Succession 1000
Succession 3.0 Software

Succession 1000 System

Upgrade Procedures

Document Number: 553-3031-258
Document Release: Standard 1.00
Date: October 2003

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Revision history

October 2003

Standard 1.00. This document is a new NTP for Succession 3.0. It was created to support a restructuring of the Documentation Library. This document contains information previously contained in the following legacy document, now retired: *Upgrades* (553-3023-258)

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About this document

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

Subject

This document explains how to upgrade a Succession 1000 system from Succession Release 2.0 software to Succession 3.0 software.

This document does not explain how to add equipment, such as additional Voice Gateway Media Cards. If the upgrade involves adding equipment, complete the upgrade as described in this guide and then refer to *Succession 1000 System: Installation and Configuration* (553-3031-210) to add equipment.

Applicable systems

This document applies to the Succession 1000 system.

Intended audience

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

Conventions

In this document, the Succession 1000 system is 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:

- *Data Networking for Voice over IP* (553-3001-160)
- *Signaling Server: Installation and Configuration* (553-3001-212)
- *IP Peer Networking* (553-3001-213)
- *Branch Office* (553-3001-214)
- *Optivity Telephony Manager: Installation and Configuration* (553-3001-230)
- *Succession 1000 Element Manager: Installation and Configuration* (553-3001-232)
- *Optivity Telephony Manager: System Administration* (553-3001-330)
- *Succession 1000 Element Manager: System Administration* (553-3001-332)
- *IP Line: Description, Installation, and Operation* (553-3001-365)
- *Internet Terminals: Description* (553-3001-368)
- *Succession 1000 System: Overview* (553-3031-010)
- *Succession 1000 System: Planning and Engineering* (553-3031-120)
- *Succession 1000 System: Installation and Configuration* (553-3031-210)

Online

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

http://www.nortelnetworks.com/

CD-ROM

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

Technical support

After studying this plan the customer may decide to contact Nortel Networks for assistance with the upgrade, migration, and conversion procedures.

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

If a Nortel Networks service program was purchased, contact one of the following Nortel Networks Technical Solutions Centers:

EMEA

(33) (4) 92-966-968

North America

(800) 4NORTEL or (800) 466-7835

Asia Pacific

61-2-9927-8800

China

(800) 810-5000

Overview

Contents

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References in preparation for an upgrade

To plan the network, refer to *Succession 1000 System: Planning and Engineering* (553-3031-120) and *Data Networking for Voice over IP* (553-3001-160).

To read about installing, configuring, and managing Voice Gateway Media Cards and Internet Telephones, refer to *IP Line: Description, Installation, and Operation* (553-3001-365) and *Internet Terminals: Description* (553-3001-368).

For detailed information about installing and configuring new components, refer to *Succession 1000 System: Installation and Configuration* (553-3031-210).

To read about virtual trunking and the Gatekeeper, refer to *IP Peer Networking* (553-3001-213).

Things to know

Element Manager

Each Succession 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 OTM 2.1 navigator. The OTM 2.1 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.

The following management tasks can be performed using Element Manager:

- **System Status**
  Enables users to perform maintenance actions on Succession 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 Gatekeeper and ESN data blocks for the Succession Call Server (LD 86).
- **Software Upgrade**
  Enables users to obtain Succession Call Server software version, ISM parameters, and packages list. Users can also upgrade Voice Gateway Media Card loadware and Internet Telephone firmware.
- **Patching**
  Enables users to download, activate and deactivate patches for the Succession 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 Succession Signaling Server.

Configuration procedures for these tasks are in *Succession 1000 System: Installation and Configuration* (553-3031-210), *System Management* (553-3001-300), and related documents.

For upgrade and configuration procedures that use Element Manager, see "Upgrade IP Telephony loadware and firmware" on page 47.

For information about Gatekeeper Element Manager, refer to the *IP Peer Networking* (553-3001-213).

Optivity Telephony Manager 2.1 (OTM 2.1)

The OTM 2.1 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. Media Gateways and Branch Offices can be added to a network through OTM's **System Properties Network** tab. For more information about OTM, refer to *Optivity Telephony Manager: System Administration* (553-3001-330).

Web-based management tools

Succession 1000 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 CallPilot management.

Network-level tools

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

For more information, see *Optivity Telephony Manager: Installation and Configuration* (553-3001-230) or *Succession 1000 System: Overview* (553-3031-010). For more information about retrieving Call Detail Recording records, see *Succession 1000 System: Installation and Configuration* (553-3031-210).

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 Succession Call Server for Succession 1000. If the system is fully functional (that is, the connection is active) between the Succession Call Server, Succession Signaling Server, Media Gateways, 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 that configured for each component must be used.

LAPW

Limited Access Password (LAPW) login names and passwords can be configured on the Succession Call Server to provide limited access to specified overlays. LAPWs can be used to log into the Succession Call Server or to Element Manager. For more information, see *System Management* (553-3001-300).

Components involved in upgrades

The following components are included in any upgrade:

- Succession Call Server and Media Gateway software
- Boot ROM for the Succession Call Server and Media Gateway
- Succession Signaling Server
- Voice Gateway Media Card loadware
- Voice Gateway Media Card firmware
- Internet Telephone firmware

Note: The IP daughterboard software and BootROM are automatically upgraded with the Succession Call Server or Media Gateway system software.

Estimating installation time

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

System expansions and additional installations require time above this window. See *Succession 1000 System: Installation and Configuration* (553-3031-210).

Implementing IP Peer Networking also requires additional time above that of an upgrade. It can be performed after completing a standalone configuration upgrade, and it does not need to interrupt call processing.

After upgrading the Succession Call Server and Media Gateways and running a few basic system tests (such as performing calls on the Internet Telephones), optionally split the system deployment team in two: one group can concentrate on deploying new Internet Telephones in the organization, while the other group can perform IP telephony upgrade configuration. This method results in a more efficient system installation or upgrade.

Upgrade and installation times depend on the following criteria:

- number and availability of technicians
- familiarity with Succession 1000
- physical location of hardware components
- interoperability products (CallPilot, Symposium, OTM, Meridian 1)
- unit testing and system testing
- unforeseen issues

Upgrade a Succession 1000 Release 2.x system to Succession 3.0 Software

This section summarizes the steps required to upgrade a Succession 1000 Release 2.x system to Succession 3.0 Software.

WARNING

Do not format the Software Delivery card through Windows 2000. The file allocation size does not match that of the Voice Gateway Media Card. Use a different version of DOS or another platform to format the Software Delivery card.

The following steps are required to upgrade a Succession 1000 2.x system to Succession 3.0 Software:

1 Complete the first steps as described on page 24.

2 Obtain the upgrade software.

3 Upgrade the Succession Signaling Server software using the Install Tool. See “Things to know” on page 29.

4 Upgrade the Voice Gateway Media Cards. See “Upgrading Voice Gateway Media Card loadware” on page 59.

5 Upgrade the Internet Telephones. See “Distributing Internet Telephone firmware” on page 67.

6 Upgrade the Succession Call Server and Media Gateways.

a Perform a datadump and back up the existing customer database (“Archive the database” on page 102) to a Software Delivery card. This backs up the IP telephony node.

b Upgrade the Succession Call Server (“Upgrade the Succession Call Server software” on page 77.) Note the pertinent information in “Centralized Software Upgrade” on page 111 about automatic upgrade and BootROM.

c Upgrade the Media Gateways using “Centralized Software Upgrade” on page 111 or “Upgrade the Media Gateway” on page 90.

d Perform a data dump to save the upgraded system database on the Succession Call Server to the Media Gateways.

e At this stage, perform “Test the upgrade” on page 94.

First steps

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This section contains information on the following topics:

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Things to know

Keycodes

During an installation or upgrade, valid keycodes are required. A security keycode protects the installation of software, feature set (packages), ISM parameters, and the system ID. A security device validates the keycodes. The installation does not continue unless the correct keycodes are entered.

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 ISM parameters and make sure the correct data has been entered.
- End the installation and contact your Nortel Networks 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 this session is lost.

> ***Note:*** If a keycode is entered that is not valid, 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:

- "Readiness checklist" on page 23
- "Data checklist" on page 24

Readiness checklist

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

Table 1
Upgrade readiness checklist

Have you?	✓
Made sure that all the software that was ordered has been received?	
Provided a PC or workstation that serves as a maintenance terminal to be used with the Succession Call Server, Media Gateways, Succession Signaling Server, and Voice Gateway Media Cards? The terminal must provide VT100 emulation at 9600 and 19200 bps. A null modem cable (DTE–DTE) with appropriate serial connectors is also required.	
Provided a PC or workstation that runs the web browser for Element Manager? See *Succession 1000 Element Manager: Installation and Configuration* (553-3001-232) guide for more information. The web browser can access the Element Manager web server on either the ELAN or TLAN. 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.	
Prepared the network data, such as new IP addresses, as suggested in “Data checklist” on page 24 and in: • *Data Networking for Voice over IP* (553-3001-160) • *IP Peer Networking* (553-3001-213) • *Succession 1000 System: Installation and Configuration* (553-3031-210)	
Obtained the correct keycodes for the software?	

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 *Data Networking for Voice over IP* (553-3001-160) and *IP Peer Networking* (553-3001-213).

The following data is required:

- **IP addresses for system components**.
  Refer to *Data Networking for Voice over IP* (553-3001-160) and *Succession 1000 System: Installation and Configuration* (553-3031-210) for more information.
- **IP addresses for the Internet Telephones**.
  DHCP can be used to distribute IP addresses and network information to the Internet Telephones. Refer to *IP Line: Description, Installation, and Operation* (553-3001-365) for more detail.
- **Trunk, routing, and network zone data** (numbering plan, standard and IP trunks, Gatekeeper data).
  Refer to *IP Peer Networking* (553-3001-213) for more detail.
- **System, telephony and voice data** (customer configuration, virtual loop and TN assignments, feature data).

First steps

This section summarizes the steps to prepare for and initiate an upgrade of the Succession 1000 software.

> ***Note:*** Data backup and restore is discussed in "Archive the database" on page 102 and "Restore a database" on page 105 respectively, in case there are difficulties with the upgrade and you need to revert to the old configuration.

To install new hardware in a system expansion, refer to *Succession 1000 System: Installation and Configuration* (553-3031-210).

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

Procedure 1
First steps

1 Read the safety instructions.

2 Complete the “Readiness checklist” on page 23.

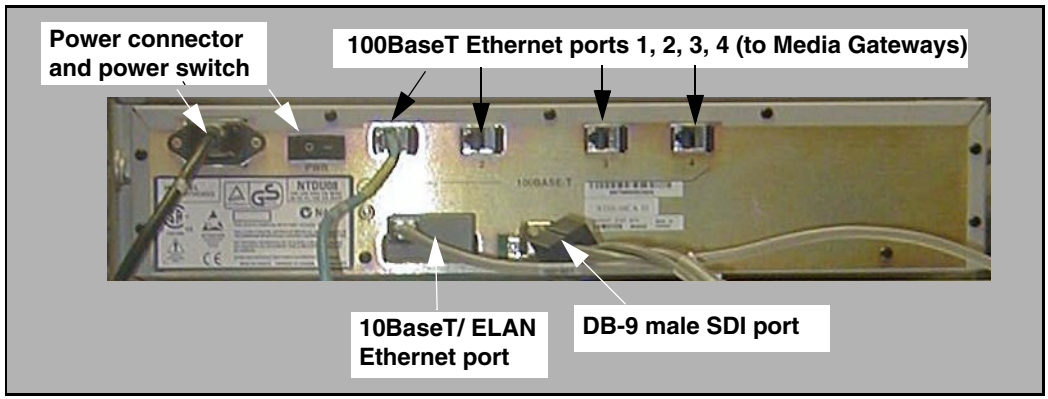
3 Review the section called “Data checklist” on page 24.

4 Verify compliance with system and site requirements.

5 Verify compliance with network requirements for system expansions (adding Media Gateways, Internet Telephones, new sites). Refer to *Data Networking for Voice over IP* (553-3001-160).

6 Connect a three-port SDI cable to the DB-9 male SDI port on the back of the Succession Call Server (Figure 1), as described in the “Readiness checklist” on page 23. In the case of a Media Gateway upgrade, connect the three-port SDI cable to DB-9 port on the back of the Media Gateway (Figure 2 on page 26). Connect the serial cable to connector 0.

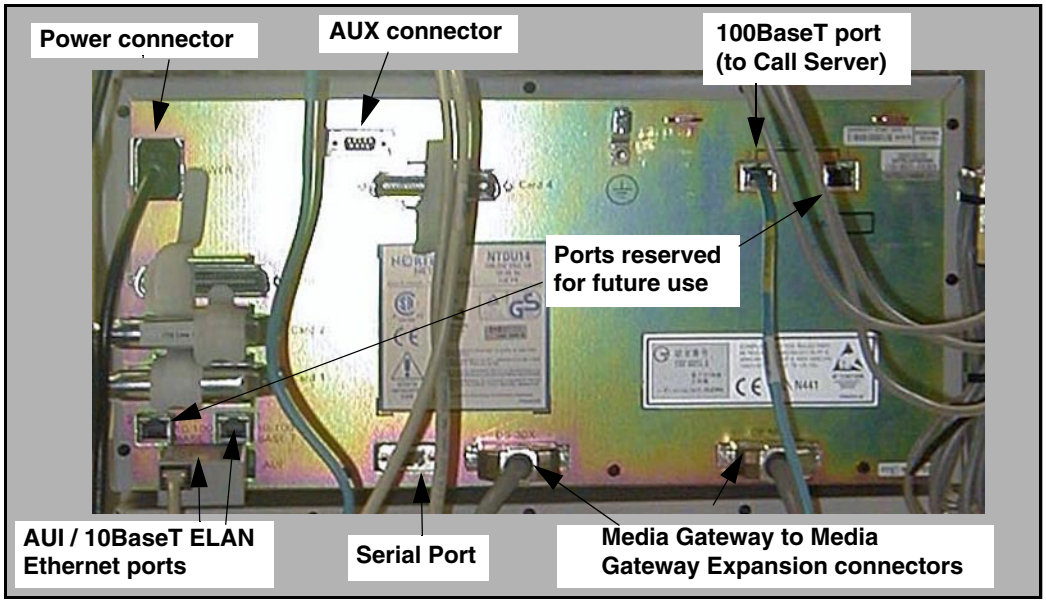
Figure 1
Back of Succession Call Server



WARNING

On the Media Gateway, do not connect a serial port to the AUX connector. It can damage the port.

Figure 2
Back of Media Gateway



7 Perform a data dump.

WARNING

Both before and after an upgrade, perform a data dump on the Succession Call Server. See Procedure 14 "Performing a data dump on the Succession Call Server" on page 78.

8 Archive the system on the Succession Call Server and save it to a Software Delivery card. Refer to Procedure 22 "Archiving the database" on page 102. Media Gateways do not require this step as a data dump synchronizes the Succession Call Server database to the Media Gateway.

End of Procedure

Software requirements

Table 2 lists the minimum software requirements for Succession 3.0 Software. See "Obtain software" on page 95 for information on how to obtain the latest versions of Succession 3.0 Software.

Table 2
Software requirements

Item	Version
Succession Call Server	Succession 3.0 software
Succession Signaling Server (see note below)	2.10.xx
IP Line application (see note below)	3.10.xx
OTM	2.1
Internet Telephone firmware (see note below)	1.59
8051XA Controller firmware on Voice Gateway Media Cards	6.7 for Succession Media Card 5.7 for ITG-P 24-port card
i2050 software telephone	v301
Web browser	Microsoft Internet Explorer v.6.02 Netscape is not supported
	Note: The Succession Signaling Server Terminal Proxy Server (TPS), IP Line 3.1 loadware, Gatekeeper, H.323 Gateway, Element Manager and Internet Telephone firmware are contained on the Succession Signaling Server CD-ROM.

Upgrade software on the Succession Signaling Server

Contents

This section contains information on the following topics:

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Things to know

The Succession Signaling Server is out-of-service during a software upgrade.

The Succession Signaling Server software is upgraded using the Install Tool, which runs from the Succession Signaling Server Software CD-ROM.

To perform a software upgrade, the Succession Signaling Server must be rebooted with the Succession Signaling Server Software CD-ROM in its drive. No floppy disk is required, since the Succession Signaling Server Software CD-ROM is bootable.

The Install Tool installs all Succession Signaling Server software, including its operating system, applications, and web files. The Install Tool also copies to the Succession Signaling Server the software files for the Voice Gateway

Media Cards and Internet Telephones, which are used to upgrade these components in subsequent chapters.

After the Succession Signaling Server software is upgraded, further system configuration is performed using Element Manager.

Follow Procedure 3 on page 32 to perform the complete software installation upgrade.

What to have ready

To install the software, have the following:

1. A power cable and serial cable (provided with Succession Signaling Server hardware), and Ethernet cables for networking.

   Note: Terminal server connections require a full 9-pin serial cable.

2. The Succession Signaling Server Software CD-ROM. Alternatively, if an Upgrade kit was not purchased, download the appropriate software and create a Succession Signaling Server Software CD-ROM, as described in the following section, “Create a Succession Signaling Server Software CD-ROM” on page 30.

Create a Succession Signaling Server Software CD-ROM

Download the CD-ROM image from the Nortel Networks Electronic Software Download site if the latest version is not provided on the CD. For more information, consult “Obtain software” on page 95.

A single “.iso” file is provided to create the Software CD-ROM. This file is a ready-to-burn ISO9660 CD image that creates a bootable CD compliant with the El Torito specification. Use CD writer software that can create a CD from this image. As the CD image is pre-configured, the software automatically creates a bootable Succession 3.0 Software CD-ROM. See the software's help pages to create a CD from an ISO file. As well, review the associated README file that is associated with the Nortel Networks Succession Signaling Server Software download.

The Software CD-ROM must be readable in a standard CD-ROM drive. When a CD is created from the CD image, the CD contains several directories and files. If there are problems creating a CD, refer to the CD writer's software documentation.

Once the CD is created, software can be upgraded on an existing Succession Signaling Server. The Succession Signaling Server Software CD-ROM also contains the latest Voice Gateway Media Card loadware files and Internet Telephone firmware files. See “Things to know” on page 29.

Follow the steps in Procedure 2 on page 31 to create a Succession Signaling Server Software CD-ROM.

Procedure 2
Creating a Succession Signaling Server Software CD-ROM

1. Use the software option to “burn” or “create” a CD from the CD image. Do not drag-and-drop, as this can result in a file copy and a CR-ROM that does not work. Do not write the ISO file to the CD-ROM.

   Note: Select the disk-at-once write option.

2. Close the session.

3. Label the CD appropriately; for example, “Succession Signaling Server, sse-2.10.xx”.

Upgrade the Succession Signaling Server software

Follow the steps in Procedure 3 to upgrade the Succession Signaling Server software.

This procedure takes approximately 16 minutes to complete (30 minutes if the hard disk is tested).

Procedure 3
Upgrading the Succession Signaling Server software.

1 Insert the Succession Signaling Server Software CD-ROM into the Succession Signaling Server CD drive, and press the RST button on the front panel to cold-reboot the Succession Signaling Server.

Note: The Software CD-ROM should be bootable. If not, create a boot floppy using the files in the `/mkboot` directory on the Succession Signaling Server Software CD-ROM.

2 If this is a software upgrade or re-installation on an existing system, observe the boot sequence. Enter '**c**' at the boot menu shown in Figure 3.

Note: Entering 'c' at the "ISP 1100 Boot" banner speeds up this process, as the keyboard input is buffered.

Figure 3
Upgrade boot sequence

```
        ISP 1100 Boot
Copyright 2003 Nortel Networks, Inc.

CPU: PC PENTIUM
Version: x
BSP version: 1.2/0
Creation date: May 31 2002, 15:44:38
ataDrv 1.0: ATAPI Drive Found
Controller 1 drive 0
Controller 1 drive 1
ATAPI Controller 1 #drives found = 1
Read boot parameters from:
[C]DROM
[H]ard Disk
5 [H]
```

If 'c' is not selected within the 5-second time-out, the Succession Signaling Server boots to the existing software on the hard disk.

3 When the Install Tool banner appears (Figure 4 on page 33), press <CR> to perform system checks and begin software installation.

Figure 4
Install Tool banner screen

```
Succession Signaling Server Install Tool (sse-2.10.xx)
================================================================================

          #####
        #########    ########
       ########``  `##############
      ########       ``     `###############
     #######`           ######```####
     #######       ######``       `###
    #######     #####``             ####
    ####### #####`                  ####
    `#########`                     ####`     N O R T E L  N E T W O R K S
     #######`                     #####
      `#######                  #####'      Succession Enterprise Software
      ##########               `###`
    ##``##########               #
   ##    `########################
   `#      `########################
     ############################``
      `````````  ````####````

 Copyright 2001 - 2003 Nortel Networks

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

Verifying filesystems ...
```

The system verifies the file systems.

**a.** The first time the software runs on a new system, the hard disk is not partitioned, so this test fails. Upon failure, the menu in Figure 4 on page 33 appears. At the first install, enter ‘a’.
```

Figure 5
First boot of a new system

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

The file systems 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
```

i. Enter '**a**' to start the new installation.

The system displays the messages:

```
Partitioning hard disk ...
Hard disk partitioning succeeded.

Creating filesystems ...
Filesystems creation succeeded.

Rebooting system ...
```

ii. The Install Tool banner screen (Figure 4 on page 33) reappears. Press <CR> to verify the filesystems.

The disk check reports:

```
Filesystems verification succeeded.
```

iii. Confirm or enter the date and time (Figure 6 on page 35).

Figure 6
Date and time

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx))
======================================================================

You should ensure the system date and time are correct prior to
installation, since all files copied or created during install will
be time-stamped.

If the date or time are correct, you can press <CR> to accept the
current values.

Current date is: WEDNESDAY 13-02-2003
Enter new date (dd mm yyyy): 18 07 2003
Date is set to: FRIDAY 18-07-2003
Current time is: 09:47:18
Enter new time (hh mm ss): 08 38 30
Time is set to: 08:38:30
Current date and time is:
FRIDAY 18-07-2003, 08:38:30
```

b. Upon re-installation on an existing system, the system verifies the file systems. The disk check reports:

```
Filesystems verification succeeded.
```

The system summary appears (Figure 7 on page 36).
Enter '**a**' to continue the installation.

Figure 7
System Summary

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
================================================================

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

+==============================================================+
|  Hostname: SS_Node276_Ldr          S/W Ver: 2.10.xx          |
|                                                              |
|      Role: Leader                  Set TPS: Enabled          |
|   Node ID: 276                    Vtrk TPS: Enabled          |
|   Node IP: 192.168.20.100           GK Svc: None             |
|  H.323 ID: SS_Node276_Ldr            CS IP: 192.168.10.10    |
|                                                              |
|   ELAN IP: 192.168.10.20           TLAN IP: 192.168.20.20    |
|   ELAN SM: 255.255.255.0           TLAN SM: 255.255.255.0    |
|   ELAN GW: 192.168.10.1            TLAN GW: 192.168.20.1     |
|  ELAN MAC: 00:02:b3:c5:51:c6      TLAN MAC: 00:02:b3:c5:51:c7|
+==============================================================+

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

        Enter Choice>
```

4 Test the disk.

a. If the hard drive has never been tested or is corrupt, enter '**a**' at the menu shown in Figure 8 on page 37.

Figure 8
Hard disk test

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

The Install Tool cannot determine when the hard disk was last tested.

The hard disk must be tested before installation can continue.
This test will take approximately 14 minutes.


        Please enter:
<CR> -> <a> - Test the hard disk.

        Enter Choice> a
```

b. If the hard disk has not recently been tested, enter '**a**' at the menu shown in Figure 9.

Figure 9
Not recently tested

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

The Install Tool has detected that the hard disk has not been tested
recently.

It is recommended to test the hard disk now. This test will take
approximately 14 minutes.

        Please enter:
<CR> -> <a> - Test the hard disk.
        <b> - Skip the hard disk test.

        Enter Choice> a
```

c. If the hard disk has been checked in the last 24 hours, enter '**b**' at the menu shown in Figure 10 on page 38.

Figure 10
Tested within 24 hours

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
======================================================================

The Install Tool has detected that the hard disk has been tested
recently.

It is recommended to skip the hard disk test.

If you select to test the hard disk anyway, it will take
approximately 14 minutes.

        Please enter:

<CR> -> <a> - Skip the hard disk test.
        <b> - Test the hard disk.
         Enter Choice> a
```

The following messages print out:

```
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.

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

Figure 11
Install Tool Main Menu

```
Succession Signaling Server CDROM Install Tool (sse-2.10.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, 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 Media Card loadware only.
         <e> - To perform basic Signaling Server configuration only.
         <t> - To go to the Tools Menu.
         <q> - Quit.

         Enter Choice>
```

5 At the Main Menu (Figure 11), enter '**a**' to install Succession Signaling Server software. Option 'a' performs options b, c, d, and e.

The following is an example of the lines output to the screen:

```
Copying "/cd0/sse210xx.p3/disk.sys" to "/u/disk.sys".
Processing the install control file ...
"/cd0/sse30047.p3/install.dat" parsed.
```

The screen shown in Figure 12 on page 40 shows the actions that can be performed.

Figure 12
Installation Status

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
================================================================================

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

+=================+========+========+==============================+
|     Option      | Choice | Status |           Comment            |
+=================+========+========+==============================+
| software        |  yes   |        | upgrade 2.00.xx to 2.10.xx   |
+-----------------+--------+--------+------------------------------+
| firmware        |  yes   |        | copy ALL                     |
+-----------------+--------+--------+------------------------------+
| loadware        |  yes   |        | copy ALL                     |
+-----------------+--------+--------+------------------------------+
| configuration   |  yes   |        | set as N/A                   |
+-----------------+--------+--------+------------------------------+

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

        Enter Choice>
```

6 Enter '**y**' to start the installation. The screens shown in Figures 13 through to Figure 17, starting on page 41, appear.

Figure 13
Installation output

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

You have selected to install version 3.10.xx on the system.
THIS WILL ERASE ALL SYSTEM FILES. Data files will be preserved.


Starting upgrade from version 2.00.xx to version 2.10.xx.

Initializing protected partition ...
"/p" initialized.

Creating directory ... (many directories are created here) ...
Copying ... (many files are copied here) ...

Boot ROM "/p/load/bootrom.bin" installed.
```

Figure 14
Success

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

Software version 2.10.xx was installed successfully.

All files were copied to the hard disk.
```

Figure 15
Internet Telephone firmware

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

The installation source contains multiple Internet Telephone firmware
files.

Copying "/cd0/0602Bxx.bin" to "/u/fw/0602Bxx.bin".
Copying "/cd0/0603Bxx.bin" to "/u/fw/0603Bxx.bin".
```

Figure 16
VGMC loadware

```
Succession Signaling Server CDROM Install Tool (sse-2.10.xx)
=============================================================================

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

Copying "/cd0/IPL310xx.p2" to "/u/fw/IPL310xx.p2".
Copying "/cd0/IPL310xx.sa" to "/u/fw/IPL310xx.sa".
```

7 Since this is an upgrade, existing Succession Signaling Server configuration files are retained.

8 The system echoes the ELAN MAC address.

```
For future reference, the ELAN MAC address is:
"00:02:b3:c5:5l:c6".
```

This address is also found on the face of the Succession Signaling Server, on the right-hand side when the bezel door is open.

9 To complete the upgrade, the Installation Status Summary screen is displayed as shown in Figure 17 on page 43.

Figure 17
Installation Status Summary

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

+=================+========+========+==============================+
|     Option      | Choice | Status |           Comment            |
+=================+========+========+==============================+
| software        |  yes   |   ok   | upgrade 2.10.xx              |
+-----------------+--------+--------+------------------------------+
| firmware        |  yes   |   ok   | copy i2002 version x.xx      |
| firmware        |  yes   |   ok   | copy i2004 version x.xx      |
+-----------------+--------+--------+------------------------------+
| loadware        |  yes   |   ok   | copy IP Line 3.10 for P2     |
| loadware        |  yes   |   ok   | copy IP Line 3.10 for SA     |
+-----------------+--------+--------+------------------------------+
| configuration   |  yes   |   ok   | set as Leader/Follower       |
+-----------------+--------+--------+------------------------------+

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

10 Exit to the Main Menu. See Figure 11 on page 39. Select '**q**' from the Main Menu to quit the installation process.

11 Figure 18 on page 44 appears. Enter '**q**' again.

Figure 18
Quit

```
Succession Signaling Server CDROM Install Tool (sse-2.10.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 the Main Menu.
        <q> - Quit and reboot the system.

        Enter Choice> q

Rebooting system ...
```

12 Remove the CD-ROM from the drive, and reboot the system.

End of Procedure

Access the Tools Menu

Follow the steps in Procedure 4 on page 44 to access options in the Install Tools Menu. Options include setting the date and time, and resetting the shell login names and passwords (if desired).

Procedure 4
Accessing the Tools Menu

1 Insert the Succession Signaling Server Software CD-ROM.

From the Main Menu, choose option '**t**' to open the Tools Menu. The Tools Menu displays as shown in Figure 19 on page 45.

Figure 19
Tools Menu

```
Succession Signaling Server CDROM Install Tool (sse-2.10.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 partition and initialize the hard disk.
        <c> - To reset the Administrator login and password.
        <d> - To test the hard disk.
        <e> - To change the web server security flag.
        <m> - To return to the Main Menu.

Enter Choice>
```

2 Under the Tools Menu, enter the letter to perform an action:

a. Set the date and time (default).

b. Repartition and re-initialize the hard disk.

c. Delete the Administrator login and password.

d. Test the hard disk.

e. Change the web server security flag.

Note: Option b, “Repartition and re-initialize the hard disk”, results in a reboot. Leave the Succession Signaling Server Software CD-ROM in the drive so that the Install Tool can restart. Then, re-install the Succession Signaling Server software as described in Procedure 3 on page 32.

End of Procedure

For more information on using the Tools Menu, refer to *Signaling Server: Installation and Configuration* (553-3001-212).

Upgrade IP Telephony loadware and firmware

Contents

This section contains information on the following topics:

Things to know 47
Task summary 48
Verify current loadware and firmware versions 49
Verify Voice Gateway Media Card loadware version 49
Verify the Internet Telephone firmware version 53
Obtain and upload loadware and firmware files 56
Upgrade the Voice Gateway Media Card loadware from IP Line 3.0 to IP Line 3.1 59
Upgrade loadware using a Software Delivery card. 64
Upgrade the Internet Telephone firmware 66

Things to know

The Install Tool copied Voice Gateway Media Cards (Voice Gateway Media Cards) loadware files and Internet Telephone firmware files to the Succession Signaling Server. Element Manager can upgrade the Voice Gateway Media Cards from these loadware files, and distribute the Internet Telephone firmware files to the other components in an IP telephony node. Administrators can then upgrade firmware on Internet Telephones. See “Upgrade the Internet Telephone firmware” on page 66.

To verify loadware and firmware versions on Voice Gateway Media Cards and Internet Telephones, follow the procedures in this chapter.

For more information about telephone operation during firmware download, see *IP Line: Description, Installation, and Operation* (553-3001-365) or *Branch Office* (553-3001-214).

Task summary

To upgrade loadware and software, perform the following tasks:

1. Verify the Voice Gateway Media Cards loadware and Internet Telephones firmware versions.
   See "Verify Voice Gateway Media Card loadware version" on page 49 and "Verify the Internet Telephone firmware version" on page 53.
2. Have the Succession Signaling Server CD-ROM from the Upgrades kit on hand.

   If an Upgrade kit was not purchased, refer to "Create a Succession Signaling Server Software CD-ROM" on page 30 for information on how to create a Succession Signaling Server CD-ROM.

   Alternatively, download the software from the Nortel Networks 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 56.
3. Upgrade the software on all of the Voice Gateway Media Card from IP Line 3.0 to IP Line 3.1.
4. Distribute the Internet Telephone firmware to all components (Succession Signaling Server and Voice Gateway Media Cards) in an IP telephony node.

Verify current loadware and firmware versions

Verify Voice Gateway Media Card loadware version

To check the version of loadware on the Voice Gateway Media Card, follow the steps in Procedure 5, Procedure 6 on page 49, or Procedure 7 on page 52.

Procedure 5
Verifying loadware version during boot

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

   ```
   Software Version:
   SSE-2.10.70_IPL-3.10.70_08_23_2003.2099
   ```

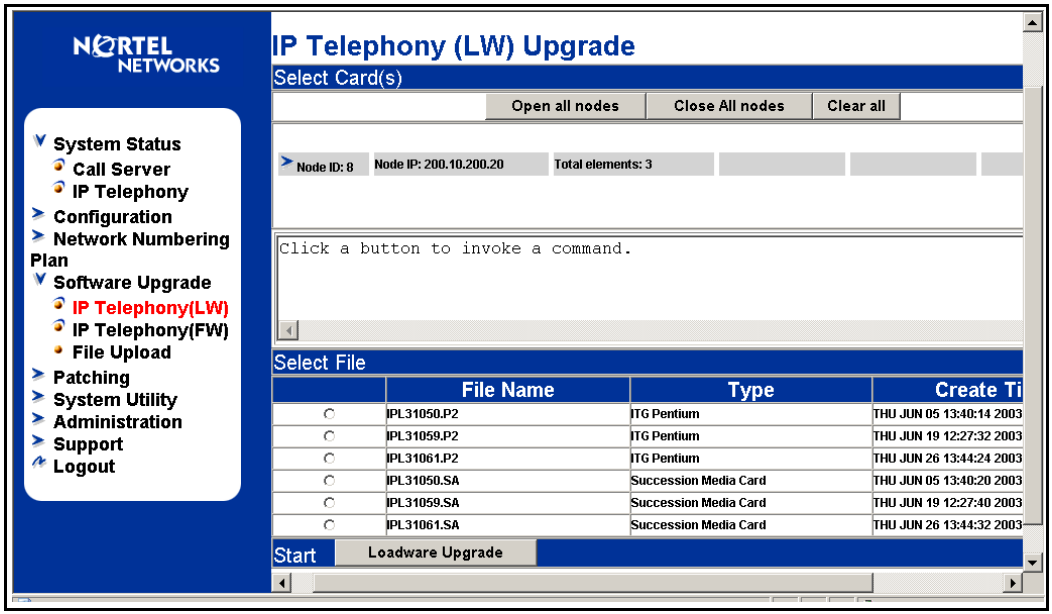
   In this case, the software version is IP Line 3.10.70.

End of Procedure

Procedure 6
Verifying the loadware version through Element Manager

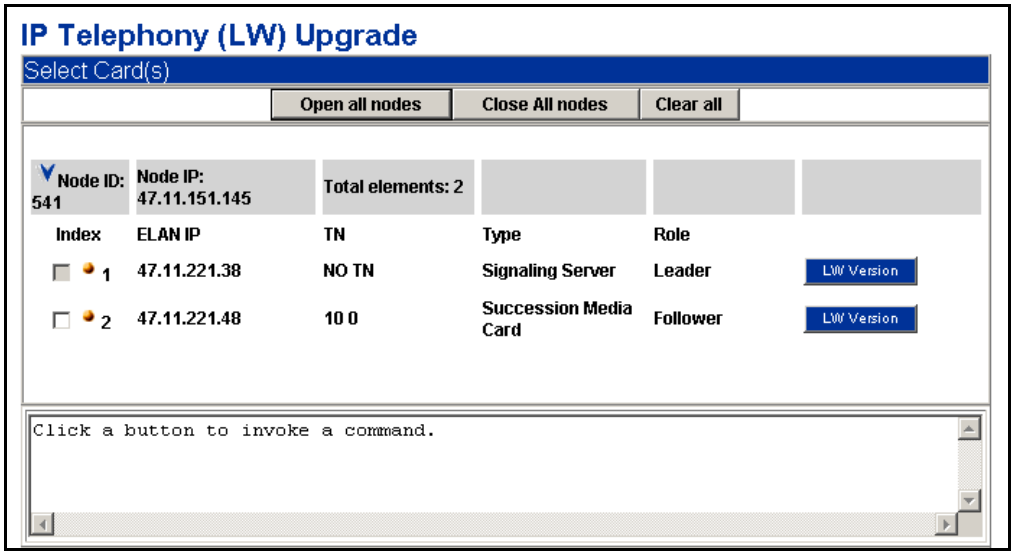
1. Click **Software Upgrade** from the Element Manager Navigation Tree.
2. Click **IP telephony (LW)** from the expanded Software Upgrade menu. The **IP telephony (LW) Upgrade** page appears. See Figure 20 on page 50.

Figure 20
IP Telephony (LW) Upgrade



3 Expand a node and select a card in the node. See Figure 21 on page 51.

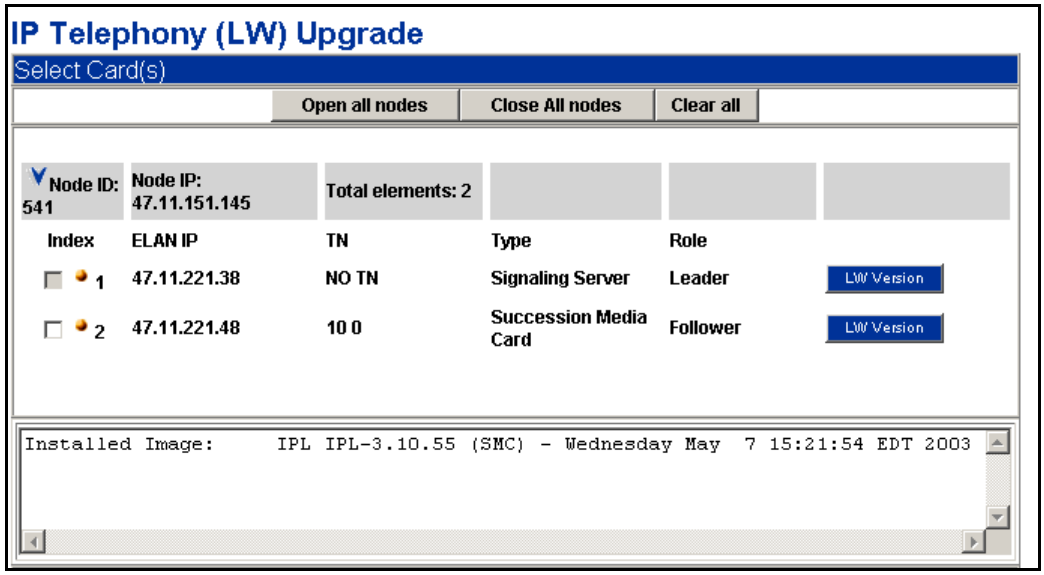
Figure 21
LW Version



4 Click the **LWVersion** 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 IP telephony (LW) page, as shown in Figure 22 on page 52.

Figure 22
Loadware version displayed



5 Note the loadware version for the card.

End of Procedure

Procedure 7
Verifying the loadware version through the CLI

Detailed procedures can be found in *IP Line: Description, Installation, and Operation* (553-3001-365).

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:
SSE-2.10.70_IPL-3.10.10_08_23_2003.2099
```

In this case, the software version is IP Line 3.10.70.

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

Verify the Internet Telephone firmware version

To determine the version of the Internet Telephone firmware that is stored on the Voice Gateway Media Card, follow the steps in Procedure 8 on page 53. To view the firmware version currently running on the Internet Telephones, use Procedure 9 on page 56.

Procedure 8
Verifying the Internet Telephone firmware version on a Voice Gateway Media Card

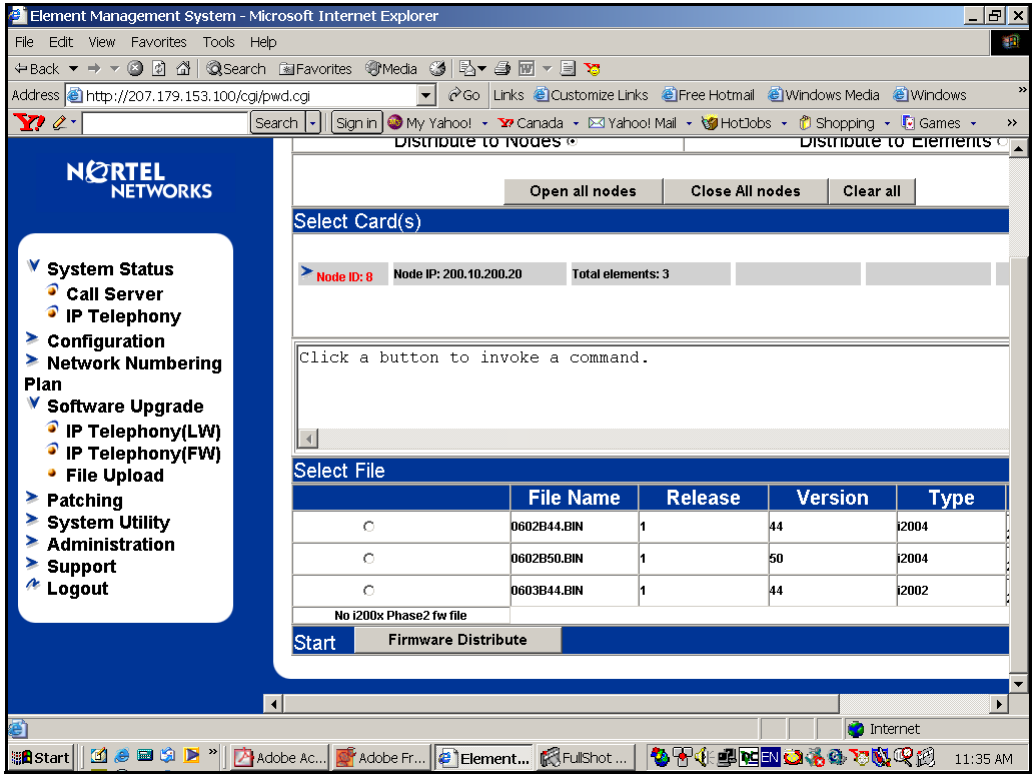
1 Click **Software Upgrade** from the Element Manager Navigation Tree.

2 Click **IP Telephony (FW)** from the expanded Software Version menu. The **IP Telephony (FW) Upgrade** page appears. See Figure 23 on page 54. At the top of the screen, there are two radio buttons:

a. Distribute to Node - disables all components which are not Leaders. Distribute to Node is the default since IP Line is responsible for distributing from the Leader to all Followers in a node.

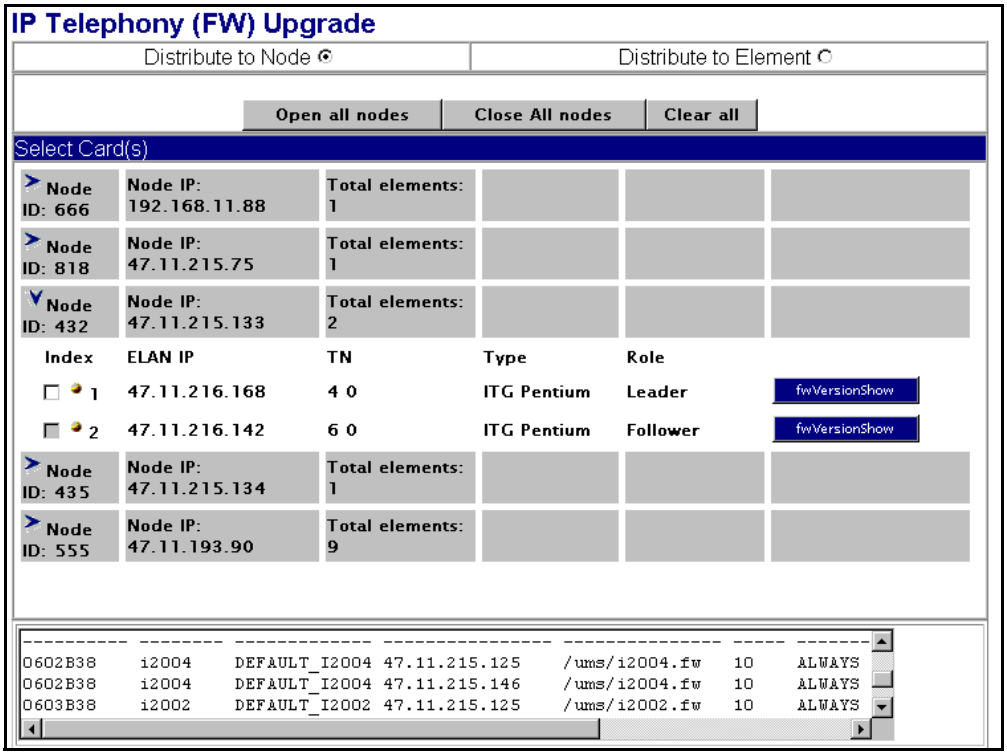
b. Distribute to Elements - enables all the components in case it is necessary to distribute the firmware to some components which have failed.

Figure 23
IP Telephony (FW)



3 Expand a node and select a card. See Figure 24 on page 55.

Figure 24
FWVersionShow



4 Click the **fmVersionShow** button located to the right of the card information. The firmware version running on the card is displayed in the pane in the center of the IP Telephony (FW) page.

5 Note the firmware version for the card.

End of Procedure

Procedure 9
Verifying firmware version on an Internet Telephone

An alternative method to verify Internet Telephone firmware is through the keypad and display interface.

1. Press the configuration key on the Internet Telephone (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 the “FW Version” is displayed.
4. Press the Cancel key to back out of each menu.

End of Procedure

Obtain and upload loadware and firmware files

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

Refer to “Obtain software” on page 95 for information on how to download the software to a management workstation.

Procedure 10 on page 57 describes how to upload the upgrade Voice Gateway Media Card loadware and Internet Telephone firmware from the management workstation to the Succession Signaling Server. Upgrade firmware and loadware files come with the Succession Signaling Server Software CD-ROM included in the Upgrade kit, or from the Nortel Networks Software Download website.

The Voice Gateway Media Card loadware and Internet Telephone firmware files were copied from the CD to the Succession Signaling Server hard drive during the Succession Signaling Server installation. The files appear in the Element Manager **Software Version | IP Telephony LW** and **Software Version | IP Telephony FW** pages. If these are the latest versions of the loadware and firmware, then there is no need to follow Procedure 10. Go to Procedure 12 "Upgrading loadware using a Software Delivery card" on page 65 or Procedure 13 "Distributing Internet Telephone firmware" on page 67.

Procedure 10
Obtaining and uploading loadware and firmware

Use a management PC on the same network as the Succession Signaling Server for Element Manager.

1. Obtain the latest software installation files for the Voice Gateway Media Card loadware and Internet Telephone firmware. Download the files from the Nortel Networks Electronic Software Download site to the management PC, as described in “Obtain software” on page 95.
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.

   The Internet Telephone firmware files have the format ‘**0602Bxx.BIN**’ (i2004) or ‘**0603B.BIN**’ (i2002), where:

   06 is the design site location code

   02 or 03 is the Internet Telephone type: 02 for i2004 and 03 for i2002

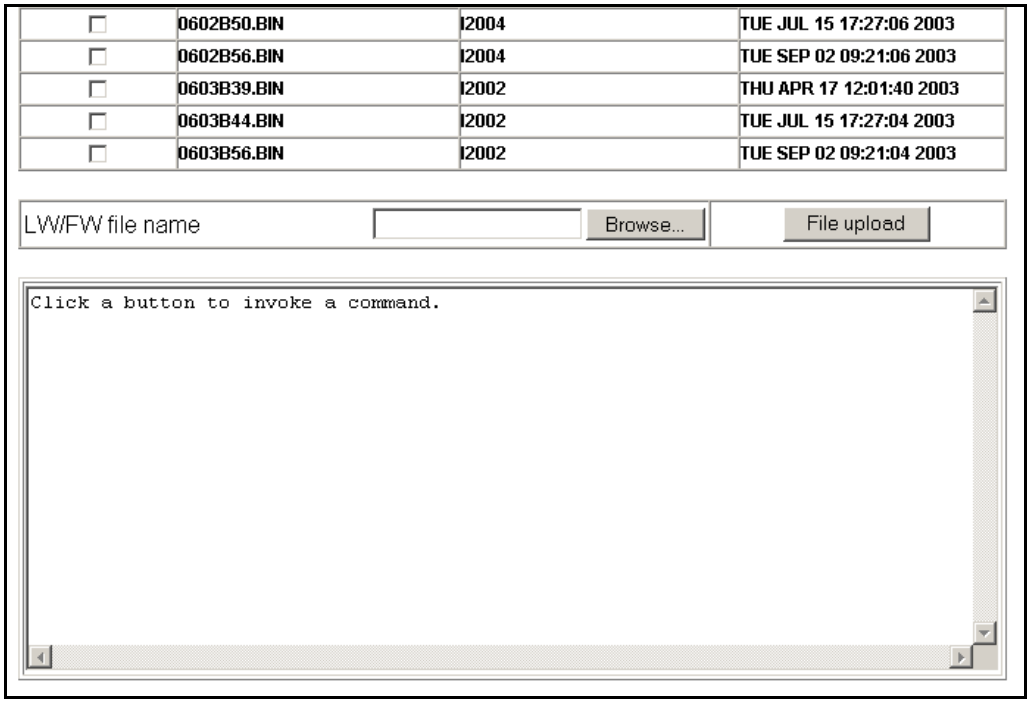
   B is the release: {B = 1, C = 2, D = 3 ...}

   xx is the firmware version

   The Voice Gateway Media Card loadware files have the format ‘**IPL310xx.p2**’ and ‘**IPL310xx.sa**’.
3. Log into Element Manager.
4. Using **Software Upgrade | File upload** (see Figure 25 on page 58), browse to the software files on the workstation (which can be on the Succession Signaling Server Software CD-ROM) and upload them to the Succession Signaling Server.

Initially, the Voice Gateway Media Card loadware and Internet Telephone firmware files are stored in the Succession Signaling Server's `/u/fw` directory.

Figure 25
Upload firmware, software, and loadware



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

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

End of Procedure

Upgrade the Voice Gateway Media Card loadware from IP Line 3.0 to IP Line 3.1

This section describes how to upgrade Voice Gateway Media Card software from 3.0 to a higher version using Element Manager. Voice Gateway Media Cards can be triggered to upgrade using Element Manager. The cards obtain their software from the Succession Signaling Server.

After the Voice Gateway Media Cards are running IP Line 3.1 (either upgraded by OTM or as they were shipped), make sure the cards are added to the IP telephony node (See "Add Voice Gateway Media Card to an IP telephony node" in *Succession 1000 System: Installation and Configuration* (553-3031-210)). Then, upgrade the loadware to the most recent version.

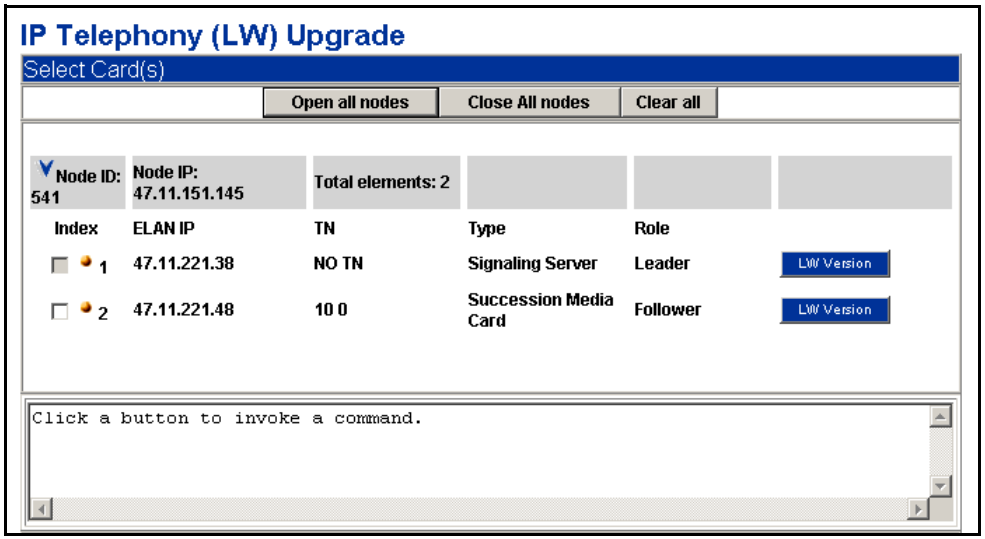
Procedure 11
Upgrading Voice Gateway Media Card loadware

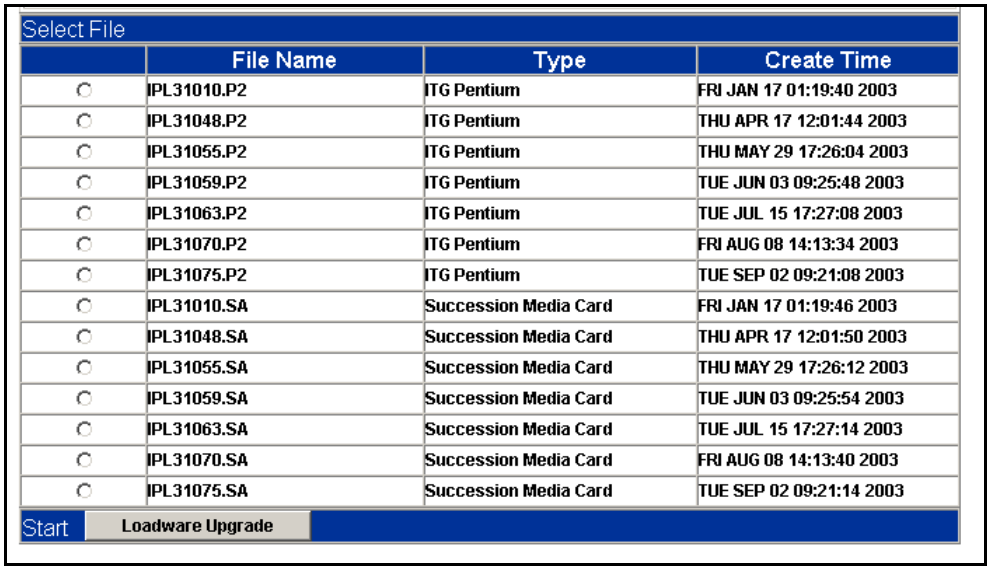
This procedure assumes the software has been uploaded. Follow these steps to update the Voice Gateway Media Card loadware:

1 Log into Element Manager.

2 For the remote Voice Gateway Media Card upgrade, choose **Software Upgrade > IP Telephony (LW)**. The application page appears as shown in Figure 26 on page 60.

Figure 26
IP Telephony (LW) upgrade





Note: Since different components have different software running on them, click the **LW Version** button for a given element to obtain the current software version.

3 Select the loadware file of the Voice Gateway Media Card for upgrade. The filename begins with "**IPL31**". The list of files available is shown in Figure 26 on page 60.

4 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 Succession Media 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.

5 Click the "Loadware Upgrade" button on the bottom of the IP Telephony (LW) Upgrade page. Click **OK** for the confirmation messages as shown in Figure 27.

A Loadware Upgrade Progress page is displayed, as shown in Figure 28 on page 62. When the loadware upgrade is complete, the page appears as shown in Figure 29 on page 62. Generally, it takes three minutes for each ITG-P 24-port card to upgrade, and one minute for each Succession Media Card.

Figure 27
Workfile

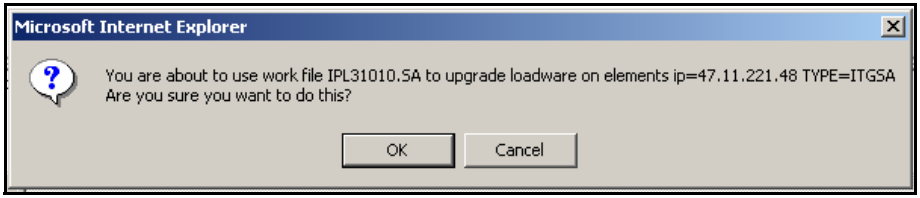


Figure 28
Loadware upgrade progress

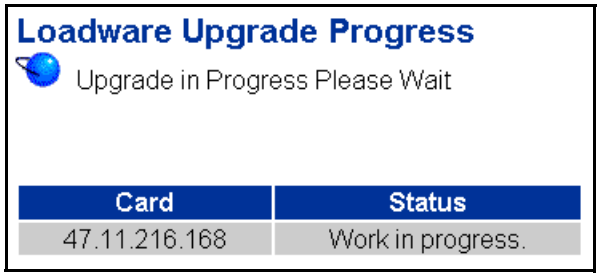
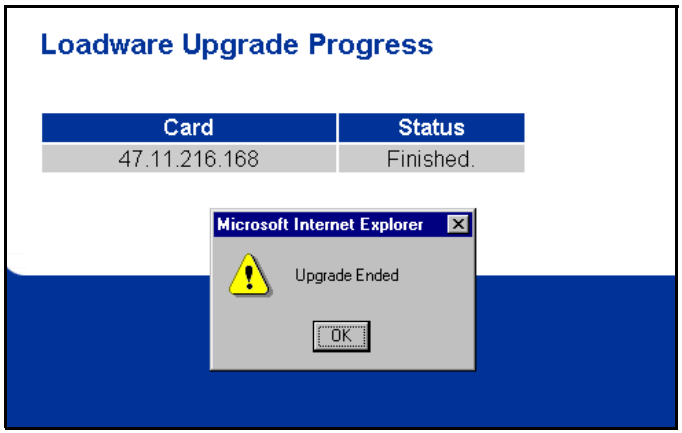


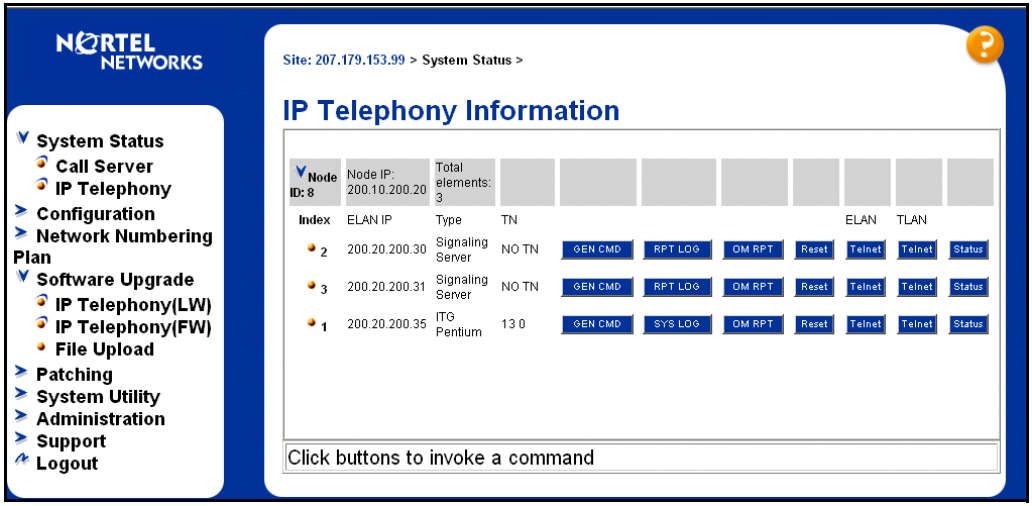
Figure 29
Loadware upgrade ended



6 Each Voice Gateway Media Card that has received the new loadware must be rebooted in order for the loadware to take effect on the card. Continue with the following steps for cards that successfully received the loadware. For cards which were not successful, begin this procedure again from step 2 on page 59.

7 Click **System Status** | **IP Telephony** and go to the IP Telephony Information page. See Figure 30 on page 63. Click the node to expand it.

Figure 30
IP Telephony information



8 Click the **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* (553-3001-365). Repeat step 6 again.

9 Reboot the card by clicking the **Reset** button for the Voice Gateway Media Card from the IP Telephony Information page (**System Status** I **IP Telephony**). See Figure 30 on page 63.

10 Look at the face plate display to determine when the card is finished booting.

11 Click the **Status** button for the Voice Gateway Media Card on the IP Telephony Information page. The message in the window pane (result box) should say:

```
xx.xxx.xxx.xxx : Disabled.
```

12 Enable the Voice Gateway Media Card. Refer to *IP Line: Description, Installation, and Operation* (553-3001-365).

13 Click the **Status** button for the Voice Gateway Media Card on the IP Telephony Information page and make sure that the message in the window pane (result box) says:

```
xx.xxx.xxx.xxx: Enabled.
```

14 Repeat from step 7 on page 62 to step 13 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* (553-3001-365).

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* (553-3001-365).

Follow the steps in Procedure 12 on page 65 to upgrade the loadware using a Software Delivery Card.

Procedure 12
Upgrading loadware using a Software Delivery card

This procedure assumes that the loadware was verified from the CLI as outlined in Procedure 5 on page 49, where a serial cable connects the Voice Gateway Media Card to a workstation.

1 Download the loadware, as described in “Obtain software” on page 95. For a first-time Voice Gateway Media Card upgrade after a system upgrade, use the files that are present on the Succession Signaling Server Software CD-ROM.

2 Format a 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 Succession Media Card.

IMPORTANT!

Do not format the Software Delivery card using Windows 2000. The file allocation size does not match that of the Voice Gateway Media Card. Use a different version of DOS or another platform to format the Software Delivery card.

3 Reset the card or use a command to restart it.

4 Observe the boot sequence and enter ‘jkl’ when prompted. This prompt times out within a few seconds, so watch closely.

5 Insert the Software Delivery card into the slot in face of the Voice Gateway Media Card.

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

When the IP Line 3.1 application has been upgraded, verify whether or not an Internet Telephone firmware upgrade is also required. Check the Release Notes for the Internet Telephone software application to determine which Internet Telephone firmware version is required in order to be compatible with the Voice Gateway Media Cards.

Upgrade the Internet Telephone firmware

Internet Telephone firmware is distributed to the Voice Gateway Media Cards through Element Manager. However, the distribution of firmware to the Internet Telephone happens as each Internet Telephone registers with the Telephony Proxy Server (TPS).

When the firmware software file has been updated on the Succession Signaling Server and distributed to the TPS, the TPS then initiates a firmware download to the Internet Telephones. The firmware upgrade decision (that is, does the Internet Telephone have a firmware version compatible with the TPS) and processing (that is, transfer) is performed by the Upgrade Manager Service on the same host as the TPS.

> ***Note:*** A firmware download does not occur with Internet Telephones performing a Virtual Office login or Branch Office login to a remote system. No firmware upgrade takes place during a Virtual Office Login or a Branch User registration with the TPS. The registration is allowed since the Internet Telephone firmware version must be 1.33 or later to do a Virtual Office login or a Branch Office User registration.

The **umsUpgradeAll** command has no impact on Virtual Office Login Internet Telephones. These Internet Telephones are not reset. If the Virtual Office Login is on the same Call Server, then the Internet Telephone firmware is upgraded after the user logs out. If the Virtual office Login is between different Call Servers, then the Internet Telephone just registers back to its home TPS and follows the normal firmware rules for regular registration.

When the **umsUpgradeAll** command is executed, Branch User Internet Telephones that are on an active call are flagged. After the Internet Telephone becomes idle, the Internet Telephones are switched by the Call Server back to the Branch Office for the firmware upgrade .

If it is necessary to immediately upgrade the firmware on the Internet Telephones already registered, the system administrator can log into the CLI on the Succession Signaling Server and issue the **`umsUpgradeAll`** command. This command also redirects Internet Telephones that are logged in through Virtual Office or Branch Office to the home TPS for the firmware upgrade.

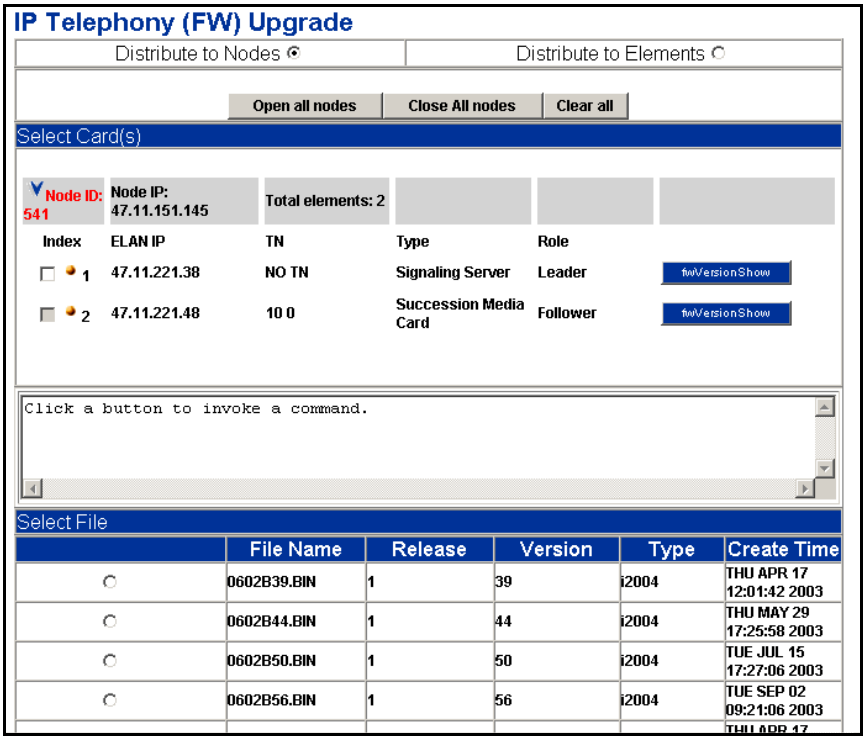
When a firmware upgrade is necessary, the system administrator should install the firmware to the Branch Office TPS before the Main Office TPS. Refer to *Branch Office* (553-3001-214) for more information. If the firmware installation is out of order, an error message is displayed on the Branch Office Internet Telephones.

Follow the steps in Procedure 13 to distribute Internet Telephone firmware.

Procedure 13
Distributing Internet Telephone firmware

1. Log into Element Manager.
2. Choose **Software Upgrade > IP Telephony (FW)**. The IP Telephony (FW) Upgrade window opens. See Figure 31 on page 68.

Figure 31
Firmware upgrade



3 Select the firmware file of the Internet Telephone model to be upgraded.

4 Open the node and select the Succession Signaling Server(s) or Voice Gateway Media Cards to be upgraded.

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

5 Click the **Firmware Distribute** button. This distributes the firmware to all the Voice Gateway Media Cards according to the Internet Telephone firmware version specified. Generally, it takes half a minute to upload the firmware to each individual element.

This process is referred to as distributing the firmware files.

6 Click the "`fwVersionShow`" button beside each element to see the firmware version of that element.

Note: This procedure only distributes Internet Telephone firmware on the Succession Signaling Server or Voice Gateway Media Card. It does not upgrade the Internet Telephone firmware directly until the Internet Telephones are reset or the **`umsUpgradeAll`** command is issued on the Succession Signaling Server.

End of Procedure

Upgrade software on the Succession Call Server and Media Gateway

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Introduction

This chapter describes how to upgrade a Succession 1000 system from Release 2.x to Release 3.0 Software on both the Succession Call Server and Media Gateway, as each uses the same software upgrade files and delivery media. The upgrade must be completed on the Succession Call Server and all Media Gateways in the system.

There are differences in software prompts and responses in the installation programs for the Succession Call Server and Media Gateway. To upgrade the Succession Call Server, see “Upgrade the Succession Call Server software” on page 77. To upgrade a Media Gateway, see “Upgrade the Media Gateway” on page 90.

To perform an upgrade to the system software using a pre-programmed software daughterboard, see Procedure 15 "Replacing an existing software daughterboard with a pre-programmed software daughterboard" on page 79. To perform an upgrade to the system using a Software Delivery card, see Procedure 16 "Upgrading the Succession Call Server software" on page 80.

The Nortel Networks Software Downloads site contains instructions on how to copy a downloaded Succession Call Server software file to a Software Delivery card.

IMPORTANT!

- The Succession Call Server and IP Line nodes within a single system must be upgraded simultaneously to Succession 3.0.
- Succession 3.0 Software is not backwards compatible with Meridian 1 X11 Release 25.40 and IP Line 3.0 within a single system.
- Succession 3.0 Software is backwards compatible with base features of Succession 1000 Release 2.0 and Meridian 1 X11 Release 25.40 at the network level.

IMPORTANT!

Upgrade the Succession Call Server software before the Media Gateways. Ensure that the Succession Call Server upgrade is complete and the Succession Call Server is up and running before loading the Media Gateways. Note that Media Gateways can be installed in any order.

Things to know

Software installation program

The Software Installation Program provides a menu-driven method of selecting from the different options of installing, modifying, or upgrading the following:

- Software
- Feature set (packages)
- Incremental Software Management (ISM) parameters

The Software Installation Program does not check the prerequisites and interactions of added packages.

The Software Installation Program provides utilities to:

- upgrade IP daughterboard software
- upgrade boot ROM
- archive, restore or install a database
- review installation data
- back up data
- undo an installation in progress

The Software Installation Program has the following additional options:

- **Set system time and date:** The system time and date is usually set before installation. This makes sure that all flash drive files have the correct creation date.
- **Confirm Upgrade Information:** This option allows you to review the selected installation options. Use the "Confirm Upgrade Information" after the system validates the keycodes, but before the installation is complete.
- **Clear Upgrade Information:** If the installation terminates after entering the keycodes, but before the installation is complete, abort the installation with the "Clear Upgrade Information" option.

For detailed procedures and information on system utilities available through the Installation and Upgrade options, see "System upgrade utilities" on page 97.

BootROM

BootROM on the existing NTDK34FA or NTDK34GA Succession System Controller (SSC) card must be version r09 or later on the Succession Call Server. The BootROM on the Media Gateway SSC must be version r08 or later.

The standard software installation automatically updates the BootROM. To manually update the BootROM, follow Procedure 21 "Upgrade boot ROM on the SSC card" on page 101.

Alternate Succession Call Server and survivability

To learn more about survivability, database synchronization, and protection commands, read the "Alternate Succession Call Server and survivability" chapters in *Succession 1000 System: Planning and Engineering* (553-3031-120) and *Succession 1000 System: Installation and Configuration* (553-3031-210).

Survivability configuration for Media Gateways maintains the same functionality as Release 2.x for defining the system settings, switchover time, and automatic switchback. Consult *Succession 1000 System: Installation and Configuration* (553-3031-210) for more information.

Customer database

Make sure the most recent system backup or archive is available before starting the upgrade procedure. A backup can be required depending on the upgrade procedure. For example, a backup is mandatory when installing from a pre-programmed software daughterboard.

The Software Installation Program and its Utilities menu allows the installation of a customer database from one of the following sources:

- Pre-configured database (page 75)
- Archived database (page 75)
- Remote restored database (page 76)
- Backed up Database (page 76)

Pre-configured database

The Software Delivery card can include several pre-configured databases and their associated feature sets, such as for the Branch Office installation. In addition, a minimal database is provided that contains basic system configuration information with no customer data.

To use a pre-configured database, define the database in an off-site lab environment and save (archive) it to a Software Delivery card until needed. Then load it to the system using the Software Delivery card.

Archived database

The Software Installation program enables users to archive various databases for later use at Succession 1000 sites. It allows multiple databases to be configured off-site for ready-to-use installation at customer sites.

To archive a database on the Software Delivery card, define it and data dump the SSC.

> ***Note:*** Off-site programming of databases is subject to all security keycode restrictions. The off-site system must either use the Security Device installed in the Succession 1000 at the customer site, or must have its own keycodes for the feature set used.

For archive procedures, see "System upgrade utilities" on page 97.

Remote restored database

If information is corrupt on the database, revert to the database on the backup flash drive. Alternatively, revert to a previous version of the database contained in the Customer Configuration Backup and Restore (CCBR) file, or revert or port over a database from the Software Delivery card.

A database can be remotely restored using the LD 143 (Customer Configuration Backup and Restore) remote restore command. The command sequence required in LD 143 is prompted as follows:

```
>LD 143
XRT
```

For more information on restoring databases, see "Restore a database" on page 105.

Backed up Database

The Backed up Database option enables administrators to install the copy on the backup flash drive. It is provided to:

- recover a database if the database on the primary flash drive becomes corrupted
- restore the database after a system software update

See "System upgrade utilities" on page 97.

IP Telephony node files

With a Succession 3.0 Software upgrade, there are new IP Telephony node database files on the Succession Call Server. These node files are backed up during a system datadump using the EDD command in LD 43. For more information about these files, refer to *IP Line: Description, Installation, and Operation* (553-3001-365).

Upgrade the Succession Call Server software

Task summary

The following list reviews the steps needed to upgrade from one software release to another for the Succession Call Server:

1. Install the Software Delivery card and start the Software Installation Program.
2. Verify the feature set and packages.
3. Select a database.
4. Verify or change the ISM parameters.
5. Validate the keycodes. The software then installs.
6. Reboot the system.

Things to know

The Software Installation Program must run from maintenance terminal port 0 on card 0. Make sure the terminal or workstation is connected to this port.

WARNING

Before and after an upgrade, perform a data dump on the Succession Call Server (Procedure 14 on page 78).

Perform a data dump on the Succession Call Server

Complete Procedure 14 on page 78 to back up the existing database. This is a routine operation.

Procedure 14
Performing a data dump on the Succession Call Server

1 Enter LD 43 in a CLI window.

2 Enter command **EDD**.

End of Procedure

Replace the software daughterboard

If a NTM400 pre-programmed software daughterboard is already installed, go to Procedure 16 on page 80.

To complete Procedure 15 on page 79, use the Keycode Data Sheet. Keycodes are required for each new installation and for existing system upgrades. The Keycode Data Sheet is supplied with the software and security device. There is a different keycode assigned to each site for a particular combination of items, such as software release, feature set, and ISM parameters. Contact a Nortel Networks representative if the Keycode Data Sheet is missing.

Make sure the customer database has been archived to a Software Delivery card (Procedure 22 "Archiving the database" on page 102) before proceeding.

Procedure 15
Replacing an existing software daughterboard with a pre-programmed software daughterboard

1 Attach an antistatic wrist strap.

CAUTION WITH ESDS DEVICES

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the SSC card, be careful not to damage any of its components.

2 Power down the system. To locate the switch, see Figure 1 on page 25.

3 Remove the Succession Call Server front cover. Refer to *Succession 1000 System: Installation and Configuration* (553-3031-210) for help with this step.

4 Remove the SSC card and set it on a clean surface.

WARNING
Damage to Equipment
Before removing the SSC card, remove the cables attached to the bulkhead. Gently push the cable in by squeezing the locking tab. Gently push the cable out. When the cables are reassembled, make sure that the number on the cable matches the number on the connector.

5 Remove the existing software daughterboard from the SSC card and replace it with the NTM400 pre-programmed software daughterboard.

6 Press firmly on the standoffs to ensure that the software daughterboard is secured to the SSC card.

7 Replace the SSC, close the cover on the Succession Call Server, and connect to maintenance terminal port 0.

8 Power up the system. The software program starts automatically.

9 Continue with the Installation menu selections as described in Procedure 16, step 4 on page 81.

End of Procedure

Upgrade the Succession Call Server software

If entering this procedure from Procedure 15, "Using a Software Daughterboard", begin the following procedure at step 4 on page 81 to bypass the commands and steps that the Software Delivery card procedure requires.

This procedure assumes that the system is running and a maintenance terminal is connected. The Link LEDs on the IP daughterboards should be lit and green.

IMPORTANT!

Both before and after an upgrade, perform a data dump on the Succession Call Server (Procedure 14 on page 78). Also perform a database archive (Procedure 22 on page 102) to back up the database.

Procedure 16
Upgrading the Succession Call Server software

1 Disable all D-channels (DCH) in LD 96.

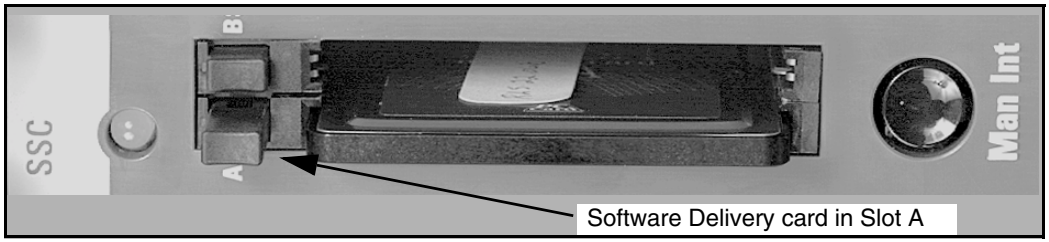
2 Disable any AML links in LD 48.

3 Install the Software Delivery card in the socket in the faceplate of the SSC card on the Succession Call Server. To install the Software Delivery card:

a. Insert the card in slot A in the Software Delivery card socket in the faceplate of the SSC card.

b. Carefully press on the Software Delivery card until it seats tightly. Refer to Figure 32 on page 81 for the correct position of the SSC card.

Figure 32
Software Delivery card slot location



4 Start the Software Installation Program.

a. Reboot the Succession Call Server.

b. Choose one of the following:

i. Press Control (Ctrl) and 'I' at the prompt to invoke the Installation program, or

ii. Enter the following command in LD 143:

```
>LD 143
UPGRADE
```

The system displays the Software Installation Main Menu.

```
Call Server Software Installation Main Menu:
1. New Install - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery
card
[q]uit, [p]revious, [m]ain menu,[h] help or [?],
<cr> - redisplay
```

5 Choose one of the following:

a. When upgrading with a Software Delivery card, select item 2, "System Upgrade". Proceed to the next step.

b. When upgrading with a pre-programmed software daughterboard, select item 1. Treat the upgrade as a new install.

The New Install - From Software Daughterboard menu displays this response:

```
Succession 1000 Software Rls 3.xx will be
installed.
```

Proceed to step 7 on page 82.

6 Make a selection in the Upgrade menu, which appears as follows:

```
Select type of upgrade to be performed:
1. New Software Upgrade
2. Feature/Parameter Upgrade
[q]uit, [p]revious, [m]ain menu,[h]elp or [?], <cr> -
redisplay
```

a. To upgrade the system software, select item 1.

b. To upgrade only the feature set and ISM parameters (see "Upgrade the feature set and ISM parameters" on page 89) select item 2.

7 Select the feature set to enable.

Note: The feature set selected must match the ones provided with key codes on the keycode data sheet. The Feature Set names shown below are examples only.

The system displays:

```
Select Feature Set You Wish to Enable:
1. S1000 N. America Business Services-L1 (ntm400cd)
2. S1000 N. America Enhanced Business Services-L2
(ntm400dd)
3. S1000 N. America Adv. Call Centre Services-L3A
(ntm400ed)
4. S1000 N. America Adv. Networking Services-L3B
(ntm400fd)
5. S1000 N. America Premium Network Services-L4
(ntm400gd))
6. S1000 CALA Business Services-L1 (ntm400hd)
7. S1000 CALA Enhanced Business Services-L2
(ntm400id))
8. S1000 CALA Adv. Call Centre Services-L3A (ntm400jd)
9. S1000 CALA Adv. Networking Services-L3B (ntm400kd))
10. S1000 CALA Premium Network Services-L4 (ntm400ld))
[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> -
redisplay

Enter selection:
```

Select the Feature Set to enable.

Note: The feature set selected must match that provided with the keycodes.

The system displays the Add Packages menu.

```
Do you wish to add packages? (y/n/[a]bort):
```

8 Indicate if there are packages to add.

a. Select **y** to add packages.

b. Select **n** to not add packages and proceed to the next step.

```
Summary of packages selected (example only):
0-2 4-5 7-14-23-29 32-64 67 70-77 79-81 83
86-93.....

Enter additional packages: <cr> to continue
```

Note 1: The additional packages must have matching keycodes.

Note 2: To add a Branch Office, packages 58, 329, 382, and 387 are required on the Succession Call Server upgrade. These packages are automatically selected.

9 Confirm the feature set and packages.The following is an example.

```
Your Feature Set Selection is:S1000 N. America Adv.
Call Centre-L3A

Additional Packages selected: 215-235

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95
100-104 107-111 113-116 118-120 122-125 127-129
131-133 135 137-141 167

...

...

215-235

Is this selection correct?
n <cr> (no)
y <cr> (yes)
a <cr> (abort, return to main menu)
```

If the response was **n**, return to step 7 on page 82.

If the response was **y**, continue.

10 Select Database to Install:

```
1. Pre-Configured database - S1000 N. America Adv. Call
Centre-L3A
2. Basic Configuration
3. Archived database
4. Quick Config for Demo only

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr>
redisplay
```

a. To install from a pre-programmed software daughterboard (beginning with Procedure 15 on page 79), select item 2, “Basic Configuration”. Install the system with a basic database, and then restore the backed up database at the end of the installation.

IMPORTANT

“Basic Configuration” must be selected at this point. If this is not done, the system starts an EDD after loading the new software, and overwrites the customer data stored on the CPU.

b. To install from a Software Delivery card (beginning at step 1 of this procedure), select item 3, “Archived database” to import an archived database.

11 Review and make changes to the ISM parameters, if required.

The Succession 1000 displays the current ISM parameters as follows (example only):

```
ISM Parameters will be set to:
TNS                  ( 2500)
ACDN                 (  300)
AST                  (    0)
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)
INTERNET TELEPHONES  (    0)
PHANTOM PORTS        ( 2500)
WIRELESS TELEPHONES  (    0)
WIRELESS VISITORS    (    0)
ITG ISDN TRUNKS      (    0)
TRADITIONAL TRUNKS   ( 2500)
TMDI D-CHANNELS      (   64)
SURVIVABILITY        (    1)
PCA                  (    0)
IP PEER H.323 TRUNKS(    0)

Do you wish to change any ISM parameter? (y/n/[a]bort):
```

a. Select **n** to accept ISM parameter(s).

b. Select **y** to change ISM parameter(s).

Note: If the feature set is not changed, the parameters displayed remain as the current ISM parameters. The ISM parameters selected must match that provided with the keycodes.

12 Verify the AUX ID.

The default AUX ID is the security ID provided with the system.

```
Security ID: xxxxxxxx
Current AUX ID: xxxxxxxx
Do you wish to change the AUX ID? (y/n/[a]bort):
```

Select the AUX ID option as provided with the keycodes.

13 Select the M3900 Language Set.

The system displays the Select M3900 Language Set menu.

```
Select M3900 Language Set:
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
[q]uit, [p]revious, [m]ain menu,[h] help or [?], <cr>
- redisplay
```

```
Enter Selection:
```

Enter the item number that applies to the system.

14 Review and confirm the upgrade summary displayed. To access this information at any time, use Procedure 25 "Using the Current Installation Summary utility" on page 107. The following is an example of an upgrade summary.

```
Software Upgrade Summary:

Security ID             : xxxxxxxx
Aux ID                  : xxxxxxxx
Cabinet Type            : Call Server/MAIN
Feature Set             : S1000 N. America Adv. Call
Centre Services-L3A (ntm400ed)
Additional Pkgs         : none
Database                : Basic Configuration

                              X21     Succession
S/W Release             :   202     300S
ISM Parameters
TNS                     :   5000    2500
ACDN                    :   300      300
AST                     :   1000       0
LTID                    :   0          0
RAN CON                 :   0          0
RAN RTE                 :   500      500
MUS CON                 :   0          0
BRAND                   :   0          2
ACD AGENTS              :   10        10
ANALOGUE TELEPHONES     :   0          0
ATTENDANT CONSOLES      :   16      2500
BRI DSL                 :   150      150
CLASS TELEPHONES        :   0          0
DATA PORTS              :   2500    2500
DIGITAL TELEPHONES      :   0          0
```

```
INTERNET TELEPHONES      :   0          0
PHANTOM PORTS            :   2500    2500
WIRELESS TELEPHONES      :   0          0
WIRELESS VISITORS        :   0          0
ITG ISDN TRUNKS          :   0          0
TRADITIONAL TRUNKS       :   2500    2500
TMDI D-CHANNELS          :   64        64
SURVIVABILITY            :   1          1
PCA                      :   0          0
IP PEER H.323 TRUNKS     :   0          0

M3900 Language Set       : 1. Global 10 languages

Is this correct? (y/n/[a]bort) : y
```

15 Enable or Disable Automatic Centralized Software Upgrade.

```
Enable Automatic Centralized Software Upgrade? (y/n/
[a]bort)
```

If choosing **y**, go to Procedure 27 "Enabling Centralized Software Upgrade" on page 115.

Note 1: This option enables Automatic Centralized Software Upgrade for upgrades from Release 2.x to 3.0.

Note 2: If intending to use the Centralized Software Upgrade, see “Verify and upgrade BootROM” on page 99.

16 Enter the keycodes when prompted.

a. Enter keycodes instead of x, y, z shown in the following example.

```
Enter new Keycodes:
Key 1:xxxxxxxx
Key 2:xxxxxxxx
Key 3:xxxxxxxx
```

b. Look for the keycode validation message.

After entering the last keycode, the system displays a message indicating if the keycodes are successful or not. See the following message examples.

Example successful screen message:

```
Keycode validation successful

***WARNING*** A system restart will be invoked as
part of the software installation process”.
```

Example unsuccessful screen message:

```
Keycode validation unsuccessful.
```

c. Choose one of the following:

i. If the **successful** message appears, go to step 17.

ii. If the **unsuccessful** message appears, repeat step 16.

After three unsuccessful keycode validation attempts, the following message appears:

```
Keycode validation unsuccessful.

Installation aborted...returning to main menu.

Contact your technical support group.
```

17 Complete the software upgrade.

Example screen display:

```
*** WARNING *** A system restart will be invoked
as part of the software upgrade process

Are you sure you wish to perform the upgrade? (y/n/
[a]bort)
```

Enter 'y' <CR>. The Software Installation Program finishes in approximately 15 minutes.

Note: If the only upgrade change was the feature set and ISM parameters, refer to "Upgrade the feature set and ISM parameters" on page 89 for the end of the software installation.

18 Observe the screen after the installation program has been completed.

Screen display:

```
Upgrade completed successfully.

Rebooting ...
```

The system reboots.

Example screen display:

```
TTY 00 SCH MTC BUG       17:50
OVL111 000 IDLE
```

If Automatic Centralized Software Upgrade was enabled, the Media Gateways now undergo the upgrade process.

19 If this procedure was for a new install from the pre-programmed software daughterboard, restore the customer's backup configuration files that were overwritten by Basic Configuration. See “Restore a database” on page 105.

End of Procedure

Upgrade the feature set and ISM parameters

The Software Installation Program allows the addition of individual packages from the feature set and the changing of ISM parameters without upgrading or altering the software version. Since additions and changes are keycode-controlled, packages and ISM parameters must match those corresponding to the site’s keycodes.

To perform the upgrade, initiate the upgrade Software Installation Menu from LD 143. Follow the steps in Procedure 16 "Upgrading the Succession Call Server software" on page 80. The pertinent steps for upgrading the feature set are outlined in the procedure.

At the end of the installation, the system prints out:

```
Upgrade was completed successfully.
```

If the only change is to the ISM parameter values, a screen message states that the system does not need a SYSLOAD, or reboot. The system has put into operation changes to the ISM values.

If the only upgrade is the feature set, the system must reboot (SYSLOAD). The message states:

```
Initiate a SYSLOAD to activate the upgrade.
```

The reboot does not need to occur immediately. The Succession Call Server stores the information until the reboot. Because a restart interrupts service on the system, Nortel Networks recommends performing a restart later when a service interruption is more convenient.

The software installation program then returns to LD 143 without affecting the system operation.

Upgrade the Media Gateway

Things to know

Media Gateways always receive a new software installation, even in the case of upgrades. This is because the master copy of the database is stored on the Succession Call Server and is upgraded during the Succession Call Server upgrade. The database is subsequently synchronized to the Media Gateways.

IMPORTANT!

Install or upgrade the Succession Call Server software prior to the Media Gateways. Ensure the Succession Call Server installation or upgrade is complete and the Succession Call Server is up and running prior to loading the Media Gateways. Media Gateways can be installed in any order.

To configure for survivability, see *Succession 1000 System: Planning and Engineering* (553-3031-120) and *Succession 1000 System: Installation and Configuration* (553-3031-210).

If using the Centralized Software Upgrade, see"Verify and upgrade BootROM" on page 99. Centralized Software Upgrade does not need to be set or triggered automatically by the Succession Call Server upgrade, as described in Procedure 16 on page 80. Use the commands outlined in "Centralized Software Upgrade" on page 111.

There are two ways to install or upgrade the Media Gateway software:

1. a Software Delivery card
2. a pre-programmed daughterboard

To install or upgrade using the pre-programmed daughterboard, use the procedure described in Procedure 15 on page 79.

Note: This procedure is performed from a maintenance terminal connected to port 0 on the Media Gateway.

Upgrade or reinstall Media Gateway software

This procedure has different menus and options from the Succession Call Server. For the Succession Call Server upgrade, see Procedure 16 on page 80. Upgrade the Media Gateways in one of the following ways:

- all at one time, which requires multiple Software Delivery cards
- in sequential order, which takes longer, but takes only one Media Gateway out of service at a time

Steps 1 and 10 of the following procedure are recommended to minimize service disruption on an active system.

Procedure 17
Upgrading or reinstalling Media Gateway software

1. Force all Media Gateway(s) configured for Survivability to operate in Survival mode.
   a. Log into the Succession Call Server and access LD 135.
   b. Type the following command at the prompt:

      ```
      SOTS n
      ```

      The Media Gateway(s) reboot and restart in Survival mode.
2. Ensure the Software Delivery card is inserted in Slot A on the SSC card of the Media Gateway.
3. Reboot the system and press CTRL-I.
4. The Media Gateway Installation Main Menu appears. Select item 1 “Media Gateway Installation - From Software Delivery card”.

   The system displays the Software Installation Main Menu.

   ```
   SOFTWARE INSTALLATION PROGRAM

   **********************************
   Verify
   Security ID: xxxxxxxx
   **********************************
   ```

```
Media Gateway Software Installation Main Menu:
1. Media Gateway Installation - From Software Delivery
Card
2. Utilities
3. Media Gateway from software daughterboard

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> -
redisplay

Enter Selection: 1
```

Note 1: If there is no input for two minutes, the installation program attempts automatic configuration using BOOTP. Press <cr> to disable the timer and stay in the menu.

5 Choose 'y' or 'n' at the prompt for IP configuration. The system displays:

```
Do you wish to do IP configuration? (y/n/[a]bort):
```

Enter one of the following commands:

a. Enter **y**. Refer to *Succession 1000 System: Installation and Configuration* (553-3031-210) for the steps required to configure the ELAN link.

b. Enter **n**. This maintains the current IP configuration. Go to step 7 on page 93.

6 Select item 1 "Global 10 languages" from the M3900 Language Set menu.

The system displays the M3900 Language Set menu.

```
Select M3900 Language Set:

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

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> -
redisplay

Enter Selection : 1
```

7 Complete the software installation. This is similar to the Succession Call Server installation (Procedure 16 "Upgrading the Succession Call Server software" on page 80).

When finished, the system displays:

```
Succession Software Rls 3.xx will be installed.

*** WARNING *** A system restart will be invoked
as part of the software installation process

Are you sure you wish to perform the installation? (y/
n/[a]bort):
```

Enter selection ‘y’. The Software Installation Program finishes in approximately 15 minutes.

8 Observe the screen after the installation program has been completed.

```
Installation completed successfully.

Rebooting ...
```

9 The system reboots.

Example screen display:

```
TTY 00 SCH MTC BUG       17:50
OVL111 000 IDLE
```

Note: The Media Gateways configured for Survival reboot in Survival mode.

10 Force all Media Gateway(s) configured for Survivability back into Normal Mode.

a. Log in to the Succession Call Server and access LD 135.

b. Type the following at the prompt:

```
SBFS n
```

The Media Gateway(s) reboot and restart in Normal mode.

11 Perform a data dump using LD 43 to synchronize the new customer database on the Succession Call Servers to the Media Gateways.

End of Procedure

Test the upgrade

Whether or not changes are made to the analog and trunk configurations in this upgrade, test the upgrade of the Succession Call Server and Media Gateway(s) at this time by making calls over both IP and circuit-switched components.

Appendix A: Obtain software

Downloading software from the Nortel Networks website

It is not necessary to acquire software media from Nortel Networks to begin a system upgrade. The software is available from the Nortel Networks Software Download website. Keycodes are required in order for the software installation to work.

Check the Nortel Networks Software Download web site for the latest software and firmware releases.

> ***Note:*** See the Ordering Rules and Price Book from a Nortel Networks supplier for details on items and packages.

Follow the steps in Procedure 18 to download software from the Nortel Networks Software Download website

Procedure 18
Downloading software from the Nortel Networks website

1. Connect to the following URL using any PC with Internet access: http://www.nortelnetworks.com
2. Select **Support | Software Downloads | Product Family | Succession**.
3. Under the **Images, Loads and Releases** section, there is an **All Software Types** drop-down list. Select, for example, **IP Line** from the list. The Software Downloads page refreshes and displays the IP Line products.

The following items applicable to Succession 3.0 Software are located on this page:

- Succession Call Server software
- Release Bulletin
- Succession Signaling Server Software CD-ROM image – this includes the Succession Signaling Server software as well as the Internet Telephone firmware and Voice Gateway Media Card loadware.
- XA Controller firmware for the Voice Gateway Media Cards

4 Click, for example, **IP Line 3.1 Software**.

5 If not already logged into a My Nortel Networks 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 Succession 1000 product bulletin for directions on how to register.

6 The **Software Downloads: Software Details Information** page appears. 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 B: System upgrade utilities

Contents

This section contains information on the following topics:

Introduction 97
Access the Utilities menu 97
Verify and upgrade BootROM 99
Upgrade the BootROM on the SSC card 101
Archive the database 102
Install an archived database. 104
Restore a database 105
Use the Current Installation Summary utility 107
Revert to a previous software release 109

Introduction

This chapter contains utilities that are useful during a system upgrade. To access these utilities, follow Procedure 19 "Accessing the Utilities menu" on page 98.

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.

Procedure 19
Accessing the Utilities menu

1 Start the Software Installation Program.

a. If on the Media Gateway, reboot the SSC and enter **Ctrl-I** during the boot sequence to put the Media Gateway into Survivable Mode.

Note: The BootROM version is displayed on the workstation screen during the bootup process.

b. On the Succession Call Server, 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 Media Gateways. For more information, read about the "Centralized Software Upgrade" on page 111.

The BootROM version must be verified to use certain features. This procedure is performed from a maintenance terminal connected to the Media Gateway maintenance terminal port 0 (the SSC card).

> ***Note:*** If the Succession Call Server or Media Gateway is rebooted, the BootROM version is displayed on the workstation screen during the bootup process. Go to step 4 on page 100.

Procedure 20
Verifying and upgrading boot ROM

1 From the Utilities menu (Procedure 19 on page 98), 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: The *_r* number should be the version mentioned in "BootROM" on page 74 (or a higher release number). 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 21 on page 101 when upgrading the software on Media Gateway(s) with the Centralized Software Upgrade feature (page 111).

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.

Procedure 21
Upgrade boot ROM on the SSC card

1 From the Utilities menu (Procedure 19), select the 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
```

2 Select Upgrade Flash BootROM (item 2).

```
Are you sure you wish to perform the Flash BootROM
Upgrade/Restore (y/n/[a]bort): Y
```

3 Select yes to perform the upgrade.

```
Upgrading Active Flash BootROM to NTDK34FA_r09

System Restart required to activate Flash BootROM
Upgrade.
```

4 Restart the system to activate the Flash BootROM upgrade.

End of Procedure

Archive the database

Procedure 22 describes how to use the archive feature to list, add, archive and remove customer databases. This procedure is a routine operation.

Procedure 22
Archiving the database

1. If necessary, install the Software Delivery card in slot A of the Software Delivery cardsocket in the faceplate of the SSC card.
2. When a customer database is added to the archive, first load it on the SSC card of this system.

   Note: For complete instructions for the installation of the Software Delivery card, refer to Procedure 16 on page 80.
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 103.

   b. Enter **2 <CR>** (Remove Customer database), and go to step 8 on page 103.

   c. Enter **3 <CR>** (Archive a Customer database), and go to step 9 on page 103.

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 on page 103.

b. To add a database to the archive, go to step 9 on page 103.

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 23 to install an archived database using a Software Delivery card.

Procedure 23
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 item 3 (Install Archived Database).

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 102.

End of Procedure

Restore a database

Procedure 24 is an advanced installation procedure or a rescue operation.

Procedure 24
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 106.

c. If selecting item 3, go to step 7 on page 106

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 107.

c. If not restoring the database, type **n** (for no), press <CR>, and return to step 3 on page 105.

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 107.

7 Restore the database from the Customer Configuration Backup and Restore (CCBR) file.

The screen displays the following message:

```
WARNING: You must have a Succession 1000 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 25 describes how to obtain an installation summary.

Procedure 25
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              : xxxxxxxx
Aux ID                   : xxxxxxxx
Cabinet Type             : Call Server/MAIN
Feature Set              : S1000 N. America Adv. Call
Centre Services-L3A (ntm400ed)
Additional Pkgs          : none
Database                 : Basic Configuration

                             X11     Succession
S/W Release              :   xxxx    300S
ISM Parameters
TNS                      :   100    2500
ACDN                     :   300     300
AST                      :   100       0
LTID                     :   100       0
RAN CON                  :   12     0
RAN RTE                  :   2500    500
MUS CON                  :   100       0
BRAND                    :   0         2
ACD AGENTS               :   300      10
ANALOGUE TELEPHONES      :   2500      0
ATTENDANT CONSOLES       :   2500   2500
BRI DSL                  :   100     150
CLASS TELEPHONES         :   2500      0
DATA PORTS               :   2500    2500
DIGITAL TELEPHONES       :   2500      0
INTERNET TELEPHONES      :   0       0
PHANTOM PORTS            :   2500    2500
WIRELESS TELEPHONES      :   2500      0
WIRELESS VISITORS        :   0         0
ITG ISDN TRUNKS          :   2500      0
TRADITIONAL TRUNKS       :   2500    2500
TMDI D-CHANNELS          :   0        64
SURVIVABILITY            :   0         1
PCA                      :   0         0
IP PEER H.323 TRUNKS     :   0         0

M3900 Language Set       : 1. Global 10 languages
```

End of Procedure

Revert to a previous software release

This section describes how to revert to the previous release of software, feature set, customer data, and ISM Parameters using the Undo Installation option.

A Succession 1000 can also be reverted to its previous database. It is necessary to install and use the same Software Delivery card used to upgrade the Succession 1000.

IMPORTANT!

A Software Delivery card cannot be used to upgrade a subsequent Succession 1000 system. When a system is upgraded, it saves (backs up) the existing Succession 1000 database on the Software Delivery card and changes the Security ID. The card contains only the backed-up database and Security ID of the last Succession 1000 used with it.

Procedure 26 describes how to revert to the previous release of software using the Software Delivery card.

Procedure 26
Reverting to a previous software release

Note: This procedure is a rescue operation.

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

Appendix C: Centralized Software Upgrade

Contents

This section contains information on the following topics:

Introduction 111
Automatic upgrade using the Centralized Software Upgrade feature . . 112
Centralized upgrade summary of steps 113
Causes of upgrade failure 114
Loss of service 114
Automatic feature operation 114
Manual upgrade operation 117

Introduction

WARNING
Ensure that there is no Software Delivery card in the Media Gateways during the Centralized Software upgrade.

The Centralized Software Upgrade feature allows an installer to centrally and automatically upgrade the Media Gateways connected to the Succession Call Server by a 100BaseT link. To manually upgrade the Media Gateway software, see “Upgrade the Media Gateway” on page 90.

Note: This chapter concerns only the Succession Call Server and Media Gateways. Upgrade the Succession Signaling Server (see "Upgrade software on the Succession Signaling Server" on page 29) and consult other chapters in this document about upgrading and configuring individual elements.

Automatic upgrade using the Centralized Software Upgrade feature

The BootROM upgrade is automatic in Succession 1000. It occurs when a new software load is introduced to the SSC card by Software Delivery card or a new software daughterboard.

After the SSC card is upgraded with new Succession Call Server software, use the Centralized Software Upgrade feature to distribute the new BootROM and software to all the connected Media Gateways, if the Media Gateways meet the following minimum requirements:

- The first general software release of Succession 1000 has been installed.
- The Media Gateways are in normal mode.

Note: The requirement for the minimum BootROM version only applies to the Succession Call Server, as the Centralized Software Upgrade feature upgrades the Media Gateway's BootROM version to match the Succession Call Server's BootROM version.

The initial upgrade installation program upgrades the BootROM on the Succession Call Server. BootROM versions only become an issue if the installer downgrades the BootROM to an earlier version in the following circumstances:

- after the installation is complete
- before the centralized software upgrade is started

The minimum BootROM version for Media Gateways is r08. Version r09 is required on the Succession Call Server for the Centralized Software Upgrade feature to work. Verify and manually upgrade this BootROM to enable the Centralized Software Upgrade. To upgrade the BootROM, see "BootROM" on page 74 and Procedure 21 "Upgrade boot ROM on the SSC card" on page 101.

After upgrading the BootROM, the feature can be activated in two ways:

1. Accept the automatic upgrade option using the Succession Call Server Software Upgrade program, as shown in step 15 on page 87.
2. Use the LD 143 command `ENL AUTOUPGMG` (see "Automatic feature operation" on page 114 for details).

Auto upgrade causes the Media Gateway to begin upgrading when the following conditions are met:

- the Media Gateway is connected (IP Link Up) to the Succession Call Server
- the Media Gateway is in normal mode
- a difference in software version is detected

Centralized upgrade summary of steps

Once the Media Gateway is installed with an SSC in slot 0, upgrade the software automatically by following these steps:

1. First, upgrade the Succession Call Server boot ROM and software using the existing Software Delivery card process — Procedure 16 on page 80.
2. If the Automatic Sequential or Automatic Simultaneous options for Centralized Software Upgrade was not selected during the Succession Call Server Upgrade, use CLI commands as outlined in "Automatic feature operation" on page 114.
3. The software is transferred to the Media Gateways over their 100BaseT Ethernet link. The Media Gateway upgrades automatically if it doesn't match the Succession Call Server software version.

   Note: No Software Delivery card is required in the Media Gateways 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 from the system or modification to the list of installed patches while the remote upgrade is in progress. This includes loadware patches.

The system cannot guarantee call processing when more than one Media Gateway is performing a software upgrade or boot ROM upgrade.

Loss of service

A temporary loss of service can be expected during the upgrade.

Automatic feature operation

Estimated time for simultaneous software upgrade:

Succession Call Server (0.5 hours)	+	4 Media Gateways (0.5 hours)	=	1.0 hours

Note: Upgrade times vary depending on the actual speed of the Succession Call Server to Media Gateway links.

Estimated time for sequential software upgrade:

Succession Call Server (0.5 hours)	+	4 Media Gateways (4 x 0.5 hours each = 2.0 hours)	=	2.5 hours

Refer to Procedure 16 "Upgrading the Succession Call Server software" on page 80. With this feature, the installation menu changes appear only on the Succession Call Server. The new sub-procedure happens after the installer has validated that the new installation summary is correct (step 14), but before the installer has input the keycodes for the installation (step 16).

Procedure 27
Enabling Centralized Software Upgrade

Note: This procedure takes place within the upgrade of a Succession Call Server. See Procedure 16 "Upgrading the Succession Call Server software" on page 80.

1 After step 14 of Procedure 16 "Upgrading the Succession Call Server software" on page 80, the following prompt appears:

```
Enable Automatic Centralized Software Upgrade? (y/n/
[a]bort):
```

a. If **n** is selected, automatic Centralized Software Upgrade is set to “disabled”. This procedure is complete.

Note: Automatic Centralized Software Upgrade can be enabled in LD 143 at a later time.

b. If **y** is selected, the following option is displayed:

```
Select the Automatic Centralized Software Upgrade
mode:

1. Sequential
2. Simultaneous

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr>
- redisplay

Enter Selection :
```

2 Make a selection.

a. If **1** is selected, the Centralized Software Upgrade option is enabled and software upgrades to Media Gateways occur in a sequential manner. This procedure is at an end.

b. If **2** is selected, the following warning is presented:

```
WARNING: This option may impact call processing. Do
you wish to proceed? (y/n/[a]bort):
```

3 Make a selection.

   a. If '**y** is selected, the Centralized Software Upgrade option is enabled and software upgrades to the Media Gateways occur in a simultaneous manner.

   b. If **n** is selected, the system returns to the Software Installation Main Menu.

   c. If abort is chosen, the system returns to the Technology Software Installation Main Menu.

   Note: Alternatively, manually upgrade the Media Gateway using a Software Delivery card. See "Upgrade the Media Gateway" on page 90.

4 After the Media Gateways have upgraded, perform a data dump using LD 43 on the Succession Call Server. This synchronizes the customer database to the Media Gateways.

End of Procedure

Software Upgrade Progress Indicators

The Software Upgrade Progress indicator is displayed on the Succession Call Server to track the Media Gateway's installation progress. This progress is also logged in the report log kept on the Succession Call Server and it is replicated to the Media Gateways. 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 upgrade operation

This feature manually initiates Succession Call Server and Media Gateway software upgrades.

LD 143 – Enable or disable Centralized Software Upgrade. (Part 1 of 2)

Command	Description
UPGMG ALL	Immediately initiates a manual upgrade of the version of software installed on the Succession Call Server to all connected Media Gateways that have a different version of software installed.
UPGMG SEQ	Sequential: Upgrade to the Media Gateways is performed sequentially. One Media Gateway upgrades at a time. No other Media Gateway upgrades can be initiated until the current Media Gateway has completed its installation.
UPGMG SIM	Simultaneous: Upgrade to all Media Gateways is performed simultaneously. All Media Gateways can be upgraded at the same time (WARNING: call processing is not supported on the Succession Call Server when this option is selected.)
UPGMG <1-4>	Immediately initiates a manual upgrade of the version of software installed on the Succession Call Server to the specified Media Gateway, regardless if the version of software on the Media Gateway matches the Succession Call Server's version. (Warning: if this option is initiated, call processing is not supported on the Succession Call Server to other Media Gateways, while the Succession Call Server is currently upgrading a specified Media Gateway.)
UPGMGBOOT <1-4>	Immediately initiates a manual upgrade of the current version of the BootROM that is operating on the Succession Call Server to the selected Media Gateway. (Warning: if this option is initiated, call processing is not supported on the Succession Call Server to other Media Gateways, while the Succession Call Server is currently upgrading a specified Media Gateway.)

LD 143 – Enable or disable Centralized Software Upgrade. (Part 2 of 2)

Command	Description
ENL AUTOUPGMG SEQ	Enables the automatic software upgrade option. Sequential: Upgrade to the Media Gateways is performed sequentially. One Media Gateway upgrades at a time. No other Media Gateway upgrades can be initiated until the current Media Gateway has completed its installation.
ENL AUTOUPGMG SIM	Enables the automatic software upgrade option. Simultaneous: Upgrade to all Media Gateways is performed simultaneously. All Media Gateways can be upgraded at the same time (WARNING: call processing is not supported on the Succession Call Server when this option is selected.)
DIS AUTOUPGMG	Disables the automatic software upgrade option.
PRT AUTOUPGMG	Displays the settings for the automatic upgrade option.
ABORT UPGMG	Aborts all the current and pending software upgrades and disables the automatic software upgrade option.

Appendix D: Product compatibility for Succession 3.0 Software

Table 3 on page 120 lists Nortel Networks product compatibility for Succession 3.0 Software.

Table 3
Succession 3.0 Software compatibility (Part 1 of 12)

Auxiliary Processor	**Compatibility (Release)**		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
As of 2003 08 29	**Attendant Console**		
PC Attendant Console	1.2.X (1.2.411 is latest)	1.2.X (1.2.411 is latest)	1.2.X (1.2.411 is latest)
M2250 Attendant Console	Supported	Supported	Supported
System Management			
Meridian Administration Tools (MAT)	Not supported	Not supported	Not supported
Optivity Telephony Manager (OTM)	OTM 2.1	OTM 2.1	OTM 2.1
Messaging			
CallPilot	1.07 (with Service Update 4), 2.0 Used on Platforms: 201i, 702t, 1001rp versions	1.07 (with Service Update 4), 2.0 Used on Platforms: 201i, 702t, 1001rp versions	1.07 (with Service Update 4), 2.0 Used on Platforms: 201i
CallPilot Mini	1.5	1.5	1.5

Table 3
Succession 3.0 Software compatibility (Part 2 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Meridian Mail	12.xx -13.xx	Not supported directly (can network back to MMail on an Meridian 1 through NMS)	Not supported
Meridian Mail Card Option	12.xx -13.xx	Not supported	Not supported
Meridian Mail reporter	2.xa	Not supported	Not supported
Companion			
Companion	3.xx -7.xx (7.xx required for Enhanced Capacity)	Not supported	Not supported
Voice over Internet Protocol			
Meridian/ Succession Companion DECT (DMC8 version)	470001xx – SW embedded on IPE card	470001xx – SW embedded on IPE card	470001xx – SW embedded on IPE card
VoIP – 802.11 Wireless IP Gateway	1.1x - Application supported on ITG-Pentium only	1.19 - Application supported on ITG-Pentium only	Not supported
Internet Telephone – i2002 (2 line display)	Minimum FW version – 1.39	Minimum FW version – 1.39	Minimum FW version – 1.39

Table 3
Succession 3.0 Software compatibility (Part 3 of 12)

Auxiliary Processor	**Compatibility (Release)**		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Internet Telephone – i2050 (Software Telephone)	Minimum SW version – Build 299	Minimum SW version – Build 299	Minimum SW version – Build 299
Internet Telephone – i2004 (Software Telephone)	Minimum FW version – 1.39	Minimum FW version – 1.39	Minimum FW version – 1.39
Remote Office Portfolio			
Remote Office 9150	1.3 or higher. 1.3.4 is M3900 Phase III Concurrent	1.3.1. or 1.3.4	Not Supported
Remote Office 9110/9115/ IP Adaptor	1.3.x or higher. 1.3.4 is M3900 Phase III Concurrent	1.3.4	Not Supported
Meridian Home Office MHO-II	1.18 is supported with Release 3.0, but not supported with M3900 Phase III	Not Supported	Not Supported
Mini Carrier Remote	Supported	Not Supported	Not Supported
Carrier Remote	Supported	Not Supported	Not Supported
Fiber I	Supported	Not Supported	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 4 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Fiber II	Supported	Not Supported	Not Supported
RPE (Remote Peripheral Equipment)	Not supported	Not supported	Not supported
Retired Call Center Applications			
Meridian MAX [any platform]	9.2, 9.3, 10.x	Not supported	Not supported
Network Administration Center [NAC]	2.5a	Not supported	Not supported
Meridian Customer Controlled Routing [MCCR] (Discontinued as of July 2000, SCCS offer the functionality of MCRR)	3B, 3C a	Not supported	Not supported
Meridian Link [Mlink]	5, 5Ca (Replaced by Meridian Link Services – MLS 4.0)	Not supported. Replaced by Meridian Link Services – MLS 4.0	Not supported. Replaced by Meridian Link Services – MLS 4.1

Table 3
Succession 3.0 Software compatibility (Part 5 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Meridian Link & MCCR Co-residency	6.0, 6.4	Not supported	Not supported
Symposium Call Center and CTI Applications			
Meridian Link	6.x	Not supported – replaced by MLS	Not Supported
Symposium Messenger	Not supported	Not supported	Not Supported
Symposium Call Manager	Not supported - Replaced by Symposium Agent	Not supported	Not Supported
Symposium Communicator	Not supported	Not supported	Not Supported
Symposium Multimedia Conference	Not supported	Not supported	Not Supported
Symposium Desktop TAPI Service Provider for MCA (Meridian Communicator Adapter)	1.x - 2.x	Not supported	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 6 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Symposium Fast Call / Fast View (Windows Only)	Not supported - replaced by Symposium Agent	Not supported	Not Supported
Meridian Link Services [MLS] (i.e., SCCS 4.x sold with 1 Agent) “	SCCS 4.2 is supported with Succession 3.0 in general. If using the Call Centre Transfer Connect (UUI) feature, the following are required:	SCCS 4.2 is supported with Succession 3.0 in general. If using the Call Centre Transfer Connect (UUI) feature, the following are required:	Not Supported
	• Meridian 1 with Core Succession 3.0; connected to any switch by ESS4 or ESS5 interface (NI-1 only); subscription and connection to AT&T Transfer Connect Services	• Meridian 1 with Core Succession 3.0; connected to any switch by ESS4 or ESS5 interface (NI-1 only); subscription and connection to AT&T Transfer Connect Services	Not Supported
	• SCCS Release 4.2 SU 09 or later (GA Q3 2003)	• SCCS Release 4.2 SU 09 or later (GA Q3 2003)	Not Supported
	• Symposium TAPI server 3.0 or 3rd party CTI application licensed to work with S MLS	• Symposium TAPI server 3.0 or 3rd party CTI application licensed to work with S MLS	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 7 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Symposium TAPI Service Provider for Meridian 1/ Succession 1000	2.3.1, 3.0	2.3.1, 3.0	Not Supported
Symposium Agent	2.3	2.3	Not Supported
Symposium Agent Greeting	2.0	2.0	Not Supported
Symposium Express Call Center [SECC]	4.2	4.2	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 8 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Symposium Call Center Server [SCCS]	SCCS 4.2 is supported with Succession 3.0 Software in general. If using the Call Centre Transfer Connect (UUI) feature, the following are required: • Meridian 1 with Core Succession 3.0; connected to any switch by ESS4 or ESS5 interface (NI-1 only); subscription and connection to AT&T Transfer Connect Services • SCCS rls 4.2 SU 09 or higher (GA Q3 2003) • Symposium TAPI server 3.0 or 3rd party CTI application licensed to work with S MLS	SCCS 4.2 is supported with Succession 3.0 Software in general. If using the Call Centre Transfer Connect (UUI) feature, the following are required: • - Meridian 1 with Core Succession 3.0; connected to any switch by ESS4 or ESS5 interface (NI-1 only); subscription and connection to AT&T Transfer Connect Services • - SCCS rls 4.2 SU 09 or higher (GA Q3 2003) • - Symposium TAPI server 3.0 or 3rd party CTI application licensed to work with S MLS	Not Supported Not Supported Not Supported Not Supported
Symposium Web Centre Portal [SWCP]	4.0	4.0	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 9 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Symposium Web Client	4.5	4.5	Not Supported
IVR Applications			
Symposium Integrated Interactive Voice Response	Not supported	Not supported	Not Supported
Symposium Open Interactive Voice Response	Not supported	Not supported	Not Supported
Periphonics Open IVR (VPS/is)	5.x	5.4.2	Not Supported
Periphonics Integrated Package for Meridian Link (IPML) – VPS/is based	2.0, 2.1a	2.0, 2.1a	Not Supported
Periphonics Multimedia Processing Server (MPS) 100, including IPML 2.0	1.0, 2.1	1.0, 2.1	Not Supported

Table 3
Succession 3.0 Software compatibility (Part 10 of 12)

Auxiliary Processor	**Compatibility (Release)**		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Periphonics Multimedia Processing Server (MPS) 500	2.1	Not supported	Not Supported
Business Communication Manager			
Business Communications Manager	2.5 + Feature pack 1 – Supports interoperability between Meridian 1, Succession 1000 through MCDN over PSTN trunks. 3.5 Minimum BCM release for IP interoperability with Succession 1000M (that is, first BCM release that supports Virtual Trunk and Gatekeeper).	2.5 + Feature pack 1 – Supports interoperability between Meridian 1, Succession 1000 through MCDN over PSTN trunks. 3.5 Minimum BCM release for IP interoperability with Succession 1000 (that is, first BCM release that supports Virtual Trunk and Gatekeeper).	Not Supported Not Supported
MIXX Portfolio			
Integrated Call Assistant (MICA)	1.5	1.6	Not Supported
Integrated Conference Bridge (MICB)	2.1, 3.0x	2.1, 3.0x	2.1, 3.0x

Table 3
Succession 3.0 Software compatibility (Part 11 of 12)

Auxiliary Processor	**Compatibility (Release)**		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Meridian Integrated Recorded Announcement (MIRAN)	2.0.16 and above	2.0.17 and above	2.0.17 and above
Meridian/ Succession Integrated Personal Call Director (MICPD)	1.0.3 and above	1.0.4 and above	Not Supported
Integrated Voice Services (MIVS)	0.17	1.17	Not Supported
MCS 5100 (formally Succession MX)			
MCS 5100	1.1	1.1	Not Supported
Note 1: Applicable systems include Meridian 1 Option 11C Cabinet; Meridian 1 Option 11C Chassis; Meridian 1 Options 51C, 61C, 81, 81C; Succession 1000M Half Group, Succession 1000M Single Group, and Succession 1000M Multi Group systems.			
Note 2: 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 *Product Compatibility* (553-3001-156).			
Note 3: a = No Core Software dependency			

Table 3
Succession 3.0 Software compatibility (Part 12 of 12)

Auxiliary Processor	Compatibility (Release)		
	Applicable system (see note)	**Succession 1000**	**Branch Office**
Note 4: Mixed Software Operation between Main Office and Branch Office: It is possible for the Main Office Call Server and the Branch Office to temporarily have different software releases, as long as the Main Office is running at the highest release (Release 3.0). Also, it is possible to temporarily have Branch Offices running different software releases (2.0 / 3.0) associated with a given Succession 3.0 Main Office Call Server. This is required to support customers who are currently running a network of Succession 1000 Release 2.0 Branch systems, and who want to add one Branch running Release 3.0 software. By allowing this mixed software operation, customers will not have to upgrade their entire network from Release 2.0 to Release 3.0 at the same time, in order to add a single additional Branch Office - the network upgrade can be scheduled over a longer period. This mixed software configuration between the Main and Branch can only remain on a temporary basis. Customers must upgrade their Branch Offices to Succession Release 3.0 Software within a month's timeframe. Indefinite operation with a mixed configuration is not supported.			
Note 5: Call Server and Succession Signaling Server software releases on both the Main Office and at the Branch Offices, should be congruent at all times.			
Note 6: In Normal mode, the feature set of Internet Telephones is the feature set on the Main Office. In Local mode, the Internet telephones use the feature set on the Branch. Analog or Digital users always use the feature set on the Branch.			

List of terms

DSP

Digital Signaling Processor. When used as a noun, DSP stands for , a special type of coprocessor designed for performing the mathematics involved in DSP. Most DSPs are programmable, which means that they can be used for manipulating different types of information, including sound, images, and video.

Digital Signal Processing refers to manipulating analog information, such as sound or photographs, that has been converted into a digital form. DSP also implies the use of a data compression technique.

ELAN

Embedded Local Area Network. This isolated section of the LAN connects the Succession Call Server, Succession Signaling Server, Media Gateway SSC, Voice Gateway Media Card, and OTM for system communication purposes.

Boot ROM

The Succession Call Server and Media Gateway BIOS.

Gatekeeper

The Gatekeeper manages a centralized numbering plan for the network. The H.323 Gatekeeper software identifies the IP addresses of H.323 Gateways, including Succession 1000 and third party systems, based on the network-wide numbering plan. This allows simplified management of the Succession 1000 network.

Gateway

In networking, a combination of hardware or software or both, that links two different types of networks. Gateways between e-mail systems, for example, allow users on different e-mail systems to exchange messages.

H.323

A standard approved by the International Telecommunication Union (ITU) that defines how audiovisual conferencing data is transmitted across networks. In theory, H.323 should enable users to participate in the same conference even though they are using different videoconferencing applications. Although most videoconferencing vendors have announced that their products conform to H.323, it's too early to say whether such adherence actually results in interoperability.

IP

Internet Protocol. Pronounced as two separate letters. IP specifies the format of packets, also called datagrams, and the addressing scheme. Most networks combine IP with a higher-level protocol called Transport Control Protocol (TCP), which establishes a virtual connection between a destination and a source.

IP by itself is something like the postal system. It allows you to address a package and drop it in the system, but there's no direct link between you and the recipient. TCP/IP, on the other hand, establishes a connection between two hosts so that they can send messages back and forth for a period of time.

ITG-P

The ITG-P card has a Pentium processor and 24 Digital Signaling Processor channels. It occupies two slots in a Media Gateway or Media Gateway Expansion. It provides the same functionality as the Voice Gateway Media Card when equipped with the IP Line 3.1 application. See “Voice Gateway Media Card” on page 137.

Layer 2 switching

Packets are forwarded based on the destination’s MAC address. The switch automatically determines which switch port must be used to send the packet, based on the destination’s MAC address. The MAC address location was determined from incoming packets from that MAC address received on that port.

Layer 3 switching

Packet traffic is grouped based on source and destination addresses. The first packet in a flow is routed by a software-based algorithm. Subsequent packets with the same source and destination addresses are switched based on the destination's MAC address (hardware mechanism). This is similar to multi-layer routing and routers with hardware assist.

PSTN

Public Switched Telephone Network. Refers to the international telephone system based on copper wires carrying analog voice data. This is in contrast to newer telephone networks base on digital technologies, such as ISDN and FDDI.

Telephone service carried by the PSTN is often called plain old telephone service (POTS).

QoS

Quality of Service. A networking term that specifies a guaranteed throughput level. One of the biggest advantages of ATM over competing technologies such as Frame Relay and Fast Ethernet, is that it supports QoS levels. This allows ATM providers to guarantee to their customers that end-to-end latency does not exceed a specified level.

There are several methods to provide QoS, as follows:

- High bandwidth
- Packet classification
- DiffServ
- IP fragmentation
- Traffic shaping
- Platform queuing mechanisms

routing

The process of selecting the correct path for packets transmitted between IP networks by using software-based algorithms. Each packet is processed by the algorithm to determine its destination.

Signaling Server

The Signaling Server is an industry-standard PC-based server that provides signaling interfaces to the IP network. In a Succession CSE 1000, the Signaling Server performs the following functions: acts as an H.323 gatekeeper, runs the H.323 Signaling Gateway (for virtual trunks), acts as a Terminal Proxy Server (TPS), and acts as a web server for Element Manager.

Succession Media Card

The Succession Media Card is an IP telephony hardware card introduced in Succession 1000 Release 2.0. It is available with 8 or 32 Digital Signal Processors (DSPs) for transcoding between circuit-switched and IP voice traffic streams. The hardware can run different software loads, which changes the function of the card. For instance, like the ITG-P card, with the IP Line 3.1 application installed, it acts as a Voice Gateway Media Card. With MIRAN software installed, it acts as a MIRAN line card.

TDM

Time Division Multiplexing. A type of multiplexing that combines data streams by assigning each stream a different time slot in a set. TDM repeatedly transmits a fixed sequence of time slots over a single transmission channel.

Within T-Carrier systems, such as T1 and T3, TDM combines Pulse Code Modulated (PCM) streams created for each conversation or data stream.

TLAN

Telephony Local Area Network. This isolated section of the network connects the Voice Gateway Media Cards, the Signaling Server, and the Internet Telephones for telephony communication purposes.

TPS

Terminal Proxy Server. This server controls the connection of Internet Telephones. It resides on the Succession Signaling Server with an emergency backup on the Voice Gateway Media Card.

Voice Gateway Media Card

The voice gateway application is used any time an IP and TDM device are connected together. The card is equipped with DSPs to perform media transcoding between IP voice packets and TDM-based devices. The Voice Gateway Media Cards also provide echo cancellation and compression and decompression of voice streams. The voice gateway software can run on an 8-port Succession Media Card, a 32-port Succession Media Card, or the 24-port Pentium-based ITG platform. Within the Branch Office, all of these cards register the voice channels to the Branch Office SSC when they are configured.

WAN

Wide Area Network. A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local-area networks (LANs).

Computers connected to a WAN are often connected through public networks, such as the telephone system. They can also be connected through leased lines or satellites. The largest WAN in existence is the Internet.

Succession 1000

Succession 1000 System

Upgrade Procedures

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Publication number: 553-3031-258
Document release: Standard 1.00
Date: October 2003
Produced in Canada

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