM on the SSC card

All versions of bootROM are backwards-compatible.

Follow the steps in Procedure 40 to upgrade the bootROM on the SSC card.

Procedure 40

Upgrading bootROM on the SSC card

- 1 Access the Utilities menu (see Procedure 38 on [page 218](#)).
- 2 From the Utilities menu, select **Flash bootROM Utilities** (item 7).

The **Flash bootROM Utilities Menu** displays:

```
Flash Boot ROM Utilities Menu:
```

```
1. List Flash BootROM
2. Upgrade Flash BootROM
3. Restore Flash BootROM
[q]uit, [p]revious, [m]ain, [h]elp or [?], <cr>-
  redisplay
```

- 3 Select **Upgrade Flash bootROM** (item 2).

```
Are you sure you wish to perform the Flash BootROM
Upgrade/Restore (y/n/[a]bort): Y
```

- 4 Select **Y** to perform the upgrade.

The screen displays the following:

```
Upgrading Active Flash BootROM to NTDK34FA_r09

System Restart required to activate Flash BootROM
Upgrade.
```

- 5 Restart the system to activate the Flash bootROM upgrade.

End of Procedure

Archive the database

Procedure 41 describes how to use the archive feature to list, add, archive and remove customer databases. This procedure is a routine operation. This procedure applies to the MG 1000T Core only.

Procedure 41 Archiving the database

- 1 If necessary, install the Software Delivery card in slot A of the Software Delivery card socket in the faceplate of the SSC card on the MG 1000T Core.
- 2 When a customer database is added to the archive, first load it on the SSC card of this system.
- 3 Start the Software Installation Program.

```
>LD 143  
UPGRADE
```

- 4 Select **Utilities** (item 3) from the Main Menu.
- 5 Select **Customer Database Archives** (item 2) from the Utilities Menu.
- 6 Select the archive function.

```
Customer Database Archives:  
1. List customer databases  
2. Remove customer database  
3. Archive a customer database  
[q]uit, [p]revious, [m]ain, [h]elp or [?]  
<cr> - redisplay
```

Enter Selection:

Choose one of the following:

- a. Enter **1 <CR>** (List Customer databases), and continue with the next step, Step 7 on [page 222](#).
 - b. Enter **2 <CR>** (Remove Customer database), and go to Step 8 on [page 223](#).
 - c. Enter **3 <CR>** (Archive a Customer database), and go to Step 9 on [page 223](#).
- 7 Review the displayed list of archived customer databases and the Customer Database Archives menu.

- a. To remove a database from the archive, continue with the next step, Step 8.
- b. To add a database to the archive, go to Step 9.
- c. To end the activity here, enter **q <CR>**.

8 Remove the required customer database from the archive.

The screen displays the archived databases and the following prompt:

```
Remove database
'Name of archived database'
database?
```

Respond to the confirm removal prompt.

9 To add a customer database to the archive, the screen displays the following prompt:

```
Enter a Customer name for your customized data:
```

- a. Type in the name for this archived database.
The system displays the name for confirmation.
- b. Confirm the name.

The screen displays the following message:

```
Copying database from primary drive to 'Name of
archived database'.
```

End of Procedure

Install an archived database

Follow the steps in Procedure 42 to install an archived database using a Software Delivery card.

Procedure 42 Installing an archived database

Note: This procedure is an advanced installation procedure for pre-programmed software daughterboards. It can also be a rescue operation.

- 1 Start the Software Installation Program.

```
>LD 143  
UPGRADE
```

- 2 Select **Utilities** from the Main Menu.

- 3 Select **Install Archived Database** (item 3).

The system displays the list of archived customer databases.

- 4 Select the Customer Database.

Type the name of the database to restore.

The system prompts to confirm the name of the database.

- 5 Confirm the database selection.

If **yes**, continue with the next step.

If **no**, repeat Step 4.

- 6 Restore the archived database. If the restore is successful, the screen displays the following:

```
Restoring Archived database to Primary drive...
```

```
Restore successful.
```

```
System Restart required to activate database.
```

Note: If the restore is not successful, go back to Step 3 on [page 222](#).

End of Procedure

Restore a database

Procedure 43 is an advanced installation procedure or a rescue operation.

Procedure 43 **Restoring a database**

- 1 Start the Software Installation Program.

```
>LD 143
UPGRADE
```

- 2 Select **Utilities** (item 3) from the Main Menu.
- 3 Select **Restore Backed Up Database** (item 1) from the Utilities Menu.
- 4 Select source of database.

The selections screen displays:

```
Select Restore Database Source:

1. Backup Flash Drive
2. External Drive
3. Succession 1000 CCBR Restore file
4. Succession 1000 CCBR File
5. Succession 1000 Software Card.
```

- a. If selecting item 1, continue to the next step.
 - b. If selecting item 2, go to Step 6 on [page 226](#).
 - c. If selecting item 3, go to Step 7 on [page 226](#).
- 5 Confirm database restore from the backup flash drive.

The screen displays the date of the backed up database and the following prompt displays:

```
Are you sure you wish to perform the Restore?
```

Do one of the following:

- a. To return to the main menu, type **a** (for abort) and press **<CR>**.
- b. To restore the database, type **y** (for yes) and press **<CR>**.

The system restores the selected database. Go to Step 8 on [page 227](#).

- c. If not restoring the database, type **n** (for no), press **<CR>**, and return to Step 3 on [page 225](#).

6 Confirm restore database from the external drive (Software Delivery card).

The following message displays:

```
Restoring primary drive from External Drive.  
(Date and time)
```

```
System Restart required to activate restored  
database
```

```
Are you sure you wish to perform the Restore?
```

Confirm to continue with the restoration. Go to Step 8 on [page 227](#).

7 Restore the database from the Customer Configuration Backup and Restore (CCBR) file.

The screen displays the following message:

```
WARNING: You must have a CS 1000E CCBR file backed up.
```

```
WARNING: Your internal backup will be erased.
```

```
Are you sure you wish to Restore?
```

Confirm again to restore.

Note: As the restoration progresses, the following information displays:

Entering receive mode for data transfer...

Escape back to host machine and commence upload...

Database transfer complete...

Restoring Primary drive from CCBR file...

Restore successful.

System Restart required to activate restored database.

8 Choose one of the following:

- a. If the restoration is successful, continue with Step 9.
- b. If the restoration is not successful, restart this procedure. Determine if the BKP011 message displays.

Restore successful but site ID in backup image differs from that of the switch.

Note: The restored database is of a system with a different site ID. This is why the restore was not successful.

9 Reboot the system:

- If the restart is successful, this procedure is complete.
- If the restart is not successful, repeat this procedure. Contact the technical support group if necessary.

End of Procedure

Use the Current Installation Summary utility

Procedure 44 describes how to obtain an installation summary.

Procedure 44

Using the Current Installation Summary utility

Note: This screen printout shows the old and the new software versions and parameters.

- 1 Start the Software Installation Program.
- 2 Select **Utilities** (item 3) from the Main Menu.
- 3 Select **Current Installation Summary** (item 8) from the Utilities menu.

4 The installation summary displays on the screen for review.

```
Software Upgrade Summary:
Security ID           : xxxxxxxxx
Aux ID               : xxxxxxxxx
Cabinet Type         : Call Server/MAIN
Feature Set          : S1000 N. America Adv. Call
Centre Services-L3A (ntm400ed)
Additional Pkgs      : none
Database             : Basic Configuration
```

```
S/W Release:         CS 1000 4.x
```

License Parameters

```
TNS                  ( 2500)
ACDN                  (  300)
AST                   (    1)
LTID                  (    0)
RAN CON               (    0)
RAN RTE               (  500)
MUS CON               (    0)
BRAND                 (    2)
ACD AGENTS            (   10)
ANALOGUE TELEPHONES (    0)
ATTENDANT CONSOLES   ( 2500)
BRI DSL               (  150)
CLASS TELEPHONES     (    0)
DATA PORTS           ( 2500)
DIGITAL TELEPHONES   (    0)
IP USERS              (    0)
BASIC IP USERS        (    0)
PHANTOM PORTS        ( 2500)
DECT USERS            (    0)
DECT VISITOR USERS   (    0)
ITG ISDN TRUNKS      (    0)
TRADITIONAL TRUNKS   ( 2500)
TMDI D-CHANNELS      (   64)
SURVIVABILITY        (    1)
PCA                   (    0)
H.323 ACCESS PORTS   (    0)
SIP ACCESS PORTS     (    0)
```

```
1. Global 10 languages
```

End of Procedure

Revert to a previous software release (software downgrade)

This section describes how to revert to the previous release of software, feature set, customer data, and License Parameters using the Undo Installation option.

A CS 1000E system can be reverted to its previous database using the software CD-ROM or CF card . An MG 1000T platform can be reverted to its previous database using the Software Delivery card.

IMPORTANT!

Ensure that all backups that were obtained prior to the software upgrade are ready to be restored to the downgraded software.

IMPORTANT!

A Software Delivery card cannot be used to upgrade a subsequent MG 1000T platform. When a system is upgraded, it backs up the existing database on the Software Delivery card and changes the Security ID. The card therefore only contains the database and Security ID of the last system backup.

Procedure 45 describes how to revert to the previous release of software using the Software Delivery Card or CF card.

Note: This procedure is a rescue operation.

Procedure 45 Reverting to a previous software release of software (software downgrade)

- 1 Start the Software Installation Program.
- 2 Select **Utilities** (item 3) from the Main Menu.
- 3 Select **Undo Installation** (item 6) from the Utilities Menu.
- 4 Complete the software installation.

5 Screen display:

*** WARNING *** A system restart will be invoked as part of the Undo Installation process.

Are you sure you wish to undo the installation?

Choose one of the following:

- a. Enter **y <CR>** (yes). This procedure is at an end.
- b. Enter **n <CR>** (no) and return to the Utilities menu.
- c. Enter **a <CR>** (abort).

End of Procedure

Revert to previous hardware (hardware downgrade)

Procedure 46**Reverting to previous hardware (hardware downgrade)**

- 1 Power down the system.
- 2 Replace all MGC cards with the corresponding SSC cards that were earlier present in the cabinets in slot 0.
- 3 Connect the LAN connection from the CP PM card to the SSC card.
- 4 Power up the system.
- 5 Do a save and transfers of all the nodes that were existing in the system.

End of Procedure

Appendix B: Obtaining software

Downloading software from the Nortel website

It is not necessary to acquire software media from Nortel to begin a system upgrade. The software is available from the Nortel Software Download website. Keycodes are required in order for the software installation to work.

Check the Nortel Software Download web site for the latest software and firmware releases.

Note: See the Ordering Rules and Price Book from a Nortel supplier for details on items and packages.

Follow the steps in Procedure 47 to download software from the Nortel Software Download web site

Procedure 47

Downloading software from the Nortel website

- 1 Connect to the following URL using any PC with Internet access:
<http://www.nortel.com>
- 2 Under the **Support and Training** menu, select **Software Downloads > Product Family > Enterprise Communication Servers > Software**.
- 3 Search for the required software.
- 4 Click the required product.
- 5 If not already logged into a My Nortel account, enter a User ID and Password on the **Sign In** page and then click **Sign In**.

Note: If not registered to access this web site, refer to the CS 1000 Release 5.5 product bulletin for directions on how to register.

- 6 The **Software Downloads: Software Details Information** window opens. Click the link next to **File Download**.
- 7 In the **Save As** window, choose the desired path to save the file to the local disk on the PC and click **Save**.

End of Procedure

Appendix C: Centralized Software Upgrade

Contents

This section contains information on the following topics:

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Introduction



WARNING

Ensure that the MG 1000Es and the MG 1000T Expansions do not contain a Software Delivery Card during the Centralized Software Upgrade.

The Centralized Software Upgrade feature allows an installer to centrally and automatically upgrade the MG 1000Es from the Call Server or the MG 1000T Expansions from the MG 1000T Core. This section describes the automatic upgrade of the MG 1000E. For Automatic upgrade of the MG 1000T Expansion using the Centralized Software Upgrade feature, refer to

Communication Server 1000S: Installation and Commissioning
(NN43031-310).

Automatic upgrade using the Centralized Software Upgrade feature

The bootROM upgrade is automatic in CS 1000E. It occurs when a new software load is introduced to the SSC card by Software Delivery Card or by a new software daughterboard.

After the Call Server SSC card is upgraded with new Call Server software, use the Centralized Software Upgrade feature to distribute the new bootROM and software to all the connected MG 1000Es, if the MG 1000Es meet the following minimum requirements:

- The first general software release of CS 1000 Release 5.5 has been installed.
- The MG 1000Es are in normal mode.

Note: The latest version of the MG 1000E bootROM and software are automatically loaded in the CS 1000E during the upgrade.

After upgrading the CS 1000E with the new software, the centralized Software Upgrade feature can be used to distribute the new bootROM and software to all connected MG 1000Es.

Verify and manually upgrade the bootROM to enable the Centralized Software Upgrade. To upgrade the bootROM, refer to “Upgrading bootROM on the SSC card” on [page 221](#).

After upgrading the bootROM, activate the feature in one of the following two ways:

- 1 Accept the automatic upgrade option using the Call Server Software Upgrade program.
- 2 Use the LD 143 command **ENL AUTOUPGMG**. See “Automatic feature operation” on [page 238](#) for details.

Auto upgrade causes the MG 1000E to begin upgrading when the following conditions are met:

- The MG 1000E is connected (IP Link Up) to the Call Server.
- A difference in software version is detected.

Centralized upgrade summary of steps

Once the MG 1000E is installed with an SSC in slot 0, upgrade the software automatically by following these steps:

- 1 First, upgrade the CS 1000E software using the software CD-ROM process.
- 2 If the Automatic Sequential or Automatic Simultaneous option for Centralized Software Upgrade was not selected during the Call Server Upgrade, use Command Line Interface (CLI) commands as outlined in “Automatic feature operation” on [page 238](#).
- 3 The software is transferred to the MG 1000Es over their 100BaseT Ethernet link. The MG 1000E upgrades automatically if its software version does not match the Call Server software version.

Note: No Software Delivery Card is required in the MG 1000E for the upgrade process.

Causes of upgrade failure

The following circumstances can cause the upgrade to fail:

- modification of the customer database
- modification of the Problem Determination Tool password after the remote upgrade has started
- ethernet link outages
- removal of patches (including loadware patches) from the system or modification to the list of installed patches while the remote upgrade is in progress

The system cannot guarantee call processing when more than one MG 1000E is performing a software upgrade or bootROM upgrade.

Loss of service

Expect a temporary loss of service during the upgrade.

Automatic feature operation

Use Table 18 to estimate the automatic upgrade time in simultaneous mode and sequential mode. These times are for an SSC upgrade only. The MGC upgrade may take considerably less time.

Table 18
Automatic upgrade estimates

Simultaneous mode				
Call Server (2 x 21 minutes)	+	8 or less MG 1000Es (35 minutes)	=	1 hour, 17 minutes
Call Server (2 x 21 minutes)	+	9 to 16 MG 1000Es (2 x 35 minutes)	=	1 hour, 52 minutes
Call Server (2 x 21 minutes)	+	17 to 24 MG 1000Es (2 x 35 minutes)	=	2 hours, 27 minutes
Call Server (2 x 21 minutes)	+	25 to 30MG 1000Es (2 x 35 minutes)	=	3 hours, 2 minutes
Sequential mode				
Call Server (2 x 21 minutes)	+	n MG 1000Es (32 x n minutes)	=	n/2 hours 2n+42 minutes

Note: Upgrade times vary depending on the actual speed of the Call Server to MG 1000E links.

Refer to Procedure "Upgrading to CS 1000E Release 5.5 (CP PII)" on [page 78](#). With the Centralized Software Upgrade feature, the installation menu changes appear only on the Call Server.

Procedure 48**Enabling Centralized Software Upgrade on the MG 1000E**

Note: This procedure takes place within the upgrade of a Call Server. See Procedure "Upgrading to CS 1000E Release 5.5 (CP PII)" on [page 78](#).

- 1 if **y** is entered to choose the **Enable Automatic Centralized Software Upgrade** option, the following appears:

```
Enable Automatic Centralized Software Upgrade (CSU)
Feature ? (Default - YES)
```

```
      Please enter:
```

```
<CR> -> <y> - Yes
```

```
      <n> - No
```

```
      Enter choice>
```

If **No** was chosen, the automatic centralized software upgrade is disabled, and the Installation Status Summary is printed for confirmation.

If **Yes** is chosen, the following option is displayed:

```
Set Automatic Centralized Software Upgrade mode to:
```

```
      Please enter:
```

```
<CR> -> <1> - Sequential
```

```
      <2> - Simultaneous
```

```
      Enter choice>
```

If **1** is entered, the Centralized Software Upgrade option is enabled, and software upgrades to the MG 1000Es will occur in a sequential manner.

If **2** is chosen, the following warning is displayed:

```
WARNING : Call Processing is not guaranteed on Call Server
during simultaneous upgrades....
```

Do you wish to proceed? (Default - YES)

Please enter:

<CR> -> <y> - Yes

<n> - No

Enter choice>

If **y** is selected, the centralized software upgrade option is enabled, and software upgrades to the MG 1000Es occur simultaneously.

If **n** is chosen, the system returns to the Technology Software Installation Main Menu.

Note: Alternatively, manually upgrade the MG 1000E using a Software Delivery Card.

- 2 After the MG 1000Es have upgraded, perform a data dump using LD 43 on the Call Server. This synchronizes the customer database to the MG 1000Es.

End of Procedure

Software Upgrade Progress Indicators

The Software Upgrade Progress indicator is displayed on the Call Server to track the MG 1000E's installation progress. This progress is also logged in the report log kept on the Call Server and it is replicated to the MG 1000Es. The following messages are displayed:

SRPT077 Gateway <x>: Preparing gateway for upgrade.

SRPT077 Gateway <x>: Gateway rebooting to start upgrade. Please wait...

SRPT077 Gateway <x>: <y>% of Software Upgrade Complete

SRPT077 Gateway <x>: Remote software upgrade complete. Rebooting system...

Manual software upgrade operation

This feature manually initiates Call Server and MG 1000E software upgrades.

LD 143 - Enable or disable Centralized Software Upgrade (Part 1 of 3)

Command	Description
UPGMG ALL <SEQ/SIM> Default entry is SIM	<p>Immediately initiates a manual centralized upgrade of software and bootROM installed on the Call Server (CS 1000 Release 5.5 or later) to all MG 1000Es that are connected through the LAN, that have a different version of software installed, and that have a minimum of CS 1000 Release 5.5 software installed. MG 1000Es that contain the same software release are not upgraded.</p> <p>Available options are:</p> <ul style="list-style-type: none"> • SEQ: MG 1000E upgrade is performed in a sequential manner. No other MG 1000E upgrades will be initiated until the current MG 1000E has completed its installation. • SIM: MG 1000E upgrade is performed in a simultaneous manner. A maximum of 8 MG 1000Es can be upgraded at the same time. The following warning is posted to the user when the SIM option is chosen: <p>WARNING: Call Processing is not guaranteed to operate on the call server during simultaneous upgrade. Do you wish to proceed? (y/ n)</p> <p>Upon selection of y, the simultaneous upgrade commences. Selection of n cancels the upgrade request.</p>

LD 143 - Enable or disable Centralized Software Upgrade (Part 2 of 3)

Command	Description
UPGMG <MG 1000E number>	<p>Immediately initiates a manual upgrade of software and bootROM installed on the Call Server (CS 1000 Release 5.5 or later) to the specified MG 1000E through the LAN connection. This upgrade occurs even if the software version on the MG 1000E matches the Call Server's version. For the command to work, the MG 1000E must already have CS 1000 Release 4.x (at a minimum) software installed.</p> <p>WARNING: If this option is initiated on one MG 1000E while the Call Server is currently upgrading another MG 1000E, Call Processing is not guaranteed to operate on the Call Server.</p>
UPGMGBOOT <MG 1000E number>	<p>Immediately initiates a manual upgrade of the current version of only the bootROM installed on the Call Server to the selected MG 1000E through the LAN connection.</p> <p>WARNING: If this option is initiated to one MG 1000E while the Call Server is currently upgrading another MG 1000E, Call Processing is not guaranteed to operate on the Call Server.</p>

LD 143 - Enable or disable Centralized Software Upgrade (Part 3 of 3)

Command	Description
<p>ENL AUTOUPGMG <SEQ/SIM></p> <p>Default entry is SIM</p>	<p>Enables the automatic Centralized Software Upgrade option. The sub options of this command are:</p> <p>SEQ: Upgrades to the MG 1000Es are performed across the LAN in a sequential manner. One MG 1000E is upgraded at a time. No other MG 1000E upgrades are initiated until the current MG 1000E completes its installation.</p> <p>SIM: Upgrades to the MG 1000Es are performed simultaneously across the LAN. Up to eight MG 1000Es are upgraded at the same time. If there are more than eight MG 1000Es, the upgrade to the next MG 1000E begins after the upgrade of one MG 1000E is complete. The following warning is presented to the installer:</p> <p>WARNING: Call Processing is not guaranteed to operate on the call server during simultaneous upgrades. Do you wish to proceed? (y/n)</p> <p>Enter y to enable the automatic Centralized Software Upgrade option for simultaneous upgrades.</p>
DIS AUTOUPGMG	Disables the automatic Centralized Software Upgrade option
PRT AUTOUPGMG	Displays the settings for the automatic Centralized Software Upgrade option
ABORT UPGMG	Aborts all the current and pending Centralized Software Upgrades and disables the automatic Centralized Software Upgrade option. A yes/no prompt may display that it will be necessary to manually upgrade the MG 1000E.

Technical Assistance service

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Nortel Technical Assistance Centers

To help customers obtain maximum benefit, reliability, and satisfaction from their CS 1000E systems, Nortel provides technical assistance in resolving system problems. Table 19 on [page 246](#) lists the centers that provide this service.

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

If a Nortel service program was purchased, contact one of the following Nortel Technical Solutions Centers.

**Table 19
Customer Technical Services (Part 1 of 2)**

Location	Contact
Nortel Global Networks Technical Support (GNTS) PO Box 833858 2370 Performance Drive Richardson, TX 75083 USA	North America Telephone: 1 800 4NORTEL
Nortel Corp. P.O. Box 4000 250 Sydney Street Belleville, Ontario K8N 5B7 Canada	North America Telephone: 1 800 4NORTEL
Nortel Service Center - EMEA	EMEA Telephone: 00 800 8008 9009 or +44 (0)870 907 9009 E-mail: emeahelp@nortel.com
Nortel 1500 Concord Terrace Sunrise, Florida 33323 USA	Brazil Telephone: 5519 3705 7600 E-mail: entcts@nortel.com English Caribbean Telephone: 1 800 4NORTEL Spanish Caribbean Telephone: 1 954 858 7777 Latin America Telephone: 5255 5480 2170

Table 19
Customer Technical Services (Part 2 of 2)

Location	Contact
Network Technical Support (NTS)	<p>Asia Pacific Telephone: +61 28 870 8800</p> <p>Australia Telephone: 1800NORTEL (1800 667835) or +61 2 8870 8800 E-mail: asia_support@nortel.com</p> <p>People's Republic of China Telephone: 800 810 5000 E-mail: chinatsc@nortel.com</p> <p>Japan Telephone: 010 6510 7770 E-mail: supportj@nortel.com</p> <p>Hong Kong Telephone: 800 96 4199 E-mail: chinatsc@nortel.com</p> <p>Taiwan Telephone: 0800 810 500 E-mail: chinatsc@nortel.com</p> <p>Indonesia Telephone: 0018 036 1004</p> <p>Malaysia Telephone: 1 800 805 380</p> <p>New Zealand Telephone: 0 800 449 716</p> <p>Philippines Telephone: 1 800 1611 0063 or 632 917 4420</p> <p>Singapore Telephone: 800 616 2004</p> <p>South Korea Telephone: 0079 8611 2001</p> <p>Thailand: Telephone: 001 800 611 3007</p>

Services available

Services available through the Technical Assistance Centers include:

- diagnosing and resolving software problems not covered by support documentation
- diagnosing and resolving hardware problems not covered by support documentation
- assisting in diagnosing and resolving problems caused by local conditions

There are several classes of service available. Emergency requests (Class E1 and E2) receive an immediate response. Service for emergency requests is continuous until normal system operation is restored. Non-emergency requests (Class S1, S2, and NS) are serviced during normal working hours. Table 20 on [page 249](#) and Table 21 on [page 250](#) describe the service classifications.

Table 20
Technical service emergency classifications

Class	Degree of failure	Symptoms
E1	Major failure causing system degradation or outage	<p>System out-of-service with complete loss of call-processing capability.</p> <p>Loss of total attendant console capability.</p> <p>Loss of incoming or outgoing call capability.</p> <p>Loss of auxiliary Call Detail Reporting (CDR) in resale application.</p> <p>Call processing degraded for reasons such as trunk group out-of-service:</p> <ul style="list-style-type: none"> • 10% or more lines out-of-service • frequent initializations (seven per day or more) • inability to recover from initialization or SYSLOAD • consistently slow dial tone (eight seconds or more delay)
E2	Major failure causing potential system degradation or outage	<p>Standby CPU out-of-service.</p> <p>Frequent initializations (one per day or more).</p> <p>Disk drive failure.</p> <p>Two sets of disks inoperative.</p>

Table 21
Technical services non-emergency classifications

Class	Degree of failure	Symptoms
S1	Failure that affects service	<p>Software or hardware trouble directly and continuously affecting user's service or customer's ability to collect revenue.</p> <p>Problem that will seriously affect service at in-service or cut-over date.</p>
S2	Intermittent failure that affects service	<p>Software or hardware faults that only intermittently affect service.</p> <p>System-related documentation errors that directly result in or lead to impaired service.</p>
NS	Failure that does not affect service	<p>Documentation errors.</p> <p>Software inconsistencies that do not affect service.</p> <p>Hardware diagnostic failures (not defined above) that cannot be corrected by resident skills.</p> <p>Test equipment failures for which a backup or manual alternative can be used.</p> <p>Any questions concerning products.</p>

Except as excluded by the provisions of warranty or other agreements with Nortel, a fee for technical assistance may be charged, at rates established by Nortel. Information on rates and conditions for services are available through Nortel sales representatives.

Requesting assistance

Collect the information listed in Table 22 before you call for service.

Table 22
Checklist for service requests

Name of person requesting service	_____
Company represented	_____
Telephone number	_____
System number/identification	_____
Installed software generic and issue (located on data disk)	_____
Modem telephone number and password (if applicable)	_____
Seriousness of request (see Tables 20 and 21)	_____
Description of assistance required	_____

Nortel Communication Server 1000

Communication Server 1000E

Software Upgrades

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