
Succession 1000

Succession 3.0 Software

Succession 1000 System

Installation and Configuration

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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: Succession CSE 1000 Installation and Configuration (553-3023-210).

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About this document

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

Subject

This document provides the information necessary to install and configure a Succession 1000 system.

Note on legacy products and releases

This NTP contains information about systems, components, and features that are compatible with Succession 3.0 Software. For more information on legacy products and releases, click the **Technical Documentation** link under **Support** on the Nortel Networks home page:

<http://www.nortelnetworks.com/>

Applicable systems

This document applies to the Succession 1000 system.

Intended audience

This document is intended for individuals responsible for installing and configuring the Succession 1000 system.

Only qualified personnel should install Succession 1000 systems. To use this document, you should have a basic knowledge of Succession 1000 equipment and operation. Contact Nortel Networks Training Centers for information on installation courses. You should also read and fully understand the Succession 1000 Nortel Networks Technical Publications (NTP) before you install a system.

Complete all system engineering and planning activities before using this guide to install a Succession 1000 system.

Conventions

In this document, the Succession 1000 system is referred to generically as “system.”

UK-specific terminology

This document contains North American terms that are not common in the UK. Table 1 lists these terms and their UK equivalents.

Table 1
North American to UK terms (Part 1 of 2)

North American term	UK term or meaning
analog (500/2500-type) telephone set	Analog rotary dial/MF4 telephone
Central Office (CO)	Local Public Exchange
cross-connect wire	jumper wire
Direct Inward Dialing (DID)	Direct Dialing In (DDI)
E1	2.0 Mbit, 32 channel digital carrier (Megastream)
grounding	earthing

Table 1
North American to UK terms (Part 2 of 2)

North American term	UK term or meaning
set	telephone
station	extension telephone
TIE trunks	private circuits
toll trunks	exchange lines
T1	1.5 Mbit, 24 channel digital carrier (North American equivalent to Megastream)
WATS, FEX (FX1 and FX2), CSA	Alternative public vendor network services (used only in North America)

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)*
- *ISDN Primary Rate Interface: Installation and Configuration (553-3001-201)*
- *Circuit Card: Description and Installation (553-3001-211)*
- *IP Peer Networking (553-3001-213)*
- *Signaling Server: Installation and Configuration (553-3001-212)*
- *IP Peer Networking (553-3001-213)*
- *ISDN Basic Rate Interface: Installation and Configuration (553-3001-218)*
- *Succession 1000 Element Manager: Installation and Configuration (553-3001-232)*
- *Features and Services (553-3001-306)*

- *Software Input/Output: Administration (553-3001-311)*
- *Succession 1000 Element Manager: System Administration (553-3001-332)*
- *IP Line: Description, Installation, and Operation (553-3001-365)*
- *Telephones and Consoles: Description (553-3001-367)*
- *Internet Terminals: Description (553-3001-368)*
- *Software Input/Output: Maintenance (553-3001-511)*
- *ISDN Primary Rate Interface: Maintenance (553-3001-517)*
- *ISDN Basic Rate Interface: Maintenance (553-3001-518)*
- *Succession 1000 System: Overview (553-3031-010)*
- *Succession 1000 System: Planning and Engineering (553-3031-120)*
- *Succession 1000 System: Upgrade Procedures (553-3031-258)*
- *Succession 1000 System: Maintenance (553-3031-500)*

Other documentation

The following documentation is referenced in this document:

- Nordex BIX documentation
- Reichle Masari documentation
- Krone documentation

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

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Safety instructions

Contents

This section contains information on the following topics:

Introduction	17
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Introduction

This chapter alerts you to the safety issues involved in Succession 1000 system installation.



WARNING

Failure to follow the safety instructions in this chapter could result in personal injury.



CAUTION

Damage to Equipment

Failure to follow the safety instructions in this chapter could result in damage to equipment.

Telephone equipment installation

The following are safety instructions for installing telephone equipment:

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is designed for wet locations.
- Never touch an uninsulated telephone wire or terminal unless the telephone line is disconnected at the network interface.
- Use caution when installing or modifying telephone lines.

Telephone equipment use

Always follow basic safety precautions when using telephone equipment to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Follow all warnings and instructions marked on the product.
- Before you clean a telephone, remove the plug from the wall outlet. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- Do not use the telephone near water (for example, near a tub or sink).
- Do not place the telephone on a piece of furniture that is unstable. The telephone can fall, causing serious damage to the telephone.
- Slots in the chassis and the telephone are for ventilation. These slots protect the equipment from overheating. Never block or cover these slots.
- Never block the openings on a telephone by placing the product on a surface like a bed, sofa, or rug. Never place the product near or over a radiator or heat register. Do not place the product in a built-in installation, unless there is correct ventilation.
- Only operate the product from the type of power source indicated on the marking label. If you are not sure of the type of power supply, check with your distributor.

- Some equipment has a three-wire grounding plug. This type of plug has a third grounding pin. As a safety feature, the plug only fits into an isolated ground outlet. If you cannot insert the plug completely into the outlet, contact your electrician to replace the outlet.
- Some equipment has a polarized line plug. This type of plug has one blade wider than the other. As a safety feature, this plug fits into the power outlet one way. If you cannot insert the plug completely into the outlet, try reversing the plug. If the plug continues to not fit, contact your electrician to replace the outlet.
- Do not place objects on the power cord. Do not locate the product where persons can walk on the plug.
- Do not overload wall outlets and extension cords as fire or electrical shock can result.
- Never push objects of any kind into the telephone through the slots. The objects can come in contact with dangerous voltage points. Also, parts can short out, causing the risk of fire or electrical shock.
- Never spill liquid of any kind on the product.
- To reduce the risk of electrical shock, do not disassemble a telephone product.
- Remove the telephone plug from the wall outlet and refer servicing to qualified personnel under the following conditions:
 - If the power supply cord or plug is damaged or worn.
 - If liquid has spilled into the telephone.
 - If the telephone has been exposed to rain or water.
 - If the telephone has been dropped or damaged.
 - If the product shows a distinct change in performance.
 - If the telephone does not function correctly under normal operating conditions.
- Avoid using a telephone (except a type without a cord) during an electrical storm. There is a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the area of the leak.

Installation procedure summary

Contents

This section contains information on the following topics:

Introduction	21
Summary of installation procedures	24

Introduction

This chapter provides a high-level summary of installation procedures for the Succession 1000 system. Where applicable, the summary contains references to chapters that describe the procedures in more detail.

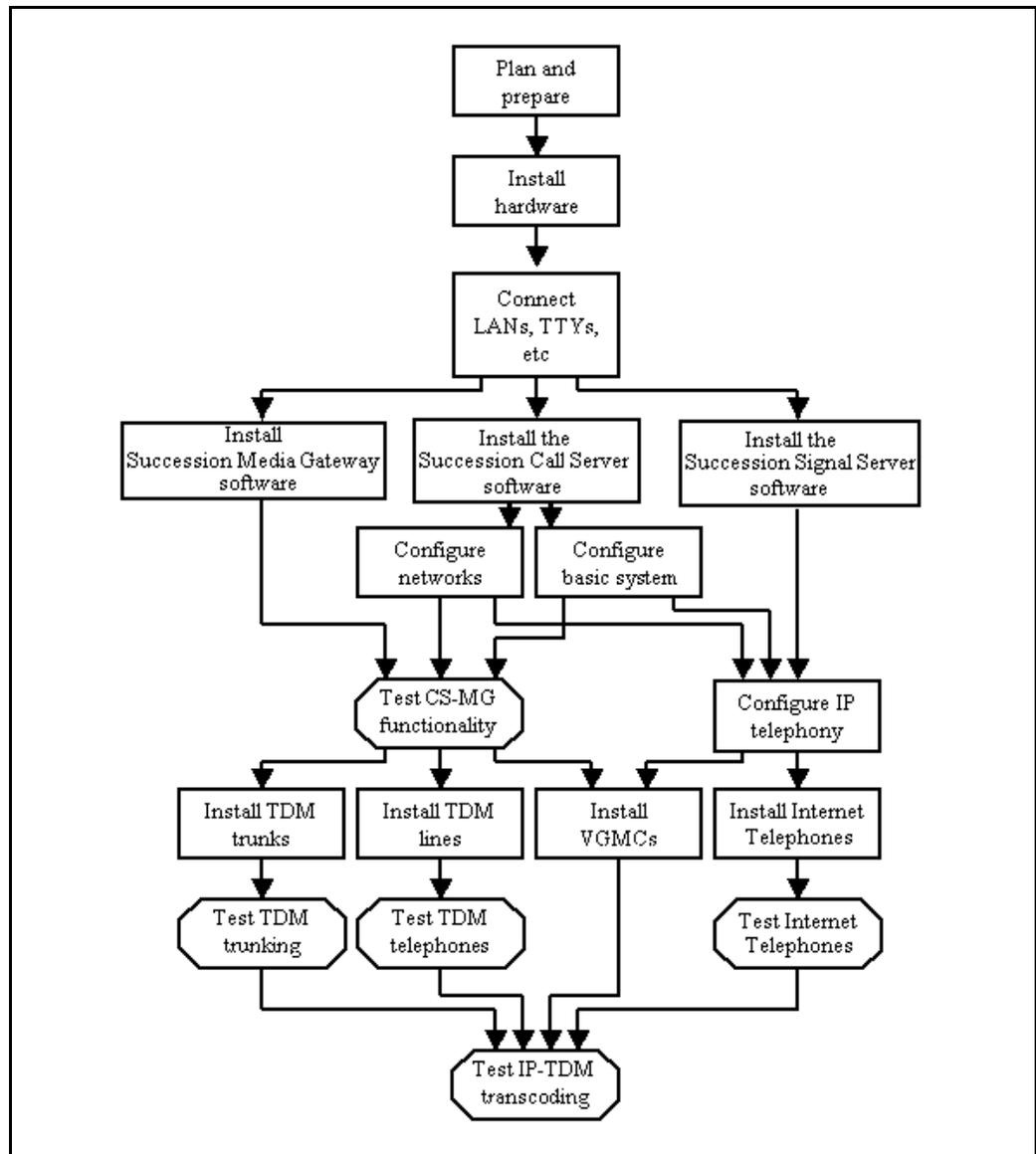
Figure 1 on [page 23](#) shows the general steps and dependencies of a new system's installation and configuration procedures. For optimum efficiency, you can choose to perform some steps in parallel or in a different order than laid out in this guide.

The flow chart identifies several "testing" steps:

- Test Succession Call Server to Succession Media Gateway functionality: the Succession Call Server and Succession Media Gateways have been installed and configured, and function together to provide call processing
- Test TDM trunking: the analog or digital trunks have been installed and configured, and are available for use
- Test TDM telephones: the analog (500/2500-type) or digital telephones have been installed and configured, and are available for use
- Test Internet Telephones: the Internet Telephones have been installed and configured, and are available for use
- Test IP-TDM transcoding: the Voice Gateway Media Cards (VGMCs) have been installed and configured, and are available to provide transcoding between analog or digital telephony and IP telephony

IP Peer H.323 Trunking (Virtual Trunking/IP Peer telephony) can be tested once IP Peer Networking has been implemented. The configuration of this feature is outside the scope of this guide. For details, see *IP Peer Networking* (553-3001-213).

Figure 1
Succession 1000 installation/configuration flow chart



Summary of installation procedures

The following list summarizes the Succession 1000 installation procedures. Refer to the chapters and procedures indicated at the beginning of each step for important and detailed information related to installation.

- 1 “Safety instructions” on [page 17](#) alerts you to the safety issues involved when installing a Succession 1000 system.
- 2 “Installation preparation” on [page 27](#) contains planning, engineering, and tool checklists. This chapter outlines the planning and engineering that must be completed before you attempt to install a Succession 1000 system.
- 3 “System components” on [page 33](#) identifies the equipment components, chassis, cables, connector locations, and miscellaneous items, required for installing Succession 1000 system.
- 4 “Chassis rack-mount installation” on [page 61](#) contains the procedures for mounting the various chassis/components into the customer supplied 19-inch chassis rack.
- 5 “System ground installation” on [page 79](#) outlines the procedures and requirements for the system ground. Where applicable, a qualified electrician is required to install some or all grounds.
- 6 “Succession System Controller cards” on [page 87](#) contains procedures to equip the Succession Call Server and Succession Media Gateway chassis Succession System Controller (SSC) cards with daughterboards, and security devices.
- 7 “System connections” on [page 101](#) contains procedures to connect the Succession Call Server to Succession Media Gateway link connection, ELAN connections, and TLAN connections.
- 8 “System terminal setup and connections” on [page 129](#) contains modem setup requirements and communication devices connections to the Succession 1000 system.
- 9 “Succession Call Server software installation” on [page 115](#) describes the Software Installation Program and how to install system software on the Succession Call Server SSC card.

- 10** “Succession Call Server and Succession Media Gateway network configuration” on [page 143](#) describes how to use the Command Line Interface (CLI) LD 117 to create host entries with the IP address on the ELAN subnet, and Succession Call Server to Succession Media Gateway links.
- 11** “Installing Succession Media Gateway SSC software” on [page 159](#) describes the software installation on the Succession Media Gateway SSC card.
- 12** “Succession Call Server and Succession Media Gateway network verification” on [page 165](#) describes how to check Succession Call Server to Succession Media Gateway links, and ELAN interfaces.
- 13** “Basic system telephony configuration” on [page 173](#) describes the order required to configure the system with basic telephony features.
- 14** “Succession Signaling Server software installation” on [page 181](#) describes the Succession Signaling Server software tool and how to install Succession Signaling Server software in the Succession 1000 system.
- 15** “IP Telephony node configuration” on [page 183](#) describes how to configure Element Manager passwords, configure pseudo-terminals, and import the pre-configured node files from the leader Succession Signaling Server.
- 16** “Internet Telephone installation and configuration” on [page 209](#) describes how to install and configure the i2002 and i2004 Internet Telephones, and the i2050 Software Phone.
- 17** “Voice Gateway Media Card configuration and installation” on [page 243](#) describes installation and configuration procedures for Voice Gateway Media Cards in the Succession Media Gateways.
- 18** “System MDF layout and MDF connection” on [page 281](#) describes how to install and connect a Succession 1000 system using the BIX, Reichle Masari (Germany), or Krone Test Jack Frame (UK) cross-connect terminals.

- 19 “Analog (500/2500-type)/digital telephone installation and cross-connection” on [page 297](#) contains instructions for connecting telephone line cards located in the Succession Media Gateway and Succession Media Gateway Expansion to the MDF cross-connect terminal.
- 20 “Trunk card installation and cross-connection” on [page 319](#) contains instructions for connecting telephone line cards located in the Succession Media Gateway and Succession Media Gateway Expansion to the MDF cross-connect terminal.
- 21 “Power Failure Transfer Unit installation and cross-connection” on [page 353](#) describes how to install a QUA6 Power Failure Transfer Unit (PFTU).
- 22 “External alarm from PFTU installation and cross-connection” on [page 367](#) describes the procedures for connecting an external alarm to the Succession 1000 system.
- 23 “Alternate Succession Call Server and survivability configuration” on [page 373](#) describes how to configure survivability on a new or existing Succession 1000 system.
- 24 “IP Peer Networking and Gatekeeper management” on [page 391](#) provides an outline for configuring the IP Peer Networking and managing the Gatekeeper database.

Installation preparation

Contents

This section contains information on the following topics:

Introduction	27
Planning and engineering checklist	27
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Site and inventory inspection	31

Introduction

This chapter contains planning, engineering, and tool checklists. Before beginning the installation, make sure you have all the tools necessary to install the Succession 1000 system.

Planning and engineering checklist

Make sure that all the tasks outlined in *Succession 1000 System: Planning and Engineering* (553-3031-120) are completed by your Planning and Engineering group.

You must have a work sheet, plan, or instructions from your Planning and Engineering group with details for the following topics.

System and site requirements

- environmental concerns
- equipment layout plan and system location
- commercial power outlet location
- auxiliary power (UPS) available, if required
- ground point location
- rack mounting supplied by customer
- cross-connect terminals/equipment available
- cross-connect layout details
- trunks available
- modem, maintenance terminals (TTY), if required, capable of 19200 bit/s and VT100 emulation
- PC maintenance workstation with the Internet Explorer 6.0.2600 (or later) web browser for Element Manager.
- layout for Succession Media Gateway chassis' card slot locations for Voice Gateway Media Cards (VGMC), trunk cards, line cards, and application cards

Data network infrastructure requirements

- subnet mask and gateway IP address for the ELAN subnet
- one IP address for the Succession Call Server's ELAN connection
- one IP address for each Succession Media Gateway SSC card's ELAN connection
- two IP addresses for each Succession Call Server to Succession Media Gateway link connection to a Layer 2 switch, or can use the pre-configured default IP addresses
- one IP address for the Succession Signaling Server's ELAN connection
- one IP address for the Succession Signaling Server's VGMC ELAN connection
- one IP address for the Succession Signaling Server's TLAN connection
- one IP address for each VGMC card TLAN connection
- one IP address for the IP Telephony node TLAN connection
- subnet mask and gateway IP address for the TLAN subnet
- one IP address for each Internet Telephone customer network connection. (Obtained from the DHCP)
- WAN bandwidth adjusted for suitable VoIP
- QoS adjusted for suitable VoIP

Software requirements

- Succession Call Server software on a pre-programmed Software Daughterboard or Software Delivery Card (PC Card)
- Feature set sheet with ISMs and keycodes
- Succession Signaling Server software on a CD-ROM
- VGMC loadware pre-installed CompactFlash card on the VGMC or a separate CompactFlash card, customer installed
- IP terminal firmware pre-installed for the i2002 and i2004 Internet Telephones. The i2050 Software Phone software is a Windows™ application.

Configuration data

- customer-supplied data sheets for Configuration Record, Customer Data Block, Route Data Block, Trunk Data Block, Digital Telephone, ESN, features and applications

Items missing from the Planning and Engineering checklist can result in increased installation time, a degradation in system operation, or possible system failure.

Tools checklist

To install the system correctly, make sure that the following tools are available before you assemble the components:

- different types of screwdrivers
- a tape measure
- a level
- pliers such as side cutters and long-nose pliers
- an ECOS 1023 POW-R-MATE or similar type of test meter
- appropriate cable terminating tools
- a drill for making lead holes for screws

Site and inventory inspection

- Confirm that the site is prepared and the external equipment is installed correctly.
- Confirm that all items on the packing slip have been received.
- Inspect all equipment for physical damage. Report any damage to your supplier.

System components

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Rack mount installation kit (NTTK09AA)	55
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Introduction

This chapter identifies the hardware and software components required for installing the Succession 1000 system. The Succession 1000 system contains the following components:

- Succession Call Server (NTDU06) (p. 34)
- Succession Signaling Server (NTDU27) (p. 37)
- Voice Gateway Media Card (p. 40)
- Succession Media Gateway (NTDU14) (p. 42)
- Succession Media Gateway Expansion (NTDU15) (optional) (p. 47)
- Internet Telephones (p. 50)
- Ethernet switch (customer-supplied) (p. 52)
- Power over LAN unit (customer-supplied, optional) (p. 52)
- 19-inch rack (customer-supplied) (p. 53)

Succession Call Server (NTDU06)

The Succession Call Server provides call processing and telephony features for the IP network.

Figure 2
Succession Call Server



Power

There is a power status indicator (Nortel Networks logo) on the front cover of the Succession Call Server. When the Nortel Networks logo is illuminated, the power is on. The power cord connector is located on the upper left-hand corner on the rear of the Succession Call Server. The Power On/Off switch is beside this connector. The power supplies are factory installed and not customer replaceable. The Succession 1000 system does not support dc input.

Cooling

The Succession Call Server has forced air cooling. The fan runs whenever the Server is on. The air flow is side-to-side.

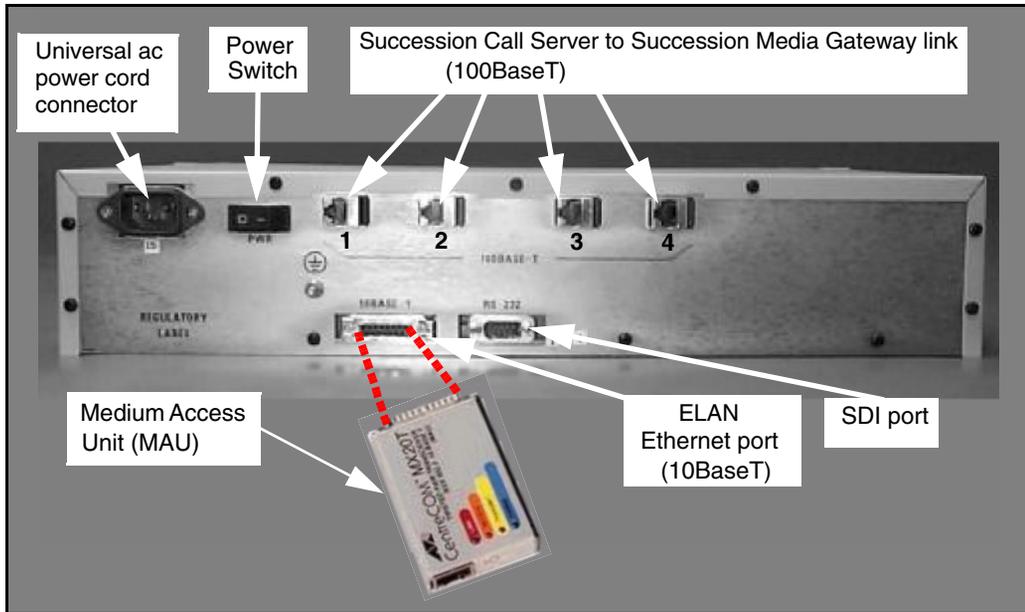
Card slots

The NTDU06 Succession Call Server has one card slot. The NTDK20FA or later Succession System Controller (SSC) card must be in this slot.

Connectors

Figure 3 on [page 36](#) shows the location of connectors on the back of the Succession Call Server.

Figure 3
Cable connectors on the back of the Succession Call Server



The four ports (1, 2, 3, 4) connect the Succession Call Server to the Succession Media Gateway. You can connect a Succession Call Server to Succession Media Gateway link point-to-point with a cross-over cable or connect the link through a data network switch.

The ELAN (10BaseT) port uses an industry-standard Medium Access Unit (MAU), which is included with the cable kit. The ELAN cable is inserted into the MAU. The ELAN port is used as a connection point to interface with management software applications, for signaling the Voice Gateway Media Cards (VGMC), and other applications, such as CallPilot.

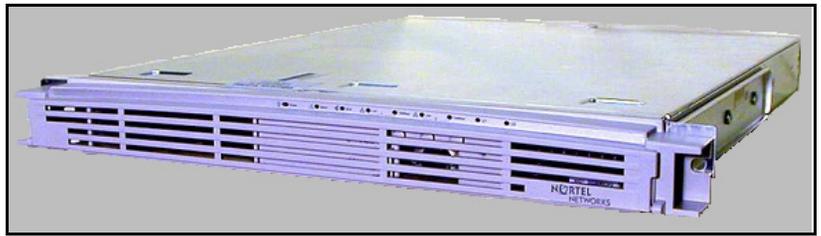
The SDI connector on the rear panel of the Succession Call Server interfaces to three pre-programmed SDI ports on the NTDK20 SSC which provides TTY ports 0, 1, and 2. You can use all three SDI ports as either modem or maintenance ports for TTY terminals. A three-port SDI cable is included in the cable kit.

Succession Signaling Server (NTDU27)

The Succession Signaling Server provides signaling interfaces to the IP network using software components that run on a real-time operating system. You can install Signaling Servers in a load-sharing redundant configuration for higher scalability and reliability. The Succession Signaling Server is equipped with several software components:

- Internet Telephone Terminal Proxy Server (TPS)
- H.323 Signaling Gateway (virtual trunk)
- H.323 Gatekeeper
- Element Manager web server

Figure 4
Succession Signaling Server



For detailed information about the Succession Signaling Server, refer to *Signaling Server: Installation and Configuration* (553-3001-212).

Power

The power cord connector is located on the left-hand corner on the rear of the Succession Signaling Server. When the green power LED, on the left-hand side is illuminated, the power is on. The Power On/Off switch is on the front faceplate. The power supplies are factory installed and not customer replaceable.

Cooling

The Succession Signaling Server has forced air cooling. The fan runs whenever the Server is on. The air flow is front-to-back.

Card slots

The Succession Signaling Server has no available card slots.

Connectors (front)

Figure 5 shows the DB-9 serial port, the CD-ROM and floppy drives on the front of the Succession Signaling Server. The front DB-9 serial port can support a login session for Command Line Interface (CLI) management.

Figure 5
Connectors on the front of the Succession Signaling Server

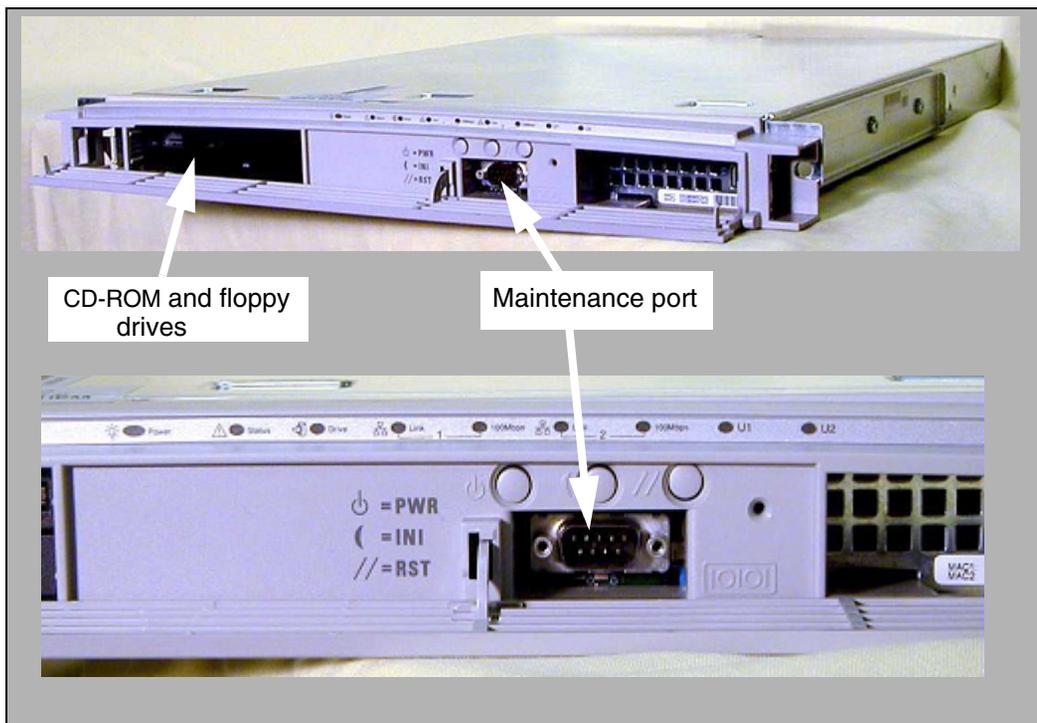
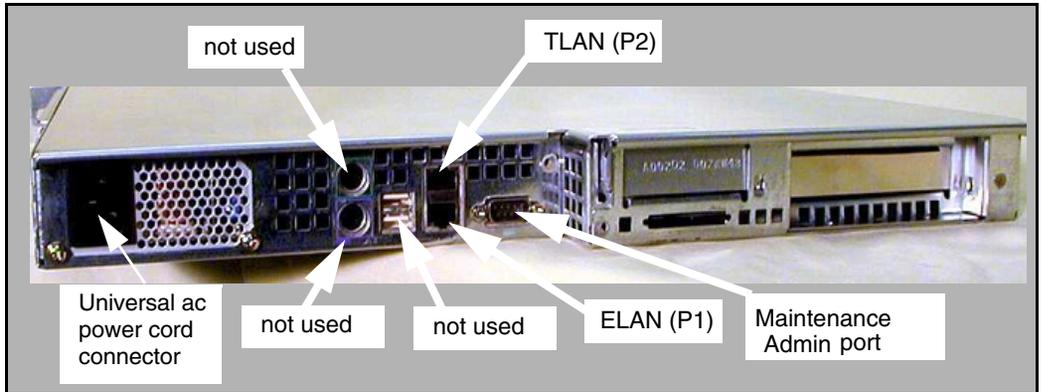


Figure 6 on [page 39](#) shows the cable connectors on the back of the NTDU27 Succession Signaling Server.

Figure 6
Connectors on the back of the Succession Signaling Server



Connectors (rear)

The ac power cord connector is at the back of the Succession Signaling Server on the left side.

The TLAN port (P2) connects the Succession Signaling Server to a TLAN port on a Layer 2 Switch.

The ELAN port (P1) connects the Succession Signaling Server to an ELAN port on a Layer 2 Switch.

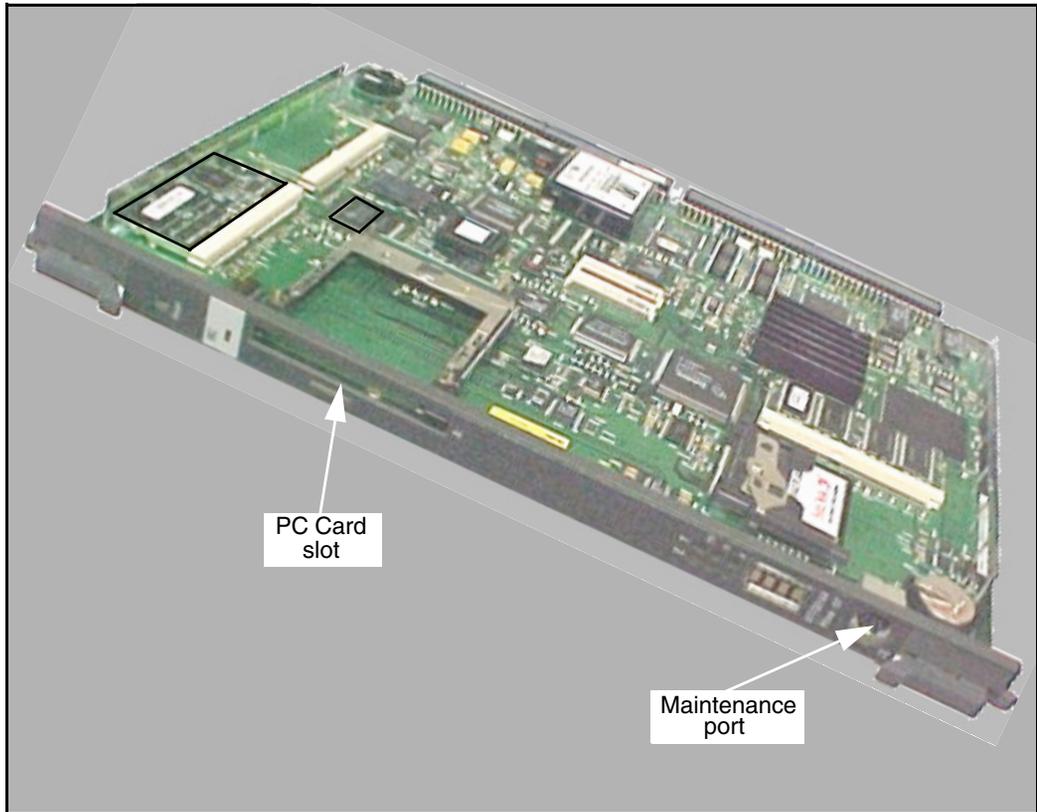
The maintenance port connects the Succession Signaling Server to a maintenance and administration terminals.

There are three ports not used for any Succession 1000 function. Do not plug any device into these ports.

Voice Gateway Media Card

The Voice Gateway Media Card (VGMC) connects an IP and circuit-switched device using Digital Signal Processors (DSPs) for either line or trunk applications. The DSPs, enabled by a Voice Gateway application, performs media transcoding between IP voice packets and circuit-switched devices.

Figure 7
Voice Gateway Media Card



The VGMC is available as an 8- or 32-port card. The VGMC also provides echo cancellation and compression/decompression of voice streams.

Power

The VGMC is powered through Succession Media Gateway chassis or Succession Media Gateway Expansion chassis backplanes.

Cooling

Cooling is provided by the Succession Media Gateway chassis or Succession Media Gateway Expansion chassis.

Card slots

The VGMC is installed in the Succession Media Gateway or Succession Media Gateway Expansion card slots.

Connectors (front)

The PC Card slot can be used to deliver software or for additional storage.

The maintenance port provides access to the Voice Gateway Media Card for OA&M purposes.

Connectors (rear)

The Shielded 50-pin to Serial/ELAN/TLAN Adapter provides connections to the VGMC through the connector labelled Card 1, Card 2, Card 3, or Card 4 that corresponds to the VGMC location. See Figure 47 on [page 109](#), Figure 48 on [page 110](#), and Figure 49 on [page 111](#).

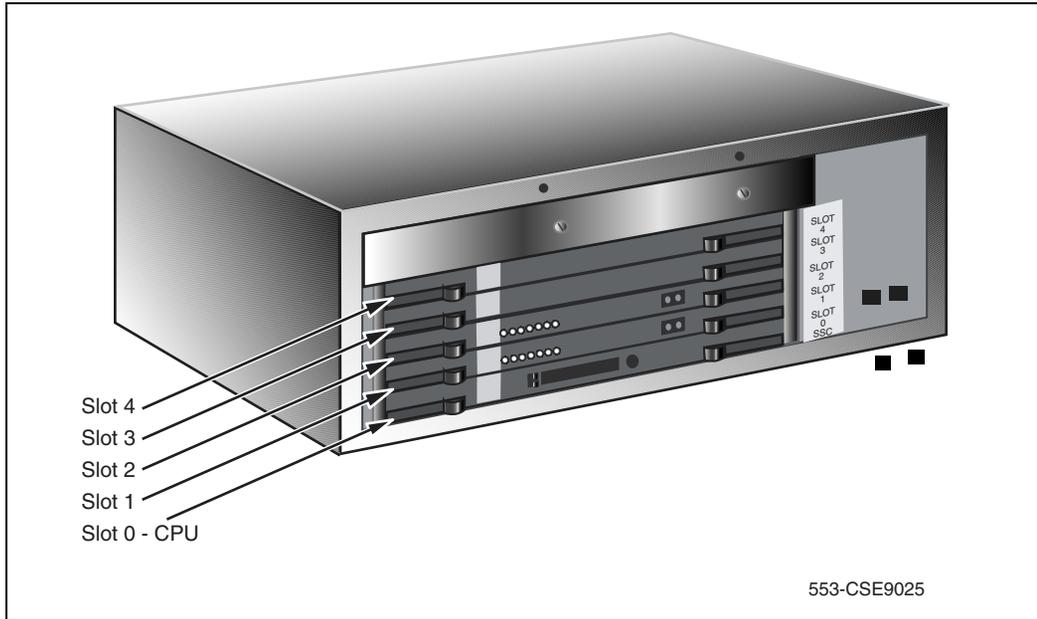
**CAUTION**

Do not connect maintenance terminals or modems to the faceplate and I/O panel DB-9 male serial maintenance port at the same time.

Succession Media Gateway (NTDU14)

Figure 8 shows the Succession Media Gateway chassis.

Figure 8
Succession Media Gateway chassis



Power

There is a power status indicator (Nortel Networks logo) on the front cover of the Succession Media Gateway. When the Nortel Networks logo is illuminated, the power is on. The power cord connector is located on the upper left-hand corner of the back of the Succession Media Gateway. The Power On/Off switch is located behind the front cover, see Figure 11 on [page 46](#).

Cooling

The Succession Media Gateway has forced air cooling. The fans inside it are controlled by temperature levels. It runs at a reduced speed at room temperature. The air flow is side-to-side.



CAUTION

Damage to Equipment

Do not block equipment ventilation openings.

Card slots

The NTDU14 Succession Media Gateway shown in Figure 8 on [page 42](#) has four usable universal card slots, 1 to 4.

Slot 0 is dedicated to the NTDK20FA or later SSC card.

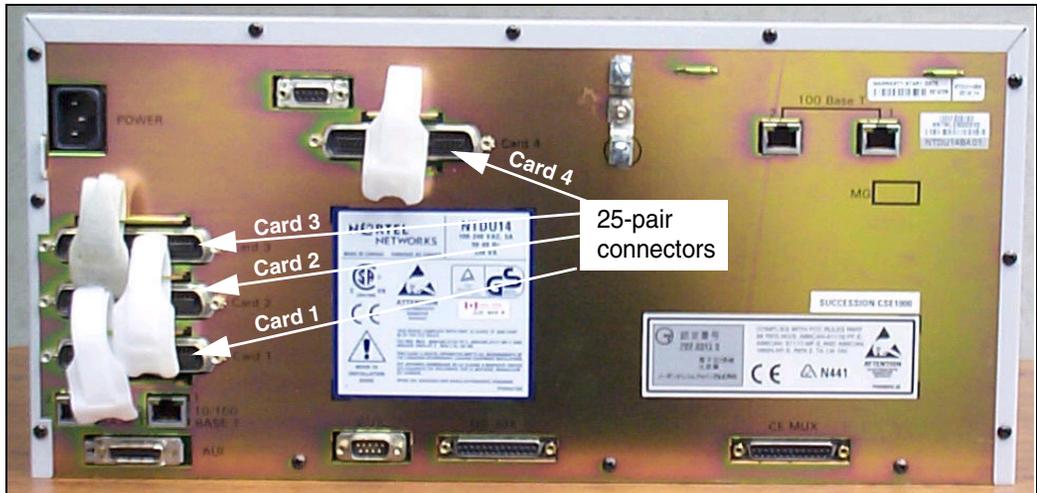
The following cards are supported in slots 1-4 for flexible configurations of:

- Trunk/Analog and Digital Line cards
 - Digital Trunk cards, maximum of four cards in each Succession Media Gateway
- Note:* Each Succession Media Gateway with a digital trunk must have one clock controller.
- Analog Trunk Cards, with a maximum of four installed in each Succession Media Gateway
- Analog Line Cards, with a maximum of four installed in each Succession Media Gateway
- Digital Line cards, with a maximum of four cards in each Succession Media Gateway
- Voice Gateway Media Cards, with a maximum of four installed in each Succession Media Gateway
- Application Cards, can be installed in each Succession Media Gateway

Connectors

The 25-pair cable connectors on the back of the Succession Media Gateway (see Figure 9 and Figure 10 on [page 45](#)) and the Succession Media Gateway Expansion provide access to the cross-connect terminal (Main Distribution Frame) through 25-pair cables.

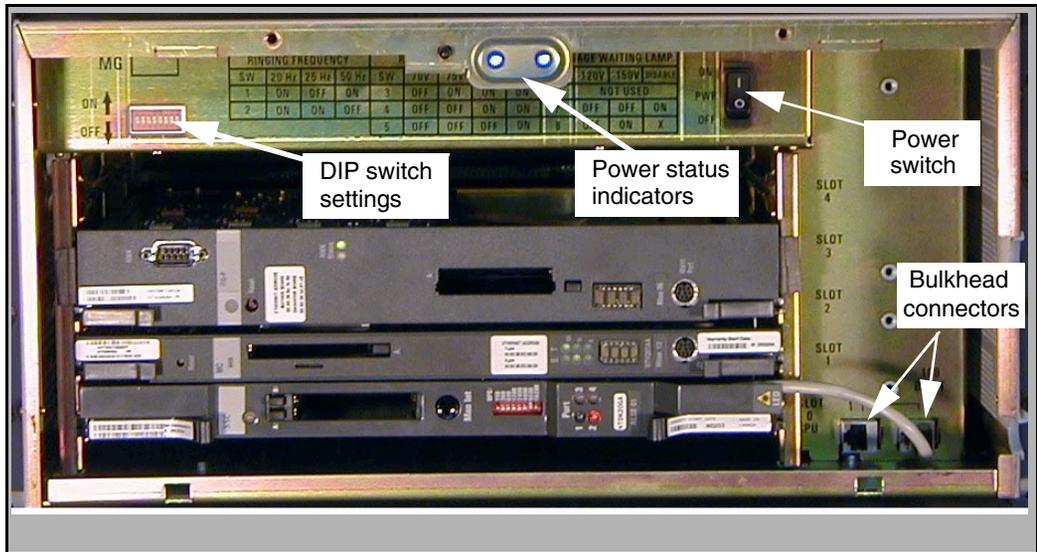
Figure 9
25-pair Cable Connectors on the back of the Succession Media Gateway



The SDI connector in the Succession Media Gateway provides interfaces for three SDI ports using a three-port SDI cable.

The DS-30X and CE-MUX cables connects the Succession Media Gateway to the Succession Media Gateway Expansion.

Figure 11
Front of the Succession Media Gateway and Branch Office

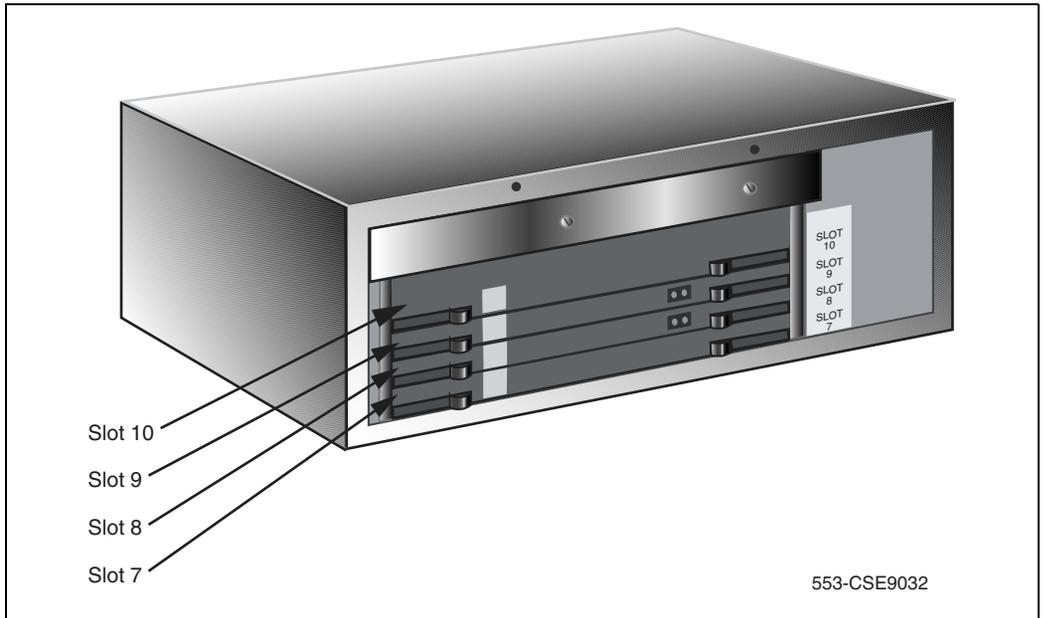


DIP switches are available to set the ringing voltages, ringing frequencies, and message waiting voltages.

Succession Media Gateway Expansion (NTDU15) (optional)

Figure 12 shows the Succession Media Gateway Expansion chassis.

Figure 12
Succession Media Gateway Expansion chassis



Power

There is a power status indicator (Nortel Networks logo) on the front cover of the Succession Media Gateway Expansion. When the Nortel Networks logo is illuminated, the power is on. The power cord connector is located on the upper left-hand corner of the back of the Succession Media Gateway Expansion. The Power On/Off switch is located behind the front cover.

Cooling

The Succession Media Gateway Expansion has forced air cooling. The fans inside it are controlled by temperature levels. It runs at a reduced speed at room temperature. The air flow is side-to-side.



CAUTION

Damage to Equipment

Do not block equipment ventilation openings.

Card slots

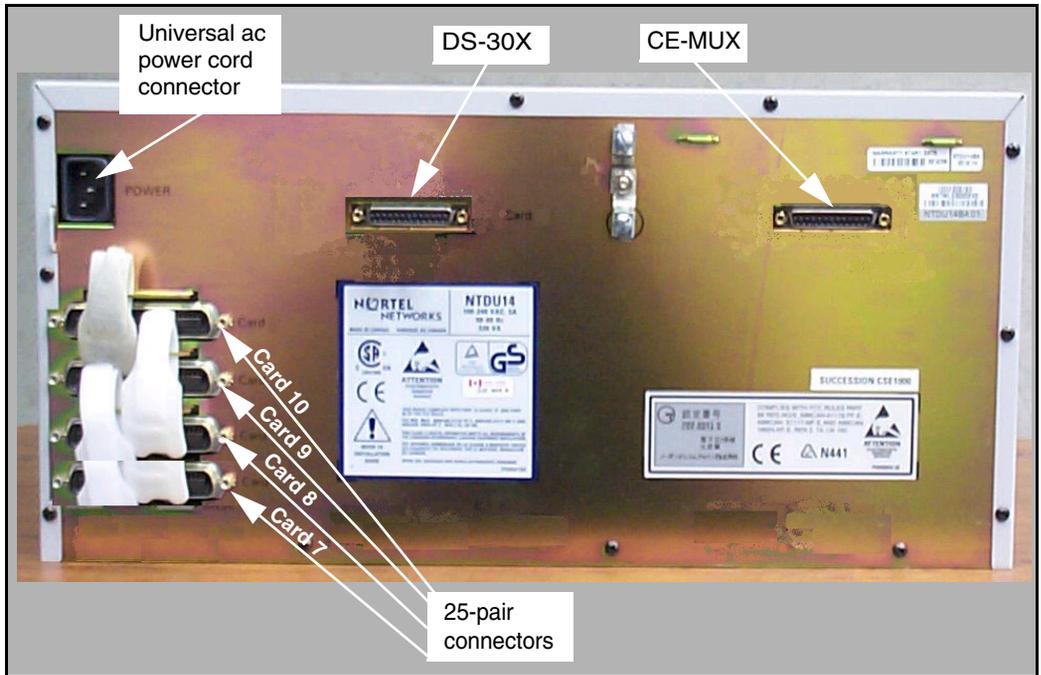
The NTDU15 Succession Media Gateway Expansion shown in Figure 12 on [page 47](#) provides four additional universal card slots, bringing the total number of configured card slots to eight. The following cards are supported in slots 7, 8, 9, and 10 (logical slots 5 and 6 are not supported) for flexible configurations of:

- Trunk/Line cards
 - Analog Trunk Cards, with a maximum of four installed in each Succession Media Gateway Expansion
 - Analog Line Cards, with a maximum of four installed in each Succession Media Gateway Expansion
 - Digital Line cards, with a maximum of four in each Succession Media Gateway Expansion
- Voice Gateway Media Cards, with a maximum of four installed in each Succession Media Gateway Expansion
- Application Cards, can be installed in each Succession Media Gateway Expansion

Connectors

For more information about Succession Media Gateway Expansion cable connectors, see “Connectors” on [page 44](#). Figure 13 on [page 49](#) shows the connectors on the back of the Succession Media Gateway Expansion.

Figure 13
Connectors on the back of the Succession Media Gateway Expansion



Telephones

The Succession 1000 system supports the following:

- i2002 and i2004 Internet Telephones
- i2050 Software Phone
- analog (500/2500-type) telephones
- digital telephones
- attendant console
- DECT handsets
- 802.11 Wireless LAN terminals

Internet Telephones

Figure 14 shows the Internet Telephones.

Figure 14
Internet Telephones

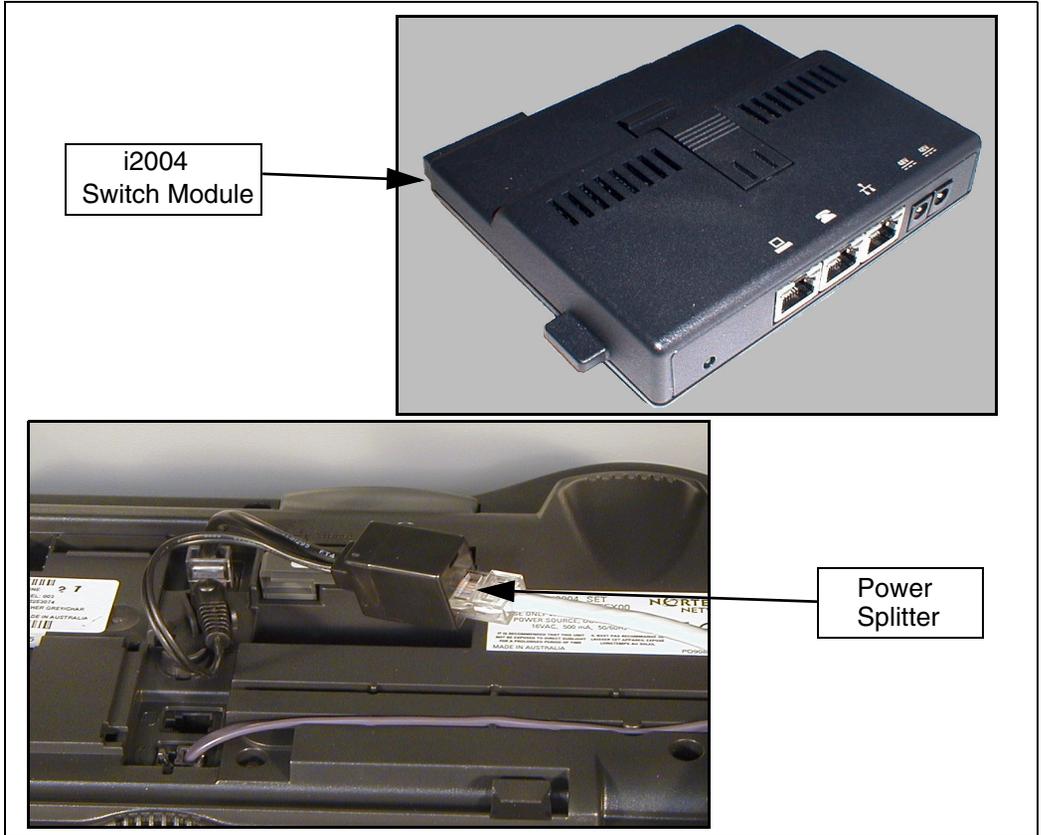


The i2004 Internet Telephone uses the following accessories as shown in Figure 15 on [page 51](#):

- Switch Module
- Power Splitter

The i2002 Internet Telephone has a built-in Switch Module, and a built-in Power Splitter.

Figure 15
Internet Telephone accessories



Ethernet switch (customer-supplied)

The data network switches are customer supplied. For more information, refer to *Data Networking for Voice over IP* (553-3001-160).

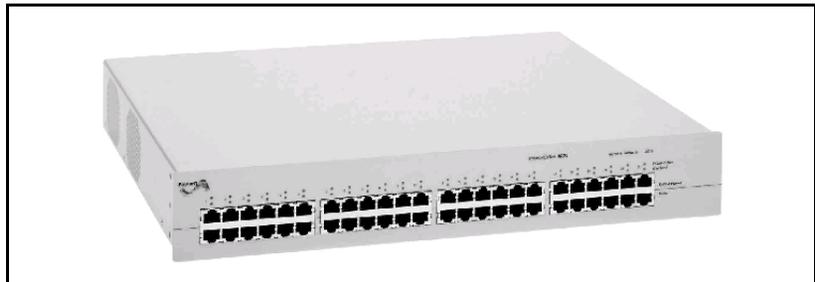
Figure 16
Ethernet switch



Power over LAN unit (customer-supplied, optional)

The Power over LAN unit (PowerDsine shown in Figure 17) adds power in addition to data communications over standard Category 5 LAN drops for powering the Internet Telephones. The LAN power system eliminates the need to connect each telephone to an ac power outlet saving in desktop wiring and also allowing centralized UPSs for power backups. Using a Power over LAN unit eliminates the need to use separate power transformers for each Internet Telephone.

Figure 17
Power over LAN unit



19-inch rack (customer-supplied)

The following Succession 1000 system components are mounted in a customer supplied 19-inch rack shown in Figure 18 on [page 54](#):

- NTDU06 Succession Call Server
- NTDU27 Succession Signaling Server
- NTDU14 Succession Media Gateway
- NTDU15 Succession Media Gateway Expansion
- Customer supplied Ethernet switch
- Customer supplied Power over LAN unit (optional)

Figure 18
Customer supplied rack



Rack mount installation kit (NTTK09AA)

An NTTK09AA installation kit is available for mounting the Succession Call Server, Succession Media Gateway, and Succession Media Gateway Expansion in the 19-inch rack.

Table 2
NTTK09AA installation

Code	Description	Qty
P0904844	Left Rack Mount Bracket	1
P0904845	Right Rack Mount Bracket	1
P0906672	Left Shelf Mounting Bracket U/O NTTK09AA	1
P097F813	Screw, .216- 24 X .500 STL 289A	8
P0719943	Sems, Ext Tooth Washer Pan Head, CR Type1A, 0.164- 32 X	4
P0906671	Right Shelf Mounting Bracket U/ O NTTK09AA	1
P0719587	Sems, Ext Tooth Washer Pan Head, CR Type 1A, 0.138- 3	4

Miscellaneous components

Cables and wires

Table 3 lists miscellaneous cables and wires used with the Succession 1000 system.

Note: Order the proper power cord for your region.

Table 3
Succession 1000 cables (Part 1 of 3)

Part number	Description	Purpose
NTBK48	3-port SDI cable.	Connects the Succession Call Server 9-pin SDI port to administration/maintenance terminals (TTYs) and modems.
NTDU19	Cable kit containing two NTDU0606 cables.	Connects the Succession Call Server NTDK83 Dual-port IP Daughterboard to the Succession Call Server bulkhead connectors.
NTTK34AA	2-meter UTP Cat-5 RJ45 cross-over cable.	Connects the Succession Call Server to the Succession Media Gateways in a point-to-point mode.
NTDK95	25-pair cable	Connects the Succession Media Gateway DS-30X and CE-MUX to the Succession Media Gateway Expansion DS-30X and CE-MUX.

Table 3
Succession 1000 cables (Part 2 of 3)

Part number	Description	Purpose
	Standard CAT 5 patch cable (Customer supplied)	Connects the following items to specified ports on the Layer 2 switch: <ul style="list-style-type: none"> • Succession Call Server MAU to an ELAN port • Succession Media Gateway SSC to an ELAN port • Succession Signaling Server to an ELAN port • Succession Signaling Server to a TLAN port • Voice Gateway Media Card to an ELAN port • Voice Gateway Media Card to a TLAN port • Succession Call Server and Succession Media Gateway IP daughterboard connectors that are not point to point
	Power cord	Connects the unit to commercial power source.
NTAK19 FA/FB	cable	A four-port SDI cable used with the NTAK02 circuit card.
NTAK1104	AUX cable	Connects a PFTU to a Succession Media Gateway.
NTAK19 EC	cable	A two-port SDI cable used with the NTAK03 circuit card.
NTAK 1108/1118	9-to-25 pin RS232 converter cable	Connects SDI ports and terminals.
A0378652	F-F DCE to DTE converter	Connects SDI ports to equipment, such as TTYs and modems.
A0381016	F-M DCE to DTE converter	Connects SDI ports to equipment, such as TTYs and modems.
NT8D7205	DTI/PRI carrier cable	DTI/PRI carrier cable.

Table 3
Succession 1000 cables (Part 3 of 3)

Part number	Description	Purpose
	25-pair inside wiring cables equipped with amphenol-type connectors	Extend the Peripheral Equipment connections from the Succession Media Gateway to the cross-connect terminal, and connect PFTUs.
	#6 AWG (#40 Metric Wire Gauge) insulated ground wire	Connects a Succession Media Gateway to a building ground source.
	10 mm ² (#6 AWG) insulated ground wire	Connects a Succession Media Gateway to a building ground source (UK).
	#6 AWG (20 mm ²) insulated ground wire	Connects a Succession Media Gateway to a building ground source (Europe).
	#8 AWG (10 mm ²) insulated ground wire	Connects a Succession Media Gateway to a building ground source (Germany).

Other items

The following is a list of miscellaneous items that are used as part of the Succession 1000 system installation. Quantities needed depend on the site and customer requirements:

- QUA6 Power Failure Transfer Units (PFTU) to transfer trunk lines during a power or system failure.
- NTBK80 grounding block.
- Connecting blocks for the cross-connect terminal.
- Transformers and centralized power supplies for telephones.
- Optional equipment such as music sources, RAN machines, paging equipment, and CDR devices.

- NTAK92 Off-Premises Protection Module for connecting up to four off-premises analog (500/2500-type) telephone.
- Additional Modem Eliminator (NULL Modem without hardware handshaking). The A0601397 converter can be required to interface the DTE to the system.

Reserve power

Use an Uninterruptible Power Supply (UPS) to provide a backup power supply for the:

- Succession Call Server NTDU30
- Succession Media Gateway NTDU14
- Succession Media Gateway Expansion NTDU15
- Succession Signaling Server NTDU27.

An UPS provides a continuous ac power supply. Install the UPS unit according to the manufacturer's instructions.

Chassis rack-mount installation

Contents

This section contains information on the following topics:

Introduction	61
Succession Call Server mounting	64
Succession Media Gateway/Succession Media Gateway Expansion mounting	65
Succession Signaling Server mounting	69
Ethernet switch chassis and inline power panel mounting	78

Introduction

This chapter contains the procedures for mounting components into the customer-supplied, 19-inch chassis rack.

This chapter contains the following procedures:

- Procedure 1 "Mounting the Succession Call Server in a 19-inch rack" on [page 64](#).
- Procedure 2 "Mounting the Succession Media Gateway/Succession Media Gateway Expansion in a 19-inch rack" on [page 66](#).
- Procedure 3 "Preparing the Succession Signaling Server for rack mounting" on [page 70](#).

- Procedure 4 "Rackmounting the Succession Signaling Server" on [page 74](#).
- Procedure 5 "Mounting the Ethernet switch chassis and inline power panel in a 19-inch rack" on [page 78](#).

Note: The 19-inch rack is a customer supplied item.

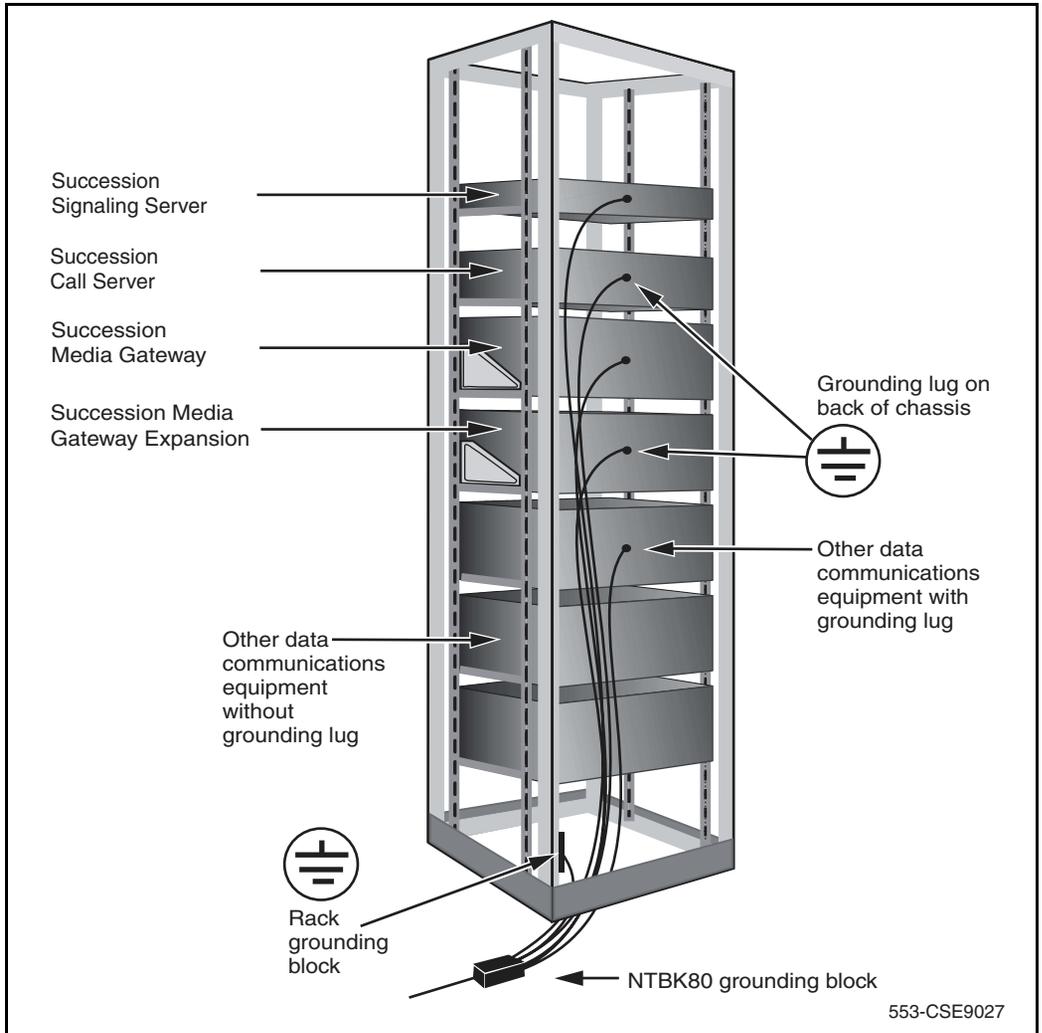
Refer to Figure 19 on [page 63](#) for guidelines on how to position system components. Also refer to the equipment layout plan and card slot assignment plan for additional information.

Because air circulates from the side of the equipment, you only need to leave a small space between the Succession Call Server, Succession Media Gateway, Succession Media Gateway Expansion, and Succession Signaling Server. For example, to install the Succession Media Gateway Expansion, start in the next 5u pattern of mounting holes. This results in the Succession Media Gateway Expansion being approximately 1/4 inch from the Succession Media Gateway.

Note: In the 5u pattern, a "u" is equal to 1.75 in. and includes three holes spaced at 5/8 in. + 5/8 in. + 1/2 in.

In addition to more Succession 1000 equipment, you can install other Data Communications Equipment in a rack with the Succession 1000. Refer to "Grounding multiple pieces of equipment in a rack" on [page 85](#).

Figure 19
Typical layout in a Succession 1000 equipment rack



Note 1: Leave wall space for the cross-connect terminal.

Note 2: The rack does not have to be tight against the wall. You can position the rack so that you have access to both the front and back.

Succession Call Server mounting

Items required

To install the Succession Call Server in a 19-inch rack, the following items are required:

- equipment layout plan
- four #12-24 machine screws

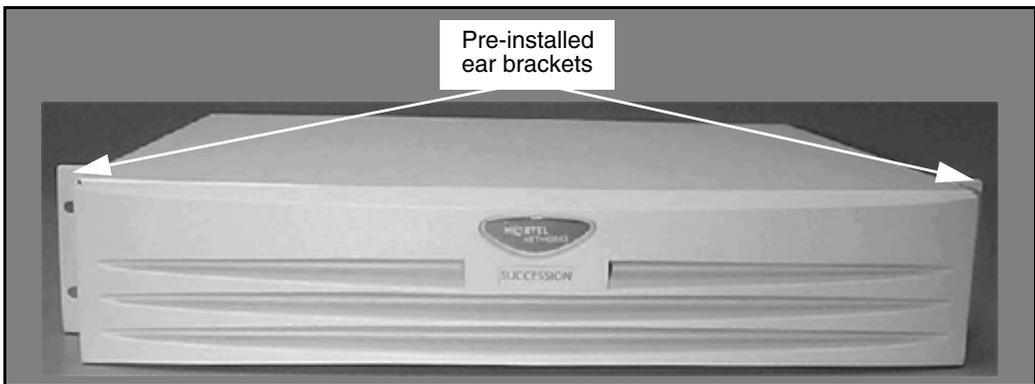
Procedure 1

Mounting the Succession Call Server in a 19-inch rack

- 1 Slide the Succession Call Server into the rack until the ear brackets rest against the rack support.

Figure 20 shows the ear brackets that are pre-installed on the Succession Call Server.

Figure 20
Ear brackets pre-installed on the Succession Call Server



- 2 Fasten the Succession Call Server to the rack supports with #12-24 self-tapping screws (two screws on each side).

End of Procedure

Succession Media Gateway/Succession Media Gateway Expansion mounting

References to the “Succession Media Gateway” in this section also apply to the Succession Media Gateway Expansion.

Items required

To install each Succession Media Gateway and Succession Media Gateway Expansion in a 19-inch rack, the following items are required:

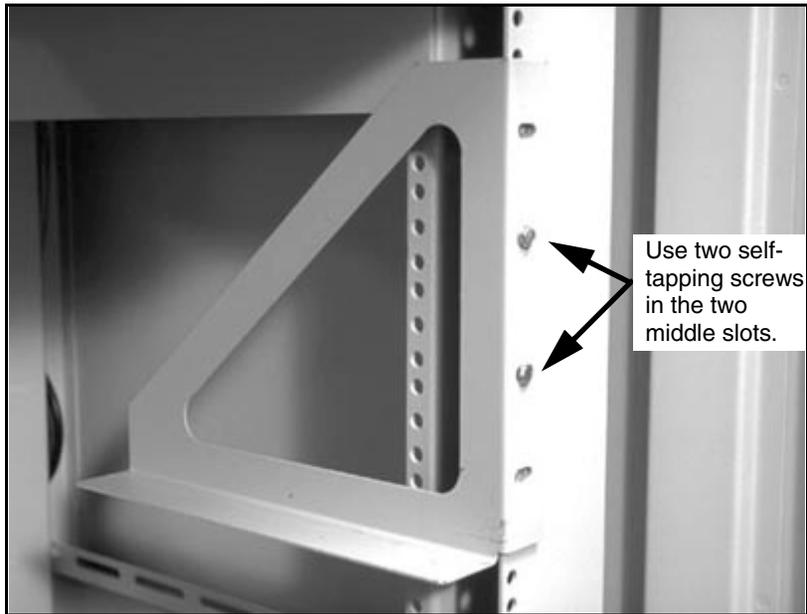
- equipment layout plan
- one left guide bracket
- one right guide bracket
- one left ear bracket
- one right ear bracket
- eight #12-24 self-tapping screws
- four #8-32 machine screws

The NTKK09 contains all of the above items, with the exception of the equipment layout plan and self-tapping screws.

Procedure 2
Mounting the Succession Media Gateway/Succession Media Gateway Expansion in a 19-inch rack

- 1 Fasten the right guide bracket to the right rack support.
Insert two #12-24 self-tapping screws into the two middle slots in the guide bracket and into the respective holes in the right rack support. Fasten the screws. See Figure 21.

Figure 21
Guide bracket installed in a rack



Note: The guide brackets guide the Succession Media Gateway into place, enabling one person to install the Succession Media Gateway in the rack.

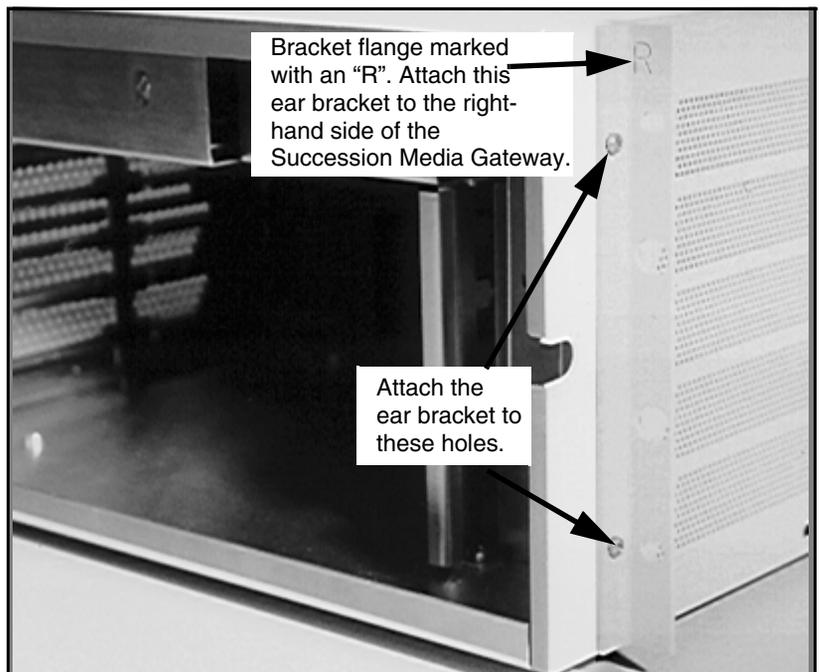
- 2 Fasten the left guide bracket to the left rack support.
Insert two #12-24 self-tapping screws into the two middle slots in the bracket and into the respective holes in the left rack support. Fasten the screws.

- 3 Attach the right ear bracket (marked with an "R") to the holes on the right side of the Succession Media Gateway.

Use two #8-32 machine screws. Position the ear bracket so that the four holes on the bracket flange are nearer to the back of the Succession Media Gateway.

To determine the front of the bracket, locate the "R". This "R" must be at the top of the bracket and face to the front of the Succession Media Gateway (see Figure 22).

Figure 22
Right ear bracket installed on the Succession Media Gateway



- 4 Attach the left ear bracket (marked with an “L”) to the holes on the left side of the Succession Media Gateway (near the front).

Use two #8-32 machine screws. Position the ear bracket so the four holes on the bracket flange are closer to the back of the Succession Media Gateway.

To determine the front of the bracket, locate the “L”. This “L” must be at the top of the bracket and must face to the front of the Succession Media Gateway.



WARNING

The Succession Media Gateway and Succession Media Gateway Expansion each weigh approximately 30 lb. (13.5 kg) with circuit cards installed, or 26 lb. (12 kg) without circuit cards installed. If necessary, get assistance when lifting the equipment.

- 5 Place the Succession Media Gateway on the guide brackets.

Carefully slide the Media Gateway into the rack until the ear brackets come to rest against the rack support.

- 6 Use the four remaining #12-24 self-tapping screws to fasten the Succession Media Gateway to the rack supports (two screws on each side).

Make sure that the back of the Media Gateway is on the guide brackets. See Figure 23 on [page 69](#).

Figure 23
Succession Media Gateway installed in a rack



End of Procedure

Succession Signaling Server mounting

This procedure describes how to install the Succession Signaling Server hardware into the 19-inch rack.

Note: Save the packaging container and packing materials in the event you need to package the server for reshipment.

Procedure 3

Preparing the Succession Signaling Server for rack mounting

- 1 Check that the power cord is the exact type required in the host region where the Succession Signaling Server is being used. Do not modify or use the supplied ac power cord if it is not the correct type.
- 2 Ensure the kit contains the following parts:
 - a. Two chassis support brackets (A)
 - b. Two rack-mounting brackets (B)
 - c. Six rack-mount bracket screws (10-25 x 1/4" panhead Phillips)

Refer to Figure 24.

Figure 24
Succession Signaling Server brackets



Note: The Front Mount Bracket assembly is not intended for use as a slide rail system. The Succession Signaling Server must be firmly attached to the rack.

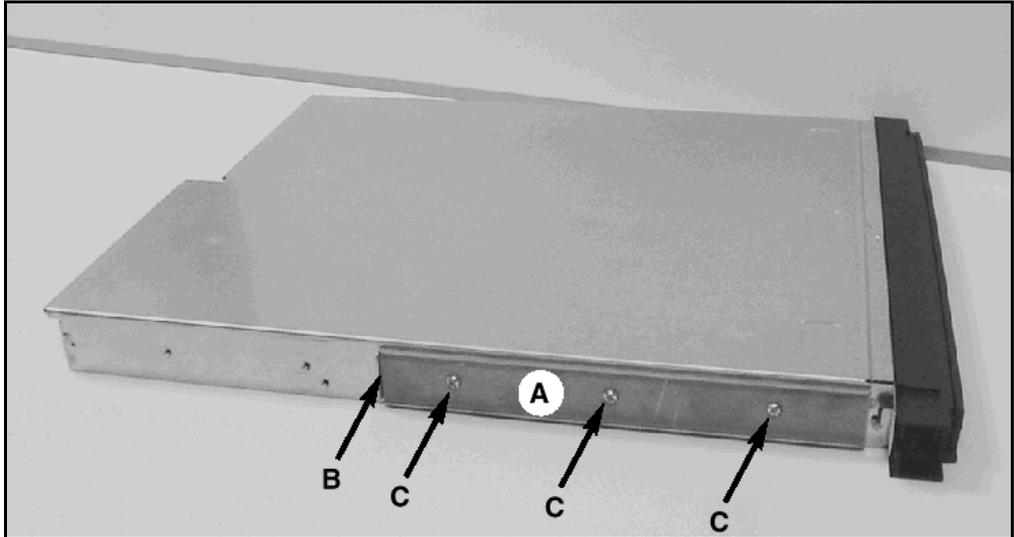


CAUTION

The load rating for this mounting kit is 50 pounds. If you exceed this limit, damage or injury can occur.

- 3 Align the end of the rail with the flange (B) toward the back of the Succession Signaling Server. See Figure 25 on [page 71](#).

Figure 25
Chassis support bracket

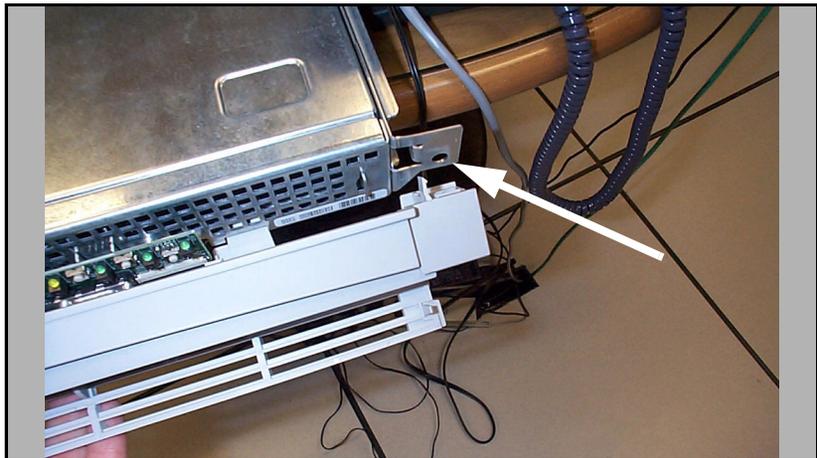


- 4 Align the screw holes in the rackmount rail to the mating holes in the side of the Succession Signaling Server chassis. Use three screws (C) on each side.
Note: Hand-tighten the screws to prevent cross-threading, then use a Phillips screwdriver to secure them.
- 5 Attach the bezel door to the faceplate of the Succession Signaling Server, as shown in Figure 26 on [page 72](#) and Figure 27 on [page 72](#).

Figure 26
Left hinge mount

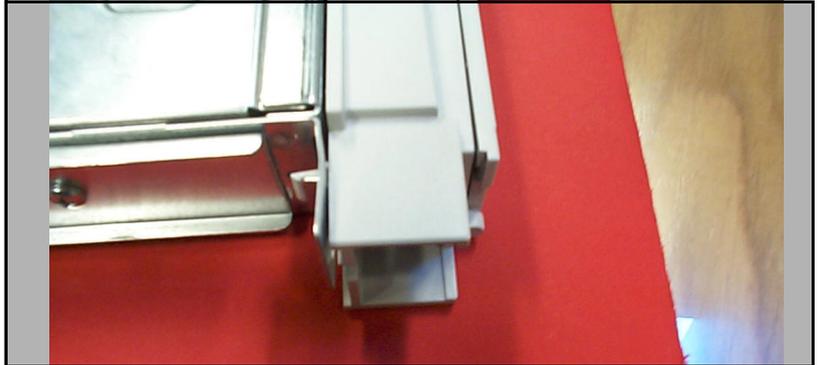


Figure 27
Right hinge mount



When the door is attached to the Succession Signaling Server and rackmount apparatus, it should appear as shown in Figure 28.

Figure 28
Snapped-in bezel door



End of Procedure

Procedure 4
Rackmounting the Succession Signaling Server

This procedure describes how to install the server in a rack.

Read the following warnings carefully before you begin installing the Succession Signaling Server in the rack.



DANGER OF ELECTRIC SHOCK
DISCONNECT AC POWER

Make sure the Succession Signaling Server is completely disconnected from any ac power source before performing this procedure. Pressing the Power button DOES NOT turn off power to this Succession Signaling Server. Some circuitry in the Succession Signaling Server can continue to operate even though the front panel Power button is off. Failure to disconnect the Succession Signaling Server from its ac power source can result in personal injury or equipment damage.



DANGER OF ELECTRIC SHOCK
GROUNDING THE RACK INSTALLATION

To avoid the potential for an electrical shock hazard, include a third wire safety grounding conductor with the rack installation. If Succession Signaling Server power cords are plugged into ac outlets that are part of the rack, then provide proper grounding for the rack itself. If Succession Signaling Server power cords are plugged into wall ac outlets, the safety grounding conductor in each power cord provides proper grounding only for the Succession Signaling Server. Provide additional, proper grounding for the rack and other devices installed in it.

**WARNING****MAIN AC POWER DISCONNECT**

You must install an ac power disconnect for the entire rack unit. This main disconnect must be readily accessible, and it must be labeled as controlling power to the entire unit, not just to the Succession Signaling Server(s).

**Damage to Equipment****OVERCURRENT PROTECTION**

The Succession Signaling Server is designed for an ac line voltage source with up to 20 amperes (A) of over-current protection. If the power system for the equipment rack is installed on a branch circuit with more than 20 A of protection, provide supplemental protection for the Succession Signaling Server. If more than one Succession Signaling Server is installed in the rack, the power source for each Succession Signaling Server must be from a separate branch circuit.

- 1 Attach the rackmount brackets ('B' as shown in Figure 24 on [page 70](#)) to the equipment rack. Install the left and right side at an equal height. Use standard length screws from the accessories pouch, and screw them into the top and bottom drill holes of the bracket (see Figure 29 on [page 76](#)).

Figure 29
Installed rackmount bracket



- 2 When both brackets are fixed in place, do the following:
 - a. Align the rackmount brackets on the Succession Signaling Server with the slide rail system on the rack posts.
 - b. Slide the Succession Signaling Server in place. Refer to [Figure 30](#) on [page 77](#).

Figure 30
Rackmounting the Succession Signaling Server



- 3** Tighten the screws through the faceplate of the Succession Signaling Server to the rackmount bracket.

Note: Do not apply excessive torque while tightening the bolts. The bezel door is plastic and does not require or withstand overtightening.

End of Procedure

Ethernet switch chassis and inline power panel mounting

Procedure 5

Mounting the Ethernet switch chassis and inline power panel in a 19-inch rack

- 1 Follow the Ethernet switch manufacturer's instructions to rackmount this equipment.
- 2 Follow the inline power panel manufacturer's instructions to rackmount this equipment.

End of Procedure

System ground installation

Contents

This section contains information on the following topics:

Introduction	79
Grounding the Succession 1000 equipment	81

Introduction



CAUTION

Complete the procedures in the “Chassis rack-mount installation” chapter before attempting to install the “System ground installation”.

This chapter describes how to ground the Succession 1000 system.

This chapter contains the following procedures:

- Procedure 6: “Grounding the Succession 1000 equipment” on [page 81](#).
- Procedure 7: “UK grounding procedure for the Succession 1000 equipment” on [page 84](#).

This chapter also describes how to ground multiple pieces of equipment in a rack when one or more pieces of equipment does not have a grounding lug. See “Grounding multiple pieces of equipment in a rack” on [page 85](#).

Refer to your grounding plan for additional information.



WARNING

Correct grounding is very important. Failure to complete the grounding procedures could result in a system that is unsafe for the personnel using the equipment.



CAUTION

Service Interruption

If your system is not grounded correctly, it can not be protected from lightning or power surges, and it could be subject to service interruptions. You must use insulated ground wire for system grounding.

Equipment powered by the same service panel

For each Succession Call Server and Succession Media Gateway, connect a #6 AWG (#40 Metric Wire Gauge) ground wire from the equipment rear panel to an NTBK80 grounding block. Connect the grounding block to a ground source (the ground bus in the ac service panel).

Consider the Succession Media Gateway and the Succession Media Gateway Expansion as the same ground. Jumper the ground wire from the Succession Media Gateway Expansion to the Succession Media Gateway. Then, connect the ground wire from the Succession Media Gateway to the grounding block.

See Table 4 on [page 81](#) for region-specific grounding requirements.

Equipment powered by different service panels

For each Succession Call Server and Succession Media Gateway connect a #6 AWG (#40 Metric Wire Gauge) ground wire from the equipment rear panel to an NTBK80 grounding block. If any equipment cannot be powered from the same service panel, ground it separately from the other equipment back to the service panel that supplies it. All Succession Media Gateway and

Succession Media Gateway Expansion pairs must be powered from the same service panel. Succession Media Gateways without Succession Media Gateway Expansions can each be powered from separate service panels.

See Table 4 for region-specific grounding requirements.

Table 4
Region-specific grounding wire requirements

Region	Grounding wire requirements
Germany	#8 AWG (10 mm ²) green/yellow wire
Other regions in Europe	not smaller than #6 AWG (16 mm ²) at any point
UK	two green/yellow wires no thinner than two 10 mm ²

Grounding the Succession 1000 equipment

Procedure 6 describes how to ground the Succession Call Server, Succession Media Gateway, and Succession Media Gateway Expansion.

Procedure 6

Grounding the Succession 1000 equipment

- 1 Disconnect the ac power cord from the power outlet.

Note: For rack configurations, equipment must be powered from the same service panel.



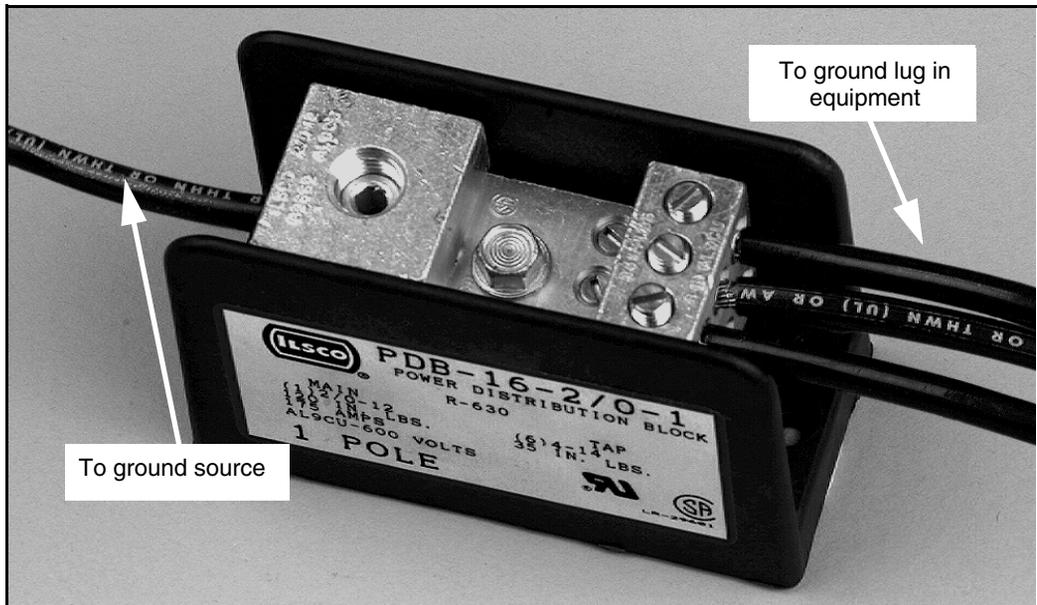
WARNING

Never connect power to equipment that is not grounded correctly.

- 2 Install an NTBK80 grounding block near the equipment (see Figure 31).

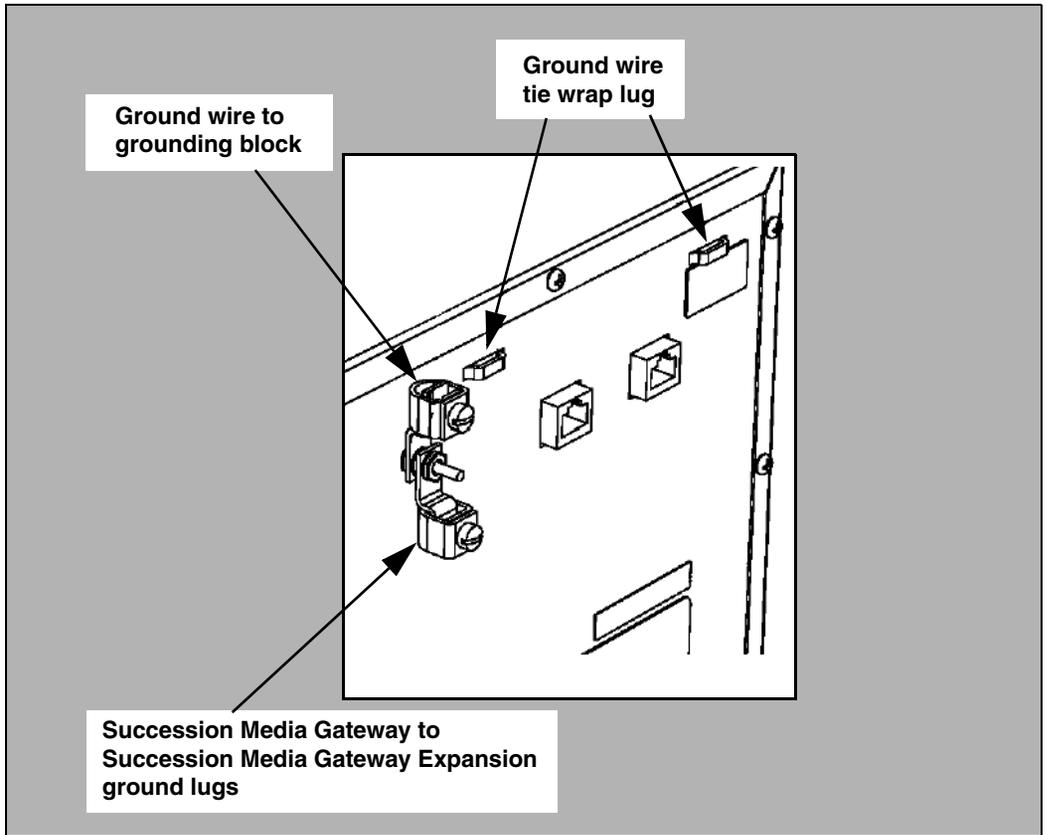
Note: Use the grounding block as a bridging point for ground wires from up to six nearby pieces of equipment. If you have additional equipment, you require additional grounding blocks.

Figure 31
NTBK80 ground block



- 3 Consider each Succession Media Gateway and Succession Media Gateway Expansion pair as one ground. Jumper the Succession Media Gateway Expansion ground to the Succession Media Gateway ground.
- 4 Install a #6 AWG (#40 Metric Wire Gauge) ground wire from the ground lug on the back of the Succession Media Gateway to the NTBK80 grounding block. See Figure 32 on [page 83](#).

Figure 32
Succession Media Gateway and Succession Media Gateway Expansion
chassis ground lug location



- 5 Place a DO NOT DISCONNECT tag on the ground wire.

- 6 Connect the grounding block to the ground bus in the ac power service panel, using #6 AWG wire. See Table 4 on [page 81](#) for region-specific grounding requirements.



WARNING

A qualified technician or electrician must make the connection in the ac power service panel.

- 7 Place a tag marked DO NOT DISCONNECT on the ground wire at the service panel.
- 8 Test the ground.

End of Procedure

Procedure 7

UK grounding procedure for the Succession 1000 equipment

- 1 Connect a protective and functional ground wire from the grounding strip on the Krone Test Jack Frame to the ground at the building entry point. Use a green/yellow wire no thinner than 10 mm².

Consider each Succession Media Gateway and Succession Media Gateway Expansion pair as one ground.

- 2 Jumper the Succession Media Gateway Expansion ground to the Succession Media Gateway ground. See Figure 32 on [page 83](#).
- 3 In each Succession Call Server and Succession Media Gateway:
 - a. Connect a ground wire from the ground lug in the equipment to the ground connection at the Test Jack Frame. Use a green/yellow wire no thinner than 10 mm².
 - b. Place a DO NOT DISCONNECT tag on the grounding wire.
 - c. Measure the resistance of the ground between the Krone Test Jack Frame and the Media Gateway frame ground. The resistance must not be more than 0.25 Ohm at 30 amperes.

End of Procedure

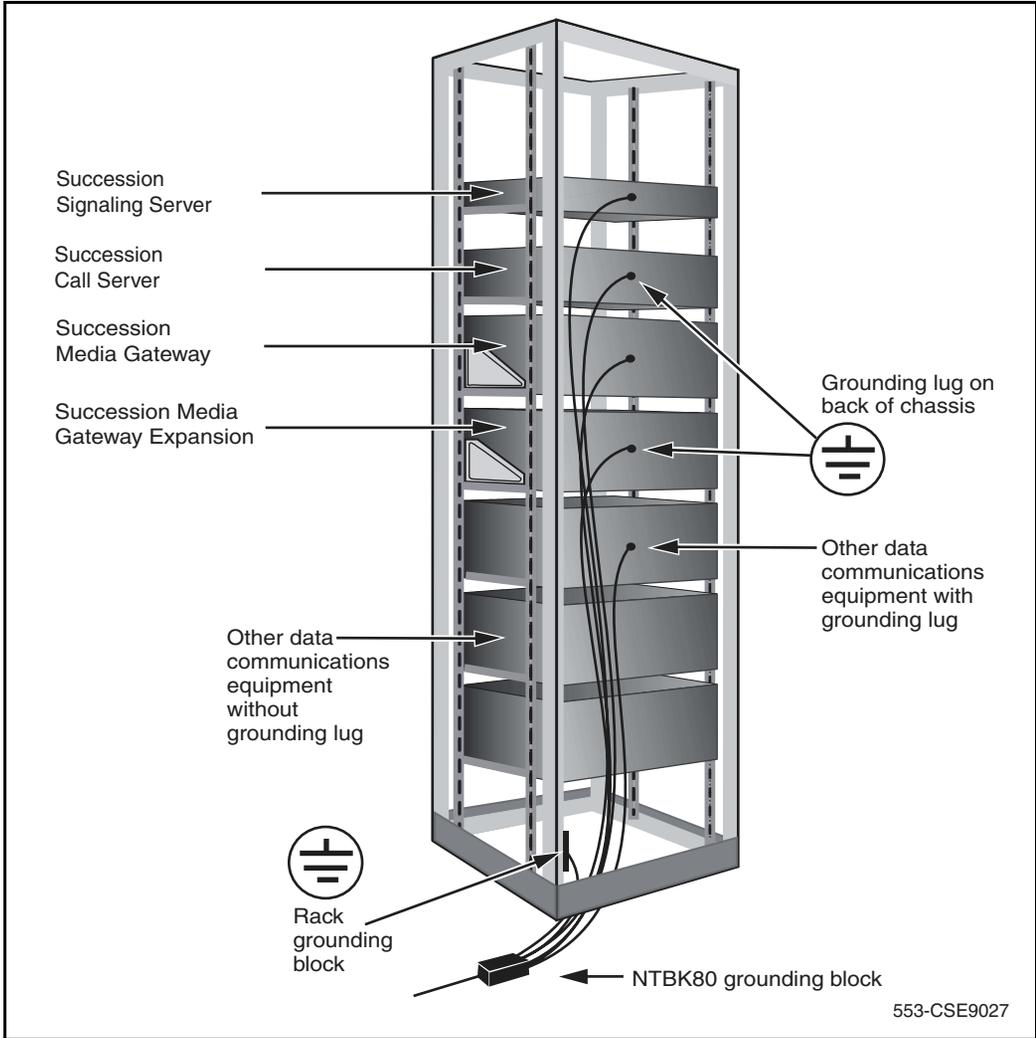
Grounding multiple pieces of equipment in a rack

For multiple pieces of equipment installed in a rack, provide a separate ground connection from each piece of equipment to the NTBK80 grounding block. Consider each Succession Media Gateway and Succession Media Gateway Expansion pair as one ground. Jumper the Succession Media Gateway Expansion ground to the Succession Media Gateway ground.

If a piece of Data Communications Equipment installed in a rack does not have a grounding lug, ground the rack to the NTBK80 grounding block.

When you ground the rack to the grounding block, the equipment is grounded using the Single Point Grounding method, as shown in Figure 33 on [page 86](#).

Figure 33
Grounding multiple pieces of equipment in a rack



553-CSE9027

Succession System Controller cards

Contents

This section contains information on the following topics:

Introduction	87
Items required	88
Accessing internal components in the Succession Call Server and Succession Media Gateway	89
Installing cards and components in the Succession Call Server SSC . .	91
Installing Succession Media Gateway SSC cards and components . . .	96

Introduction



CAUTION

Complete the procedures in the “System ground installation” chapter before attempting to install Succession System Controller cards.

This chapter explains how to equip the Succession Call Server and Succession Media Gateway chassis Succession System Controller (SSC) cards with daughterboards and security devices.

This chapter contains the following procedures:

- Procedure 8 "Removing the front cover" on [page 89](#).
- Procedure 9 "Installing the NTM400 Software Daughterboard and NTDK57 (NT_STD) Security Device on the Succession Call Server" on [page 92](#).
- Procedure 10 "Installing an additional NTDK83 Dual-port IP daughterboard in the Succession Call Server" on [page 93](#).
- Procedure 11 "Installing the SSC NTM400 Software daughterboard and NTDK57 (NT_REM) Security Device on the Succession Media Gateway SCC card" on [page 97](#).
- Procedure 12 "Installing the Succession Media Gateway NTDK99 Single-port IP daughterboard" on [page 98](#).

Items required

The following items are required.

- One NTDK20 SSC card in the Succession Call Server and each of the Succession Media Gateways.
- One NTM400 Software daughterboard for each SSC card.
- One Security Device for:
 - Succession Call Server SSC card - NTDK57AA (NT_STD on the dongle)
 - Succession Media Gateway SSC card - NTDK57DA (NT_REM on the dongle)

- One NTDK99 Single-port 100BaseT IP Daughterboard for each Succession Media Gateway SSC card.
- An NTDU19 Succession Call Server Gateway Expansion kit containing two NTDU0606 Cat-5 Ethernet cables. The cables are used to connect the additional NTDK83 Dual-port IP Daughterboard to their respective chassis bulkhead connectors. The Succession Call Server is shipped with one NTDK83 Dual-port 100BaseT IP daughterboard, that supports two Succession Media Gateways. Two additional Succession Media Gateways are supported with an NTDU19 Succession Call Server Gateway Expansion kit that includes an additional NTDK83.

Accessing internal components in the Succession Call Server and Succession Media Gateway

Complete Procedure 8 to access internal components in the Succession Call Server and Succession Media Gateway.

Procedure 8 **Removing the front cover**

- 1 If the front cover lock latches are in their locked position:
 - a. Use a flat screwdriver to slide the icon away from the latch. Refer to Figure 34 on [page 90](#).
 - b. Slide both spring loaded latches simultaneously down toward the bottom of the chassis and pull forward. Then lift the cover upward to remove it from the chassis. Refer to Figure 35 on [page 90](#).

Note: The bottom of the front cover is supported by, but not secured to, the chassis. Do not drop it.

Figure 34
Unlock the latches

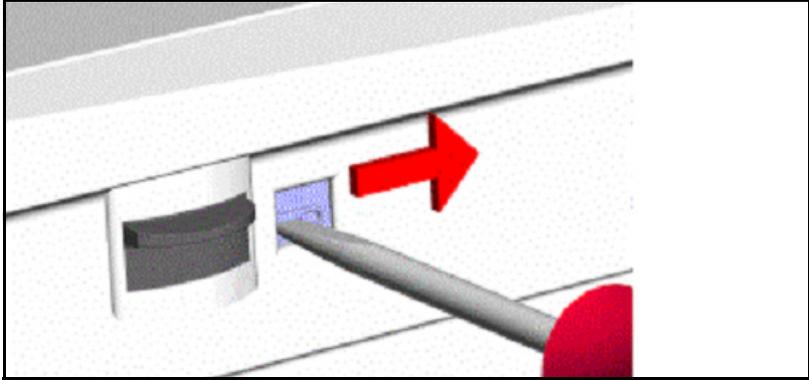
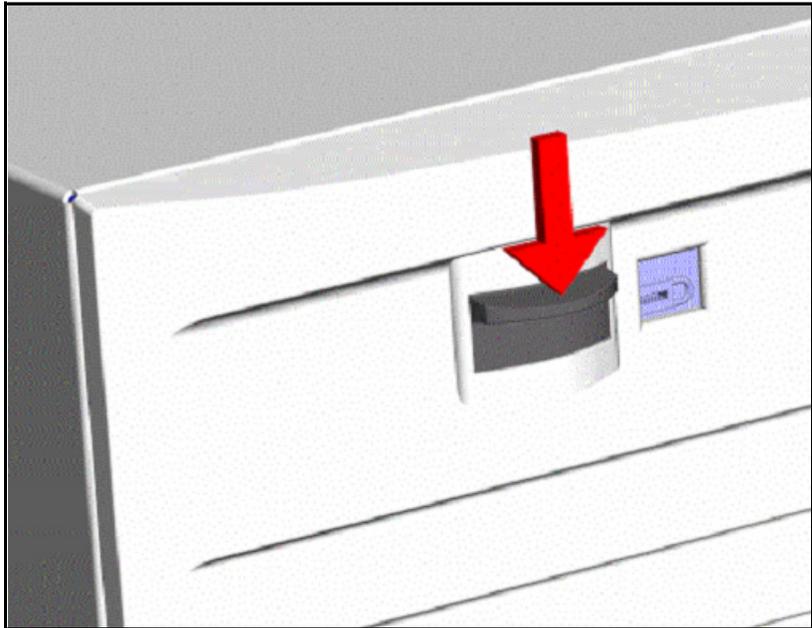


Figure 35
Unlocking the latches

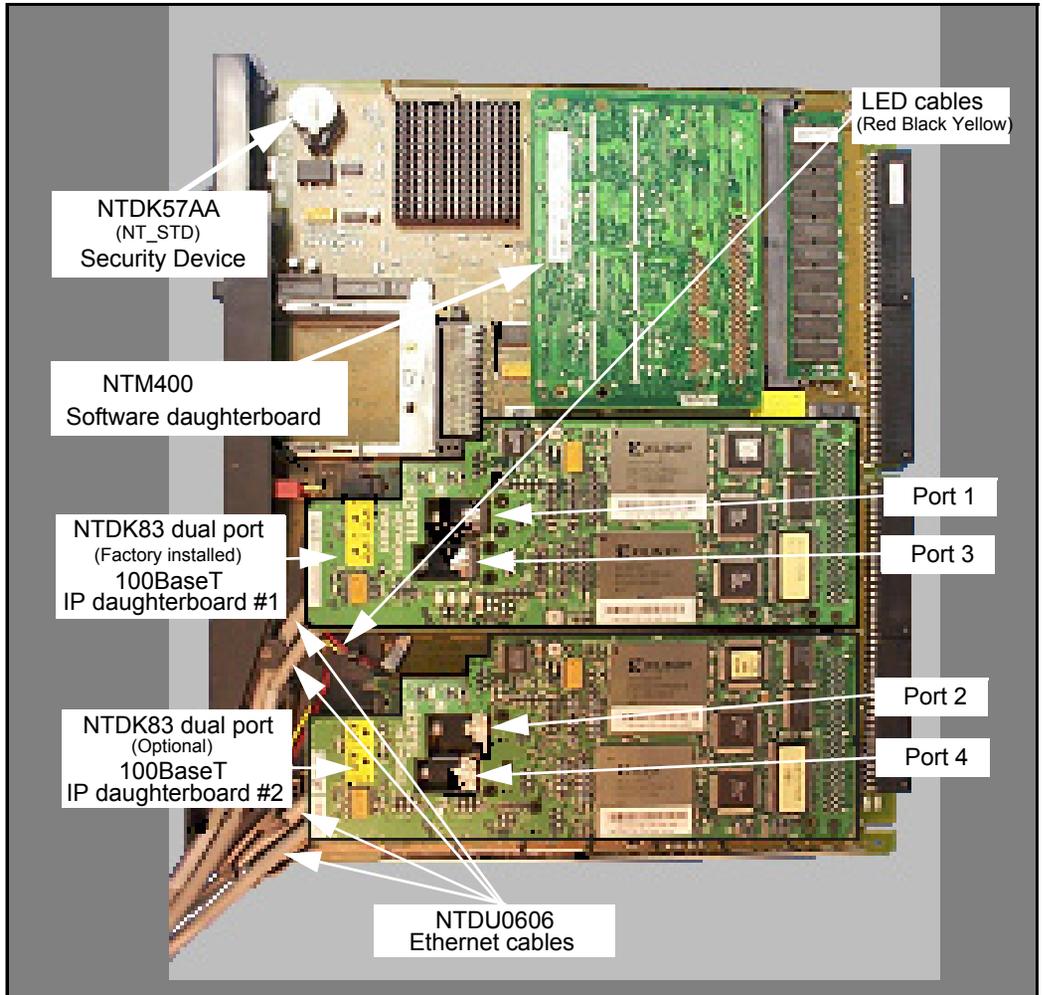


End of Procedure

Installing cards and components in the Succession Call Server SSC

Complete Procedure 9 on [page 92](#) to install cards and components in the Succession Call Server SSC.

Figure 36
Location of the Succession Call Server NTDK20 SSC card components



Procedure 9
Installing the NTM400 Software Daughterboard and NTDK57 (NT_STD) Security Device on the Succession Call Server

- 1 Attach an antistatic wrist strap to your wrist.



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 Remove the Succession Call Server front cover. Refer to Procedure 8 on [page 89](#).
- 3 Remove the NTDK20 SSC card and set it aside on a clean surface.



CAUTION
Damage to Equipment

Before you remove the SSC card, you must remove the cables labeled 1 and 3 attached to the bulkhead. Gently push the cable in by squeezing the locking tab. Gently pull the cable out.

When you reassemble the cables, make sure that the number on the cable matches the number on the connector.

- 4 Install the NTM400 Software daughterboard in the appropriate connector as shown in Figure 36 on [page 91](#).
- 5 Press firmly on the standoffs until the NTM400 Software daughterboard is secured to the SSC card.
- 6 Insert the NTDK57 (NT_STD) Security Device, with NT_STD facing out, as shown in Figure 36 on [page 91](#).

End of Procedure

Procedure 10**Installing an additional NTDK83 Dual-port IP daughterboard in the Succession Call Server**

The Succession Call Server comes with an NTDK83 Dual-port 100BaseT IP Daughterboard, which supports two Succession Media Gateways.

To expand beyond two Succession Media Gateways, use the NTDU19 Succession Call Server Gateway Expansion kit, containing two 25 cm (10 in.) NTDU0606 Cat-5 Ethernet cables, and another NTDK83 Dual-port IP Daughterboard using the following procedure.

- 1 Attach an antistatic wrist strap to your wrist.

**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 Remove the Succession Call Server front cover. Refer to Procedure 8 on [page 89](#).
- 3 Remove the SSC card and set it aside on a clean surface.

**CAUTION****Damage to Equipment**

Before you remove the SSC card, you must remove the cables labeled 1 and 3 attached to the bulkhead. Gently push the cable in by squeezing the locking tab. Gently pull the cable out.

When you reassemble the cables, make sure that the number on the cable matches the number on the connector.

- 4 Unpack the NTDK83 Dual-port IP daughterboard and the NTDU0606 cable.

Note: There are two NTDU0606 cables in the NTDU19 kit.

- 5 Using the two NTDU0606 Cat-5 Ethernet cables, provided in the NTDU19 kit:
 - a. Attach the appropriate port number label “2” or “4” to the respective cable.
 - b. Install these cables firmly into the RJ-45 port on the NTDK83 IP daughterboard #2. Completely insert each cable. See Figure 36 on [page 91](#) and Figure 40 on [page 98](#).

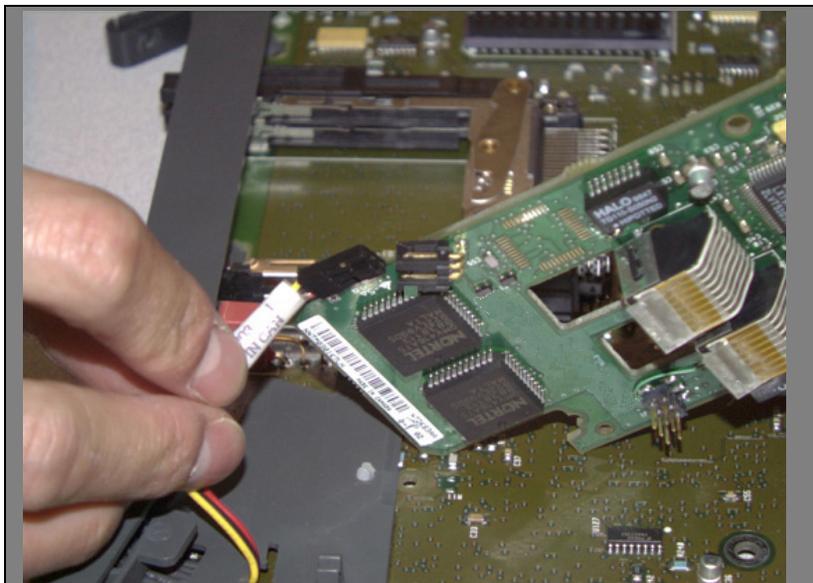


CAUTION — Service Interruption

The RJ-45 connectors on the top NTDK83 IP Daughterboard is for Succession Media Gateways 1 and 3. The connectors on the bottom IP Daughterboard is for Succession Media Gateways 2 and 4.

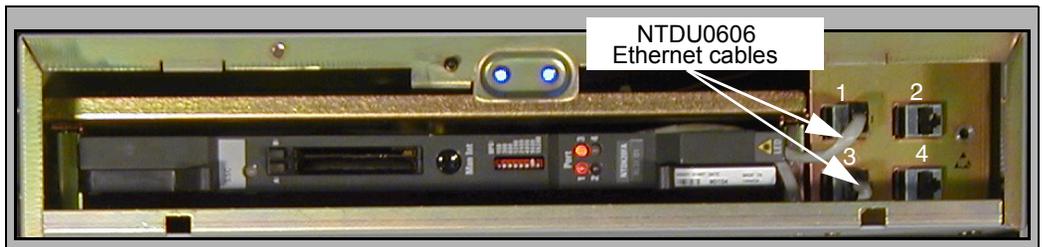
- 6 Insert the red black yellow LED cable on the SSC card into the LED connector on the NTDK83 IP daughterboard, Figure 37 on [page 94](#). This connection provides the link status display on the front cover.

Figure 37
IP daughterboard LED cable connector



- 7 Install the NTDK83 Dual-port IP Daughterboard in slot 2 of the SSC card:
 - a. Locate the alignment pin on the SSC card.
 - b. Insert the alignment pin into the appropriate hole on the daughterboard.
 - c. Secure the NTDK83 Dual-port IP daughterboard using metal screw downs on the SSC card.
 - d. Route the NTDU0606 Ethernet cable(s) through the plastic guides of the SSC card.
- 8 Install the SSC Card in the Succession Call Server.
- 9 Connect each labeled Ethernet cables to the corresponding port number bulkhead connectors using Figure 38 as a reference.
- 10 Reinstall the front cover.

Figure 38
Connecting NTDU0606 Ethernet cables at the Succession Call Server bulkhead

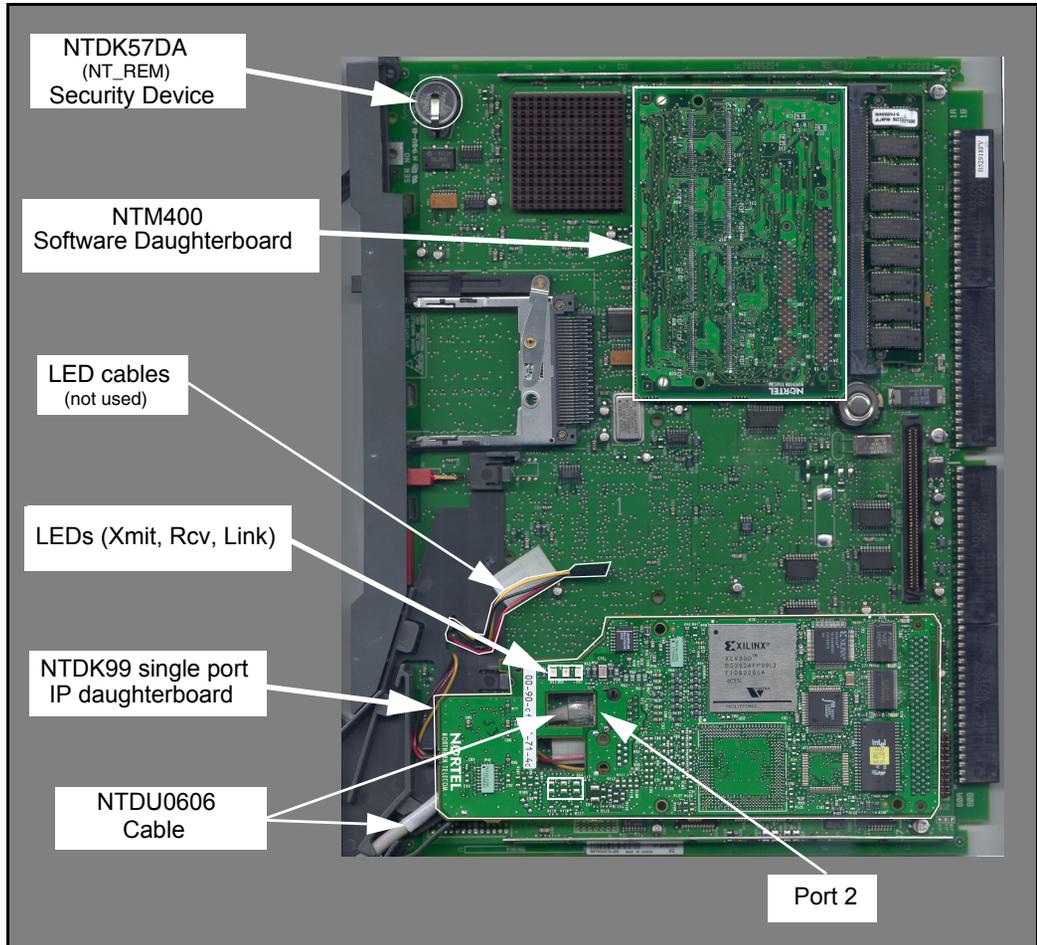


End of Procedure

Installing Succession Media Gateway SSC cards and components

Complete Procedure 11 on [page 97](#) to install Succession Media Gateway SSC cards and components.

Figure 39
Location of the Succession Media Gateway NTDK20 SSC card components



Procedure 11**Installing the SSC NTM400 Software daughterboard and NTDK57 (NT_REM) Security Device on the Succession Media Gateway SCC card**

- 1 Attach an antistatic wrist strap to your wrist.

**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.

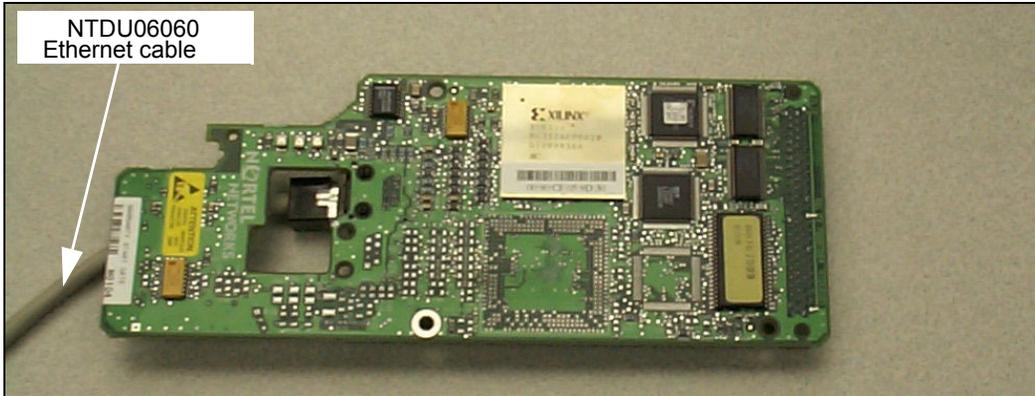
- 2 Remove the Succession Media Gateway front cover. Refer to Procedure 8 on [page 89](#).
- 3 Unpack the NTDK20 SSC card and set it aside on a clean surface.
- 4 Install the NTM400 Software daughterboard in the appropriate connector as shown in Figure 39 on [page 96](#).
- 5 Press firmly on the standoffs to ensure that the NTM400 Software daughterboard is secured to the SSC card.
- 6 Insert the NTDK57 (NT_REM) Security Device, with NT_REM facing out, as shown in Figure 39 on [page 96](#).
- 7 Repeat step 1 to step 6 for each Succession Media Gateway.

End of Procedure

Procedure 12
Installing the Succession Media Gateway NTDK99 Single-port IP daughterboard

- 1 Unpack the NTDK99 Single-port IP daughterboard and the NTDU0606 cable (see Figure 40 on [page 98](#)).

Figure 40
NTDK99 Single-port IP daughterboard

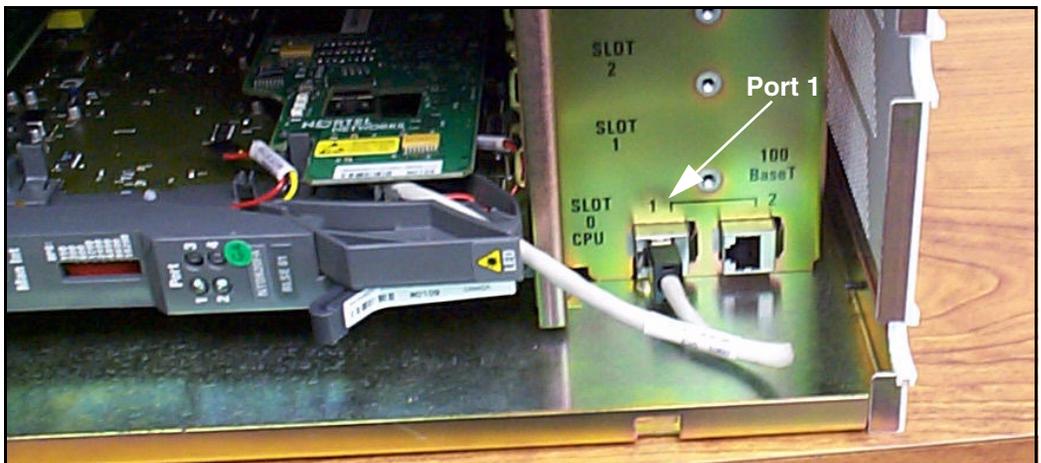


- 2 Note the IP daughterboard MAC address for each Succession Media Gateway.
You must enter the MAC address for each Media Gateway in Procedure 32 on [page 146](#).
- 3 Using one of the NTDU0606 Cat-5 Ethernet cables:
 - a. Attach port number label "1" to the cable.
 - b. Install the cable firmly into the RJ-45 port on the NTDK99 Single-port IP daughterboard. Make sure that the cable end is inserted completely. See Figure 39 on [page 96](#).

Note: Do not connect the LED cable to the NTDK99 IP Single-port daughterboard.

- 4 Install the NTDK99 Single-port IP Daughterboard in slot 2 of the SSC card:
 - a. Locate the alignment pin on the SSC card.
 - b. Insert the alignment pin into the appropriate hole on the daughterboard.
 - c. Secure the NTDK99 Single-port IP daughterboard using metal screw downs on the SSC card.
 - d. Route the NTDU0606 Ethernet cable through the plastic guides of the SSC card.
- 5 Install the SSC Card in the Succession Media Gateway.
- 6 Repeat step 1 to step 5 for each Succession Media Gateway.
- 7 Connect the NTDU0606 Ethernet cable to port 1 of the Succession Media Gateway bulkhead connector shown in Figure 41 on [page 99](#).
- 8 Reinstall the front cover.

Figure 41
Bulkhead connector



End of Procedure

System connections

Contents

This section contains information on the following topics:

Introduction	102
Succession Call Server to the Succession Media Gateway link connection	103
Succession Call Server to ELAN connection	106
Succession Media Gateway to ELAN connection	107
Succession Signaling Server to the ELAN connection	108
Succession Signaling Server to the TLAN connection	108
Voice Gateway Media Card to ELAN and TLAN connections	109
Succession Media Gateway to the Succession Media Gateway Expansion connection	112

Introduction



CAUTION

Complete the procedures in the “Succession System Controller cards” chapter before you to install the “System connections”.

This chapter contains procedures to connect the Succession Call Server to Succession Media Gateway link connection, ELAN connections, and TLAN connections.

This chapter contains the following procedures:

- Procedure 13 "Connecting the Succession Call Server to the Succession Media Gateways" on [page 103](#).
- Procedure 14 "Connecting the Succession Call Server to ELAN" on [page 106](#).
- Procedure 15 "Connecting the Succession Media Gateway to the ELAN" on [page 107](#).
- Procedure 16 "Connecting the Succession Signaling Server to the ELAN" on [page 108](#).
- Procedure 17 "Connecting the Succession Signaling Server to the TLAN" on [page 108](#).
- Procedure 18 "Insert the Shielded 50-pin to Serial/ELAN/TLAN Adapter on to each VGMC" on [page 110](#).
- Procedure 19 "Connect the VGMC to the ELAN" on [page 111](#).
- Procedure 20 "Connecting the VGMC to the TLAN" on [page 112](#).
- Procedure 21 "Connecting a Succession Media Gateway to a Succession Media Gateway Expansion" on [page 112](#).

Succession Call Server to the Succession Media Gateway link connection

Procedure 13

Connecting the Succession Call Server to the Succession Media Gateways

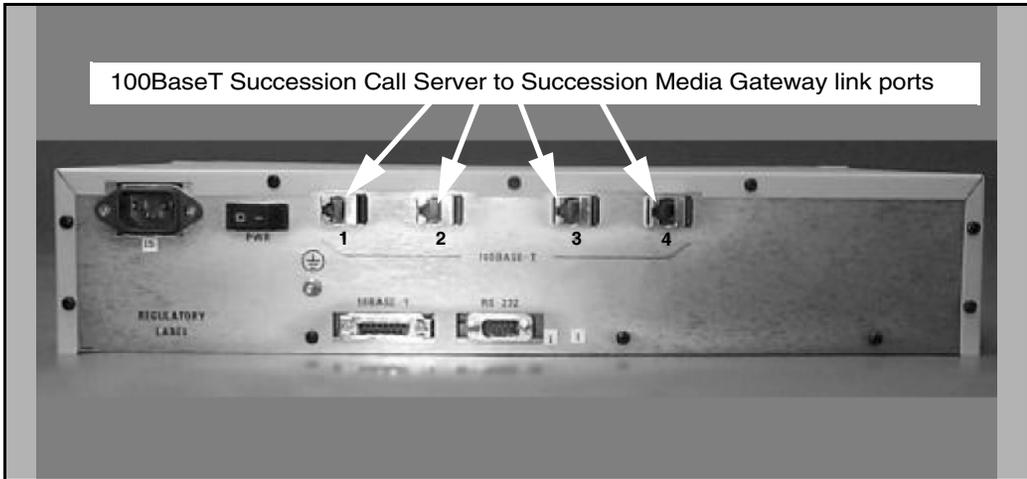
- 1 Choose one of the following:
 - a. For point-to-point 100BaseT Succession Call Server to Succession Media Gateway link connectivity, go to step 2.
 - b. For 100BaseT Succession Call Server to Succession Media Gateway link connectivity over a distributed data campus network, go to step 3 on [page 104](#).
- 2 Connect a Succession Call Server port, shown in Figure 42 on [page 104](#), to each Succession Media Gateway 100BaseT port, shown in Figure 43 on [page 105](#).

Use the supplied NTKK34AA two-meter UTP Cat-5 RJ-45 cross-over cable to connect the Succession Call Server and Succession Media Gateways.

Note 1: If you connect the SSC cable to bulkhead Port 1, (“Installing Succession Media Gateway SSC cards and components” on [page 96](#)) you must use Port 1 on the back of the Succession Media Gateway. If you connect the SSC cable to bulkhead Port 2, you must use Port 2 on the back of the Succession Media Gateway.

Note 2: Port 1 on the Succession Call Server must go to Succession Media Gateway 1, Port 2 to Succession Media Gateway 2, and so on.

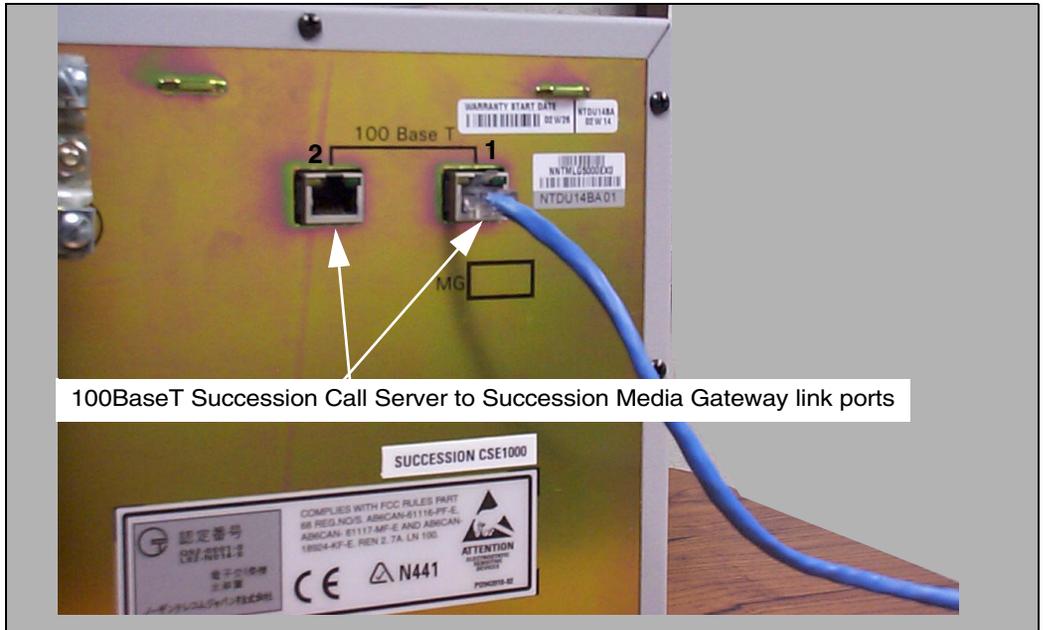
Figure 42
Succession Call Server to Succession Media Gateway link connectors



- 3** Connect the Succession Call Server port, shown in Figure 42 to the data network switch using a customer supplied standard Cat-5 patch cable. Connect port 1 on the Succession Media Gateways, shown in Figure 43 on [page 105](#) to the data network switch.

The customer supplied straight-through cable connects directly to the customer's LAN.

Figure 43
Succession Media Gateway to Succession Call Server link connectors



End of Procedure

Succession Call Server to ELAN connection

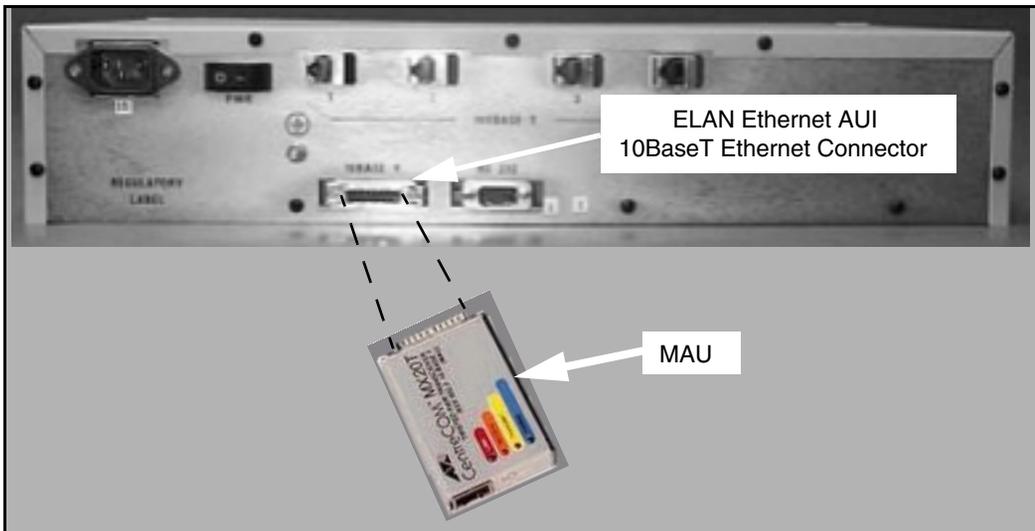
Procedure 14

Connecting the Succession Call Server to ELAN

- 1 Connect the MAU to the Succession Call Server AUI (see Figure 44).
- 2 Connect a standard Cat-5 patch cable between the MAU RJ-45 Ethernet connector and an ELAN port on the data network switch.

Note: The Ethernet MAU is included in the cable kits for the Succession Call Server.

Figure 44
Ethernet cable connection on the Succession Call Server



————— End of Procedure —————

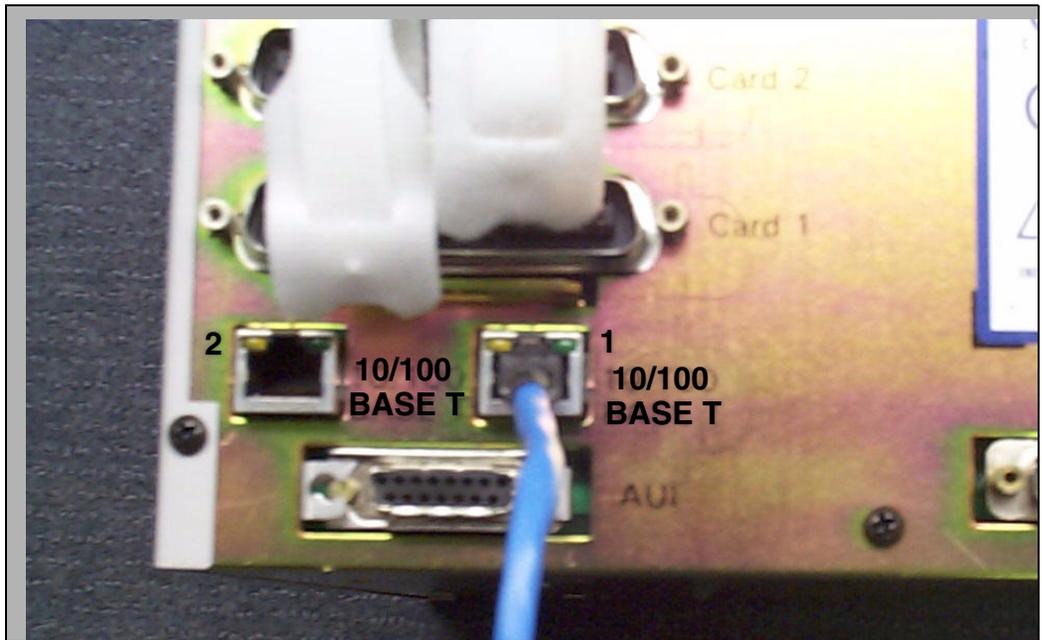
Succession Media Gateway to ELAN connection

Procedure 15

Connecting the Succession Media Gateway to the ELAN

- 1 Connect one end of a standard Cat-5 patch cable to the 10/100BaseT ELAN Port 1 on the back of the Succession Media Gateway (Figure 45).
- 2 Connect the other end of the standard Cat-5 patch cable to an RJ-45 ELAN port on the data network switch.

Figure 45
10/100 BaseT connectors



————— End of Procedure —————

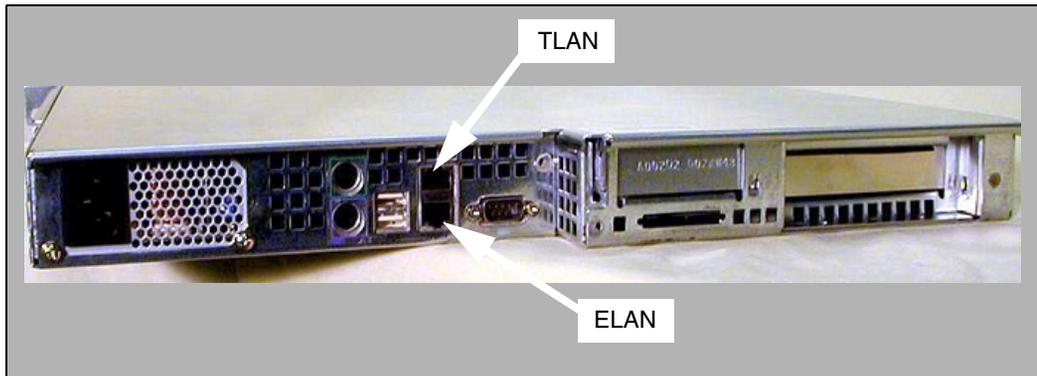
Succession Signaling Server to the ELAN connection

Procedure 16

Connecting the Succession Signaling Server to the ELAN

- 1 Connect one end of a standard Cat-5 patch cable to the ELAN (bottom) on the back of the Succession Signaling Server (Figure 46).
- 2 Connect the other end of the standard Cat-5 patch cable to an RJ-45 ELAN port on the data network switch.

Figure 46
Succession Signaling Server ELAN and TLAN connectors



End of Procedure

Succession Signaling Server to the TLAN connection

Procedure 17

Connecting the Succession Signaling Server to the TLAN

- 1 Connect a standard Cat-5 patch cable to the TLAN (top) on the back of the Succession Signaling Server (Figure 46).
- 2 Connect the other end of the standard Cat-5 patch cable to an RJ-45 TLAN port on the data network switch.

End of Procedure

Voice Gateway Media Card to ELAN and TLAN connections

The Shielded 50-pin to Serial/ELAN/TLAN Adapter provides access to the TLAN and ELAN Ethernet Ports. The adapter breaks out the signals from the I/O connector to the following:

- ELAN (management) port
- TLAN (telephony) port
- one RS-232 (local console) port

Figure 47
Diagram of the Shielded 50-pin to Serial/ELAN/TLAN Adapter

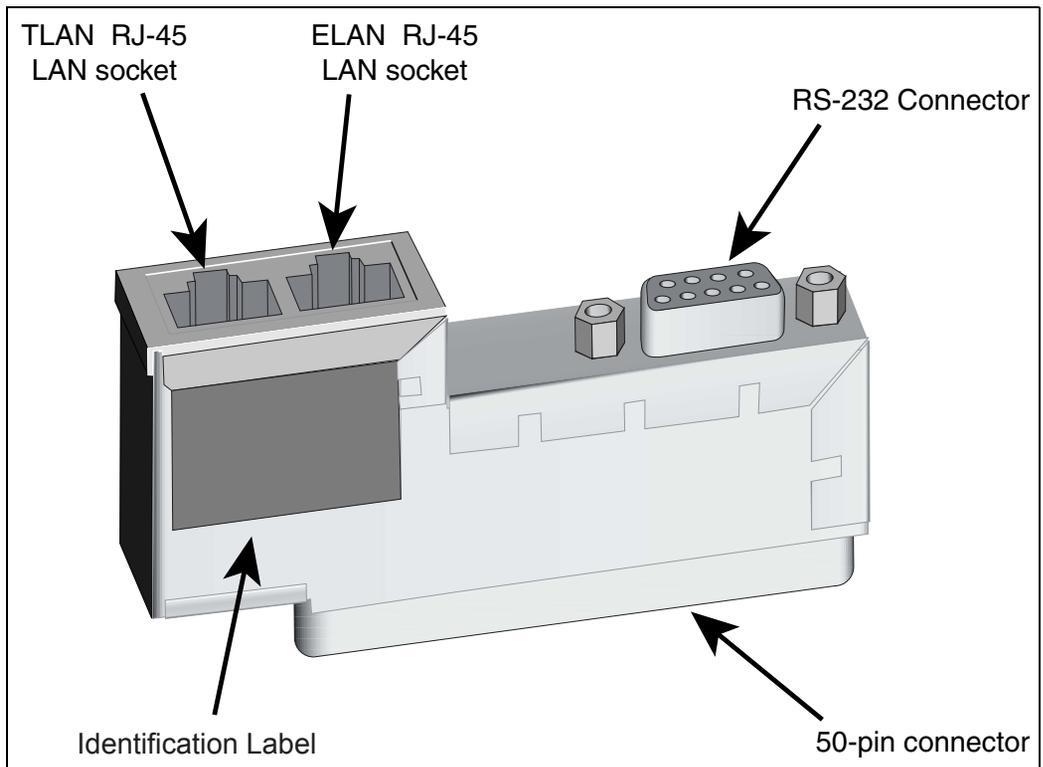
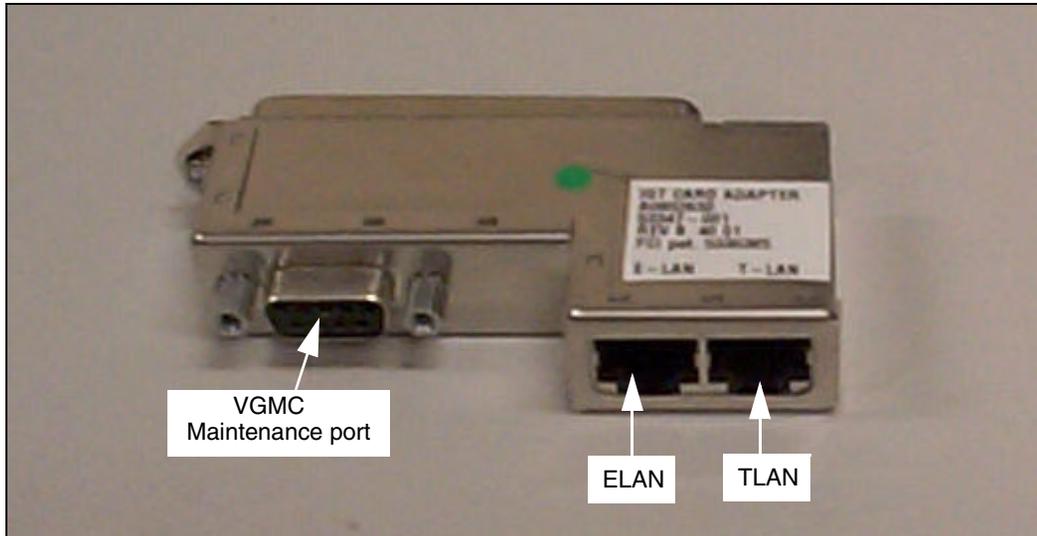


Figure 48
Shielded 50-pin to Serial/ELAN/TLAN Adapter



Procedure 18

Insert the Shielded 50-pin to Serial/ELAN/TLAN Adapter on to each VGMC

- 1 Open the Voice Gateway Media Card package NTDU41BA.
- 2 Remove the Shielded 50-pin to Serial/ELAN/TLAN Adapter.
- 3 Save the other items from the package for use in “Installing a Voice Gateway Media Card” on [page 254](#).
- 4 Insert the adapter, shown in Figure 48, into the connector Card 1, Card 2, Card 3, or Card 4 that corresponds to the VGMC location.

For example, Figure 49 on [page 111](#), the VGMC is installed in card slot 1. Therefore, the Adaptor is installed in connector Card 1.

End of Procedure

Voice Gateway Media Card to ELAN connection

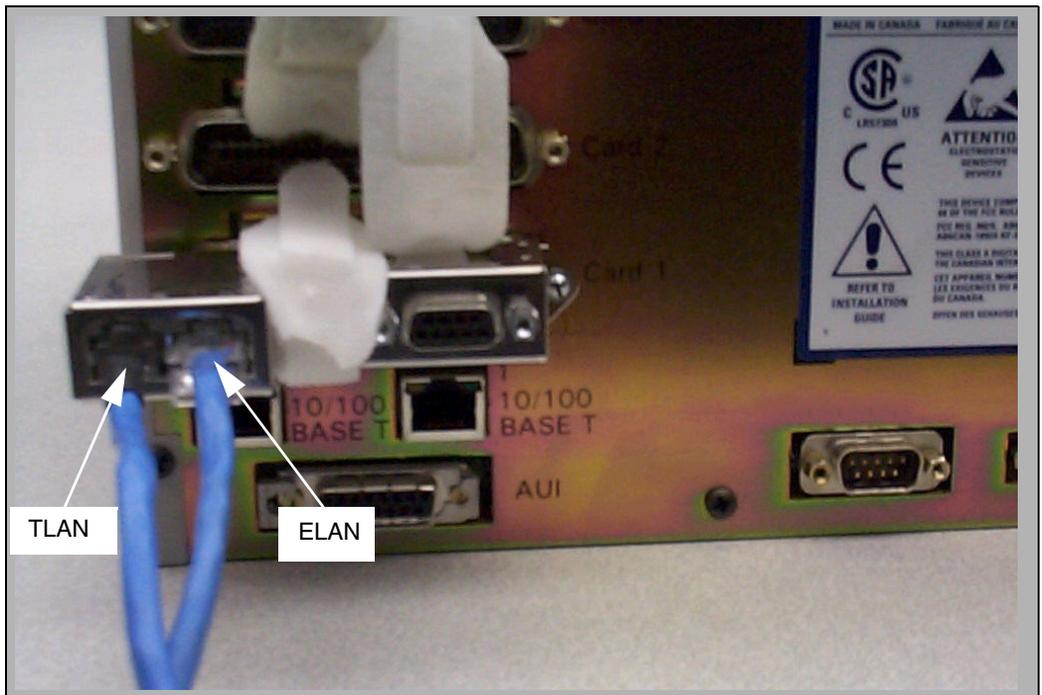
Procedure 19

Connect the VGMC to the ELAN

- 1 Connect a standard Cat-5 patch cable to the ELAN port on the Adaptor (Figure 49).
- 2 Connect the other end of the standard Cat-5 patch cable to an RJ-45 ELAN port on the data network switch.

Figure 49

Shielded 50-pin to Serial/ELAN/TLAN Adapter on the Succession Media Gateway



End of Procedure

Voice Gateway Media Card to the TLAN connection

Procedure 20

Connecting the VGMC to the TLAN

- 1 Connect a standard Cat-5 patch cable to the TLAN port on the Adaptor (see Figure 49 on [page 111](#)).
- 2 Connect the other end of the standard Cat-5 patch cable to an RJ-45 TLAN port on the data network switch.

End of Procedure

Succession Media Gateway to the Succession Media Gateway Expansion connection

This procedure describes how to connect a Succession Media Gateway Expansion to the Succession Media Gateway.

The Expansion Cable Kit (NTDK89) contains two NTDK95 cables, that connect the Succession Media Gateway Expansion to the Succession Media Gateway:

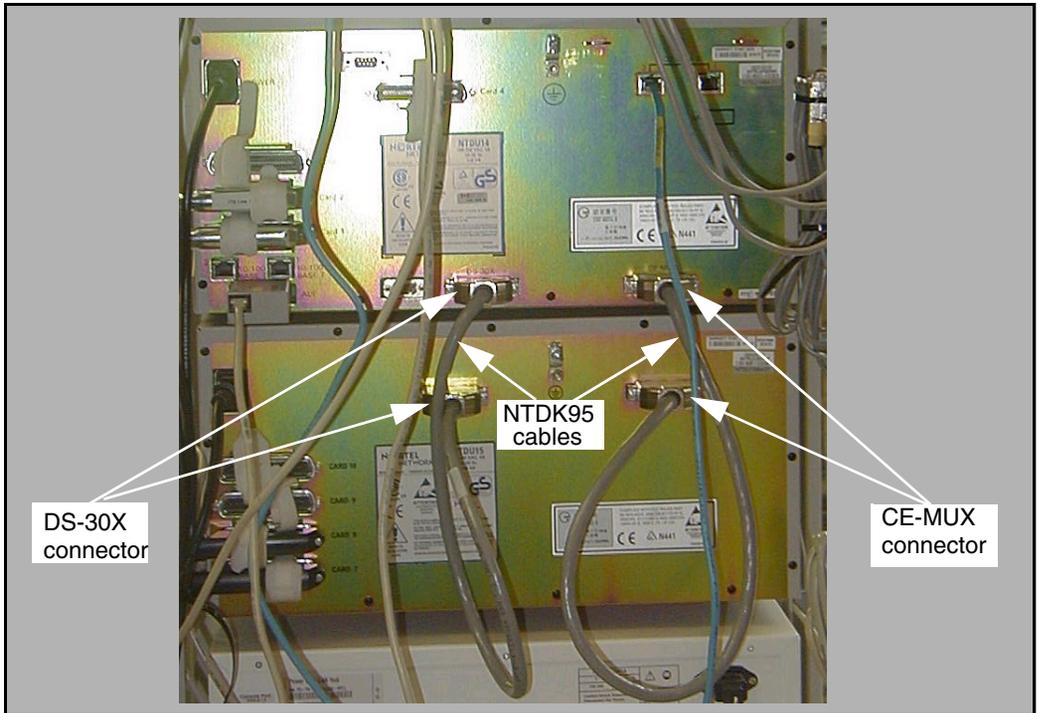
- one cable provides DS-30X connectivity
- the other cable provides CE-MUX connectivity to slot 10 only

Procedure 21

Connecting a Succession Media Gateway to a Succession Media Gateway Expansion

- 1 Connect one NTDK95 cable from the CE-MUX connector on the back of the Succession Media Gateway to the CE-MUX connector on the back of the Succession Media Gateway Expansion.
- 2 Tighten the screws on the connectors.
- 3 Connect the other NTDK95 cable from the DS-30X connector on the back of the Succession Media Gateway to the DS-30X connector on the back of the Succession Media Gateway Expansion.
- 4 Tighten the screws on the connectors. Figure 50 on [page 113](#) shows the Succession Media Gateway and Succession Media Gateway Expansion connected with the two NTDK95 cables.

Figure 50
The Succession Media Gateway and Succession Media Gateway Expansion connections



End of Procedure

Succession Call Server software installation

Contents

This section contains information on the following topics:

Introduction	115
Software Installation Program overview	116
Installing the Succession Call Server software	119
Set system time and date	127

Introduction



CAUTION

Complete the procedures in the “System terminal setup and connections” chapter before attempting to do the “Succession Call Server software installation”.

This chapter describes the Software Installation Program and how to install system software on the Succession Call Server SSC card.

This chapter contains the following procedures:

- Procedure 22 "Starting a new system installation" on [page 119](#).
- Procedure 23 "Installing the software" on [page 121](#).
- Procedure 24 "Performing a data dump on the Succession Call Server" on [page 127](#).
- Procedure 25 "Setting system time and date" on [page 127](#).

Software Installation Program overview

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

Starting the program

The Software Installation Program must run from TTY 0 (port 0 on card 0).

On a new system with a pre-installed software daughterboard, the Software Installation Program runs automatically.

Function selection

The Software Installation Program is menu-driven. The main menu provides the core functionality of the program. The Software Installation Program includes the following key functions:

- installs software in a new system
- upgrades and modifies software in an existing system
- uses utilities to work with archived databases, review data, back up data, undo an installation in progress, and clear unwanted data

The Software Installation Program has the following additional options:

- **Clear Upgrade Information:** If the installation terminates after you enter the keycodes, but before the installation is complete, you can abort the installation with the “Clear Upgrade Information” option.
- **Confirm Upgrade Information:** This option enables you to review selected installation options. You can use the “Confirm Upgrade Information” after the system validates the keycodes and before the installation is complete.
- **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.

Keycodes

After you have made all installation selections, you must enter valid keycodes. The system validates the keycode. If you enter an invalid keycode, the installation function does not continue.

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

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

A security keycode system protects the installation of software, feature set, and Incremental Software Management (ISM) parameters. The installation does not continue unless correct keycodes are entered.

Keycodes are required for each new installation, and for existing system upgrades. Keycodes are on a Keycode Data Sheet, which 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.

Note: Contact your support group if the Keycode Data Sheet is missing.

The Software Installation Program validates the keycodes. If the keycodes are valid, the installation function continues.

If the system rejects the keycodes that you enter, the installation function stops. Take one or more of the following actions:

- Check the keycodes and make sure you entered the correct keycodes.
- Check the software and make sure that it is the correct version for the site.
- Check the feature set and make sure you entered the correct data.
- Check the ISM parameters and make sure you entered the correct data.
- Stop the installation and call your support group.

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

Feature set and ISM parameters

The Software Installation Program enables administrators to install and enable the Succession 1000 system. A feature set, such as Basic Services, Advanced Services, and Premium Services, has an associated list of software packages and ISM parameters. The Software Delivery Card can include several pre-configured feature sets. The Software Installation Program also enables administrators to add individual packages from the feature set and change ISM system parameters.

Additions and changes are keycode controlled. Therefore, the packages and ISM parameters must match those corresponding to the site's keycodes.

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

AUX ID

Enter the AUX ID using the Software Installation Program. For new Succession 1000 sites, the AUX ID is the system security ID.

Customer database

The Software Installation Program enables an administrator to install a customer database from one of the following sources:

- 1 Pre-configured database.** The Software Delivery card can include several pre-configured databases and their associated feature sets. In addition, a minimal database is provided containing basic system configuration information with no customer data.
- 2 Archived database.** The Software Installation Program enables the archiving of various databases which can be used later at Succession 1000 sites. It also enables multiple databases to be configured off-site and then installed ready-to-use at customer sites.
Note: Off-site programming of databases is subject to all security keycode restrictions. The off-site system must either use the Security Device that is installed in the Succession 1000 system at the customer site, or must have its own keycodes for the feature set used.
- 3 Remote restored database.** A database can be restored remotely using the Overlay 143 CCBP remote restore command.
- 4 Backed up database.** This option enables the copy on the backup flash drive to be installed. It is provided to recover a customer database if the customer database on the primary flash drive becomes corrupted.

Installing the Succession Call Server software

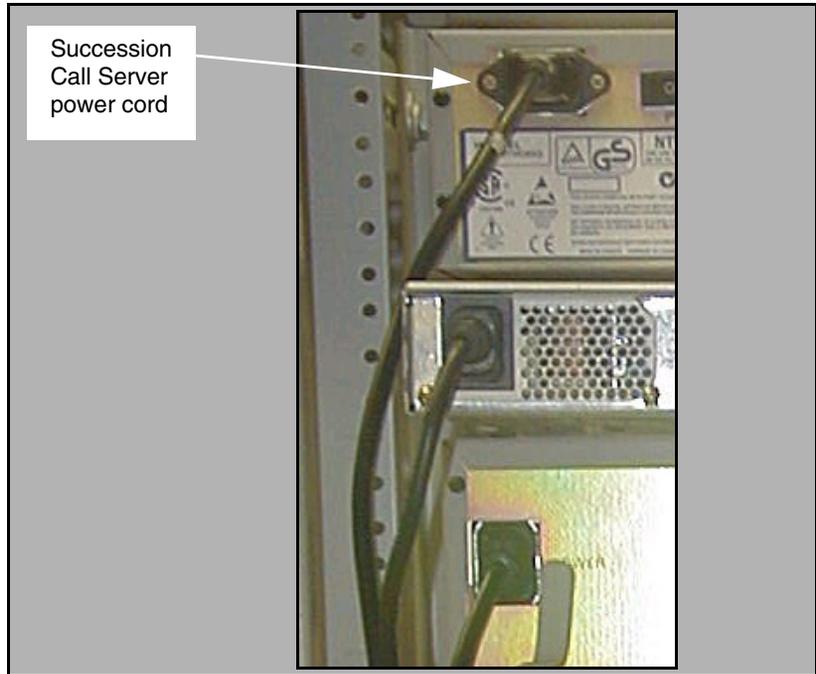
Ensure all the necessary hardware is installed in the system and connected. Check all connections and make sure all the SSC cards are correctly installed.

Procedure 22

Starting a new system installation

- 1 Test the power outlet.** Make sure that the correct voltage is present before you plug the power cord into the outlet. The source must match the label on the back of the equipment.
- 2 Connect the power cord from the power connectors on the back of the Call Server to an ac power source.** See Figure 51 on [page 120](#).

Figure 51
Power connectors



- 3 Ensure that the system terminal (TTY) is connected to the cable marked "port 0" on the NTBK48 3-port cable of the Succession Call Server.
- 4 Turn the Succession Call Server power switch to "ON".
- 5 Observe the system terminal screen. A menu-driven program called the "Software Installation Program" runs.

End of Procedure

Procedure 23
Installing the software

The following is displayed:

```
SOFTWARE INSTALLATION PROGRAM
*****
Verify
Security ID: xxxxxxxx
*****

Technology Software Installation Main Menu:
1. Media Gateway/IPExpansion Cabinet
2. Call Server/Main Cabinet
[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection:
Release:
Created: Weekday Month Day hh:mm:ss EDT Year
```

If the year of the system clock is not in the range 1995-2095 (for example, the system clock was never set):

- 1 Enter the current system date and time at the prompts:

```
Current system time and date:
xx/xx/xxxx xx:xx:xx
```

- 2 Enter new time (**hh:mm:ss**): for example, **10:15:30**
- 3 Enter new date (**mm/dd/yy**): for example, **09/03/03**

```
10:15:30 -- 9/3/2003 is the new system time and date.
Is this correct? (y/n/[a]bort):y
```

- 4 Select option **2** for the **Call Server/Main Cabinet** software installation.

The following is displayed:

```
Call Server/Main Cabinet Software Installation Main
Menu:
```

```
1. New Install or Upgrade from Option11/11E - 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
```

Enter Selection:

- 5 Select option **1** for new install from pre-programmed Software Daughterboard, or option **4** for new system installation from Software Delivery Card.

The following is displayed:

```
Succession Enterprise Software Rls 300x will be
installed.
```

```
Does this System have a Signaling Server ? :
(y/n[a]bort) : _
```

- 6 Enter **y** for the Succession Signaling Server prompt.

7 Select the appropriate feature set (see Keycode Data Sheet).

Select Feature Set You Wish to Enable:

1. AsiaPac Basic Services (ntm400cc)
2. AsiaPac Advanced Services (ntm400dc)
3. AsiaPac Premium Services (ntm400ec)
4. CALA Basic Services (ntm400fc)
5. CALA Advanced Services (ntm400gc)
6. CALA Premium Services (ntm400hc)
7. EMEA Basic Services (ntm400jc)
8. EMEA Advanced Services (ntm400kc)
9. EMEA Premium Services (ntm400lc)
10. N.America Basic Services (ntm400mc)
11. N.America Advanced Services (ntm400nc)
12. N.America Premium Services (ntm400pc)
13. Retain Current Feature Set

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

Enter Selection: **12**

Feature Set Selection: N.America Premium Services

8 Add packages now, if required (see Keycode Data Sheet).

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

9 Select database to install (see Keycode Data Sheet)

Select Database to Install:

1. Pre-Configured database - N.America Premium Services
2. Basic Configuration
3. Archived database
4. Quick Configuration for Demo only

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

Enter Selection: **1**

Database Selection: Pre-Configured database -
N.America Premium Services

10 Change ISM parameters now, if required (see Keycode Data Sheet).

ISM Parameters will be set to:

TNS	(5000)
ACDN	(300)
AST	(1000)
LTID	(0)
RAN CON	(0)
RAN RTE	(500)
MUS CON	(0)
BRAND	(0)
ACD AGENTS	(10)
ANALOGUE TELEPHONES	(0)
ATTENDANT CONSOLES	(16)
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)

Do you wish to change any ISM parameters?

(y/n/[a]bort): **n**

11 Change the AUX ID now, if required (see Keycode Data Sheet).

```
Security ID: xxxxxxxx
Current AUX ID: xxxxxxxx

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

12 Select the M3900 Language Set (see Keycode Data Sheet).

```
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
```

13 Confirm the installation information.

```
New Installation Information Summary:
Security ID           : xxxxxxxx
Aux ID               : xxxxxxxx
Cabinet Type         : Call Server
Feature Set          : N.America Premium Services
Additional Pkgs      : none
Database             : Pre-Configured database -
N.America Premium Services

                                OLD      NEW
S/W Release           : 2xxx 2xxx
ISM Parameters
TNS                   : (5000)
ACDN                  : (300)
AST                   : (1000)
LTID                  : (0)
RAN CON               : (0)
RAN RTE              : (500)
MUS CON              : (0)
BRAND                 : (0)
ACD AGENTS            : (10)
ANALOGUE TELEPHONES  : (0)
```

```
ATTENDANT CONSOLES      : (16)
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)
M3900 Language Set      : 1. Global 10 languages
```

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

- 14** Do not enable Automatic Centralized Software Upgrade. This feature is only applicable during upgrades.

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

- 15** Enter the keycodes from the Keycode Data Sheet.

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

Keycode validation successful.

- 16** Enter **y** to perform the installation.

```
*** 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): y
```

The following message displays when the software installation completes successfully.

```
Installation completed successfully.
```

The system then reboots.

```
Rebooting...
```

Once the installation program completes, messages appear on the terminal screen. When the message “INIXXX” appears, the system is operational.

End of Procedure

Procedure 24

Performing a data dump on the Succession Call Server

Back up the database using a data dump.

- 1 Log in to the Succession Call Server.
 - a. Enter **LOGI** and press **<cr>**.

The system response is **PASS?**
 - b. Enter the default password, **0000** and press **<cr>**.
- 2 To access LD 43, enter **LD 43** and press **<cr>**.
- 3 Enter **EDD**.
- 4 Exit from LD 43, enter the command:

End of Procedure

Set system time and date

Element Manager or OTM can also be used to set the system time and date.

Procedure 25

Setting system time and date

- 1 Log in to the Succession Call Server.
 - a. Enter **LOGI** and press **<cr>**.

The system response is **PASS?**
 - b. Enter the default password, **0000** and press **<cr>**.
- 2 To access LD 2, enter **LD 2** and press **<cr>**.
- 3 To set the time and date, enter the command:

STAD <day> <month> <year> <hour> <minute> <second>

Where:

<day> = the day of the month (1-31).

<month> = the month number (1-12).

<year> = the year, in 4-digit or 2-digit form (see Note on [page 128](#)).

<hour> = the hour of the day (0-23).

<minute> = the minutes (0-59).

<second> = the seconds (0-59).

Sample entry:

STAD 2 9 2002 16 47 0

- 4 Print the current time and date, enter **TTAD**.

The current time and date is printed, for example:

MON 02 09 2002 14 47 05

Note: Except for the year, the other entries in the time of day output are two-digit numbers. The year can be any year from 1901 to 2099 inclusive. It can be input as a full four-digit field or as a two-digit short form. The two-digit short form is assumed to be in the range 1976 to 2075 and the appropriate addition is made when calculating the day-of-week and leap years.

- 5 Exit from LD 2, enter the command:

End of Procedure

System terminal setup and connections

Contents

This section contains information on the following topics:

Introduction	129
System terminal ports	130
Succession Call Server and Succession Media Gateway SDI ports	136
Succession Signaling Server maintenance ports	140
Voice Gateway Media Card maintenance ports	142

Introduction

**CAUTION**

Complete the procedures in the “System connections” chapter before attempting to install the “System terminal setup and connections”.

This chapter describes how to connect system terminals, and how to set up modems.

This chapter contains the following procedures:

- Procedure 27 "Connecting SDI ports on the Succession Call Server" on [page 138](#).
- Procedure 26 "Setting the TTY terminal" on [page 131](#).

System terminal ports

System terminal ports are available on the Succession Call Server, Succession Media Gateways, Succession Signaling Server, and VGMCs. The system terminal ports are used for software installation and other maintenance.

It can be convenient to have more than one system terminal connected to the system components during installation and configuration.

Modems can be connected to system terminal ports for remote access.

Modem setup requirements

Modems connected to the Succession 1000 system are set as follows:

- Carrier Detect (CD): Active if carrier detected on incoming call
- Clear to Send (CTS): Normal operation or forced active
- Hardware and software: Disabled flow control

The ports on the Succession 1000 system can disable if devices connected to the ports generate additional “garbage” characters. For this reason, do not use modems in the following modes:

- Loopback
- Auto Echo
- Self Test

Note: The system terminal (SDI) ports are designed for use with “dumb” modems. If IP “Intelligent” modems are used, the modems must not enter into modes of operation that send additional characters to the system.

Table 5 lists some of the problems that can be related to modems.

Table 5
Modem problems

Problem	Solution
CDR is not printing on an SDI port configured as 8 bits, no parity, and 1 stop bit.	Change the modem setup to 7 bits, no parity, 1 stop bit, or add MTC or SCH to the SDI user prompt.
Modem is not communicating with the Succession 1000 system when the User is MTC, BUG, or CTY. (The default setting of 8 bits, no parity, 1 stop bit is incompatible with the modem).	Change the modem setup to 7 bits or the parity to EVEN/ODD.

Terminal setup

The terminal can be set up any time, except during data transmission. Do not configure the terminal during data transmission to avoid potential data loss.

Table 52 on [page 133](#), Table 53 on [page 134](#), and Table 54 on [page 135](#) provide setup values. Use Procedure 26 to set up the terminal.

Procedure 26 **Setting the TTY terminal**

- 1 Turn on the power for the terminal.
- 2 Enter the setup mode by pressing the **<SETUP>** key located on the top row of the special function keys. The terminal screen displays the current setup values.

- 3 Change the value in each field on each setup screen as necessary. Use the keys listed in Table 6 to view and change setup values.

Table 6
SDI key function

Key	Function
Arrow key	Move from field to field
<Enter>	Scroll through possible values or cause requested action to occur (depends on type of field)
<Next Screen>	Move to next setup screen
<Prev Screen>	Move back to last screen

- 4 Save changes by returning to the *General setup* screen, moving the cursor to the Saved field, and pressing <Enter>.

End of Procedure

Figure 52
HP700/32 setup values

Global set-up screen			
Host Port	1	Keyboard	U.S.
Background	Dark	Message Translations	English
Screen Saver	10 Min	Setup Translations	English
Refresh Rate	72 Hz	Clear Display	
Key Click	Yes	Clear Comm	
User Set-up Screen			
Smooth Scroll	Jump scroll	Display Width	80
Cursor Type	Blink Line	Display Width Allowed	80 or 132
Cursor	Off	Char Cell Height	16
2nd Message Line	On	Clr on Width Change	Yes
Message Line	On	Aux Mode	Off
Status Line	On	Aux to Host	Off
On Line	Yes	Print Terminator=FF	No
Local Echo	Off	Logical Page Size	24
Auto Wrap	Off	Number of Pages	1
Auto Linefeed	Off		
Display Ctrl Codes	Off		
Emulation Set-up			
Emulation	VT320	Cursor Keys	Normal
Terminal Id	VT220	Print Scroll Region	Off
Control Codes	7-bit	User Features Locked	No
Characters Mode	8-bit	User Keys Locked	No
Preferred Char Set	DEC Supplemental	Data Procession Keys	No
Key Pad Mode	Application		
Port 1 Set-up			
Communications	Full Duplex	Limited Transmit	Off
Data Length	8-bits	DSRI	No
Parity	None	CTS	Ignore
Stop Bits	1	CD	Ignore
Xmit Baud	2400	Break Disconnect	170ms
RecvBaud	=Xmit	Disconnect Delay	Never
Xmit pace	Xoff	Aux printer Type	National
Recv Pace	Xoff at 128		
Port 2 Set-up			
Communications	Full Duplex	Xmit pace	Xon/Xoff
Data Length	8-bits	Recv Pace	Xoff at 128
Parity	None	Limited Transmit	Off
Stop Bits	1	Break Duration	170ms
Xmit Baud	9600	Aux Printer Type	National
RecvBaud	=Xmit		
Keyboard Set-up			
Lock Key	Caps Lock	Warning Bell	Yes
Kbd Lock Enable	Yes	Auto Answerback	Yes
Save Tabs	Yes	Answerback =	
Auto Repeat	Yes	Conceal Answerback	No
Margin Bell	Yes	Do not set any tabs or programmed keys.	

Figure 53
VT420 setup values

Global Set-Up On Line Sessions on Comm1 CRT Saver	Comm1=RS232 Printer Shared	70Hz
Display Set-Up 80 Columns Interpret Controls Auto Wrap Jump Scroll Dark Screen Cursor Block Style Cursor	No Status Display Cursor Steady 3x24 pages 24 Lines/Screen Vertical Coupling Page Coupling Auto Resize Screen	
General Set-up VT400 Mode, 7-bit Controls User Defined Keys Unlocked User Features Unlocked 8-bit Characters Application Keypad	Normal Cursor Keys No New Line UPSS DEC Supplemental VT420 ID When Available Update	
Communications Set-Up Transmit=2400 Receive=Transmit Xoff=64 8bits, No Parity 1 Stop Bit No Local Echo Data Leads Only	Disconnect, 2 s Delay Limited Transmit No Auto Answerback Answerback= Not Concealed Modem High Speed = ignore Modem Low Speed = ignore	
Printer Set-Up Speed=2400 No printer to Host Normal Print Mode XOFF	8bits, No Parity, 1 Stop bit Print Full Page Print National Only No Terminator	
Keyboard Set-up Keyboard Set-up Typewriter Keys Caps Lock Auto Repeat Keyclick High Margin Bell Warning Bell High Character Mode <X] Delete	Local Compose Ignore Alt F1 = Hold F2 = Print F3 = Set-Up F4 = Session F5 = Break ,< and .> Keys <-> Key '-Key	
Tab Set-Up Leave this screen at the default values		

Figure 54
VT220 setup values

Global Set-Up	Comm1=RS232	
On Line		70Hz
Sessions on Comm1	Printer Shared	
CRT Saver		
Display Set-Up	Light Text, Dark Screen	
80 Columns	Cursor	
Interpret Controls	Block Style Cursor	
Auto Wrap		
Jump Scroll		
General Set-up	Application Keypad	
VT200 Mode, 7-bit Controls	Normal Cursor Keys	
User Defined Keys Unlocked	No New Line	
User Features Unlocked		
Multinational		
Communications Set-Up	No Local Echo	
Transmit=2400	Data Leads Only	
Receive=Transmit	Disconnect, 2 s Delay	
Xoff at 64	Limited Transmit	
8bits, No Parity		
1 Stop Bit		
Printer Set-Up	Print Full Page	
Speed=9600	Print National Only	
Normal Print Mode	No Terminator	
8bits, No Parity,		
1 Stop bit		
Keyboard Set-up	Warning Bell	
Typewriter Keys	Break	
Caps Lock	Answerback=	
Auto Repeat	Not Concealed	
Keyclick High		
Margin Bell		
Tab Set-Up Screen		
Leave this screen at the default values		

Succession Call Server and Succession Media Gateway SDI ports

You can use a switch setting on the SSC card's faceplate to control the baud rate for port 0. Use LD 17 to configure port 1 and port 2. Make sure the baud rate and device option settings are set correctly.

- Use Port 0 for software installation and upgrades. Port 0 is the only system terminal (SDI) port that you can use for software installation and upgrades.
- You can use all three ports on the SSC card to connect terminals or modems.
- Use an NTBK48 3-port SDI cable with the SSC card.

Table 7 shows the SDI port numbering.

Table 7
SDI port numbering

Port	Use	Baud rate	Data bits	Stop bits	Parity
0	MTC/SCH/BUG	Set by a DIP switch	8	1	None
1	MTC/SCH/BUG	1200	8	1	None
2	MTC/SCH/BUG	1200	8	1	None

Refer to Table 8 on [page 137](#) for SDI port numbering for the Succession components.

Table 8
SDI port numbering

Chassis	Normal mode	Survival mode
Succession Call Server	0, 1, 2	n/a
Succession Media Gateway # 1	3, 4, 5	0, 1, 2
Succession Media Gateway # 2	6, 7, 8	0, 1, 2
Succession Media Gateway # 3	9, 10, 11	0, 1, 2
Succession Media Gateway # 4	12, 13, 14	0, 1, 2

Note: The default baud rate of the SSC card is 1200 bps; the maximum data rate is 19,200 bps. When you change the DIP switch on the faceplate, make sure only one baud rate switch is set to ON. See Table 8 on [page 137](#).

Procedure 27 on [page 138](#) and Procedure 28 on [page 139](#) describes how to connect a terminal, modem, and other devices, such as CDR devices and additional TTYs, to the Succession Call Server and Succession Media Gateways.

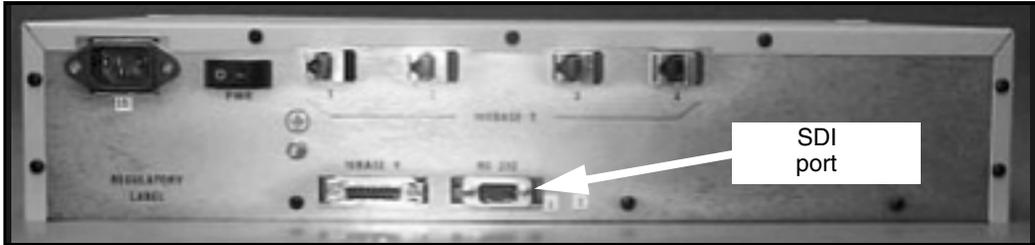
Procedure 27

Connecting SDI ports on the Succession Call Server

- 1 Connect the NTBK48 3-port SDI cable to the 9-pin SDI port (RS-232) at the back of the Succession Call Server (see Figure 55).

Figure 55

SDI port access to the Succession Call Server SSC card



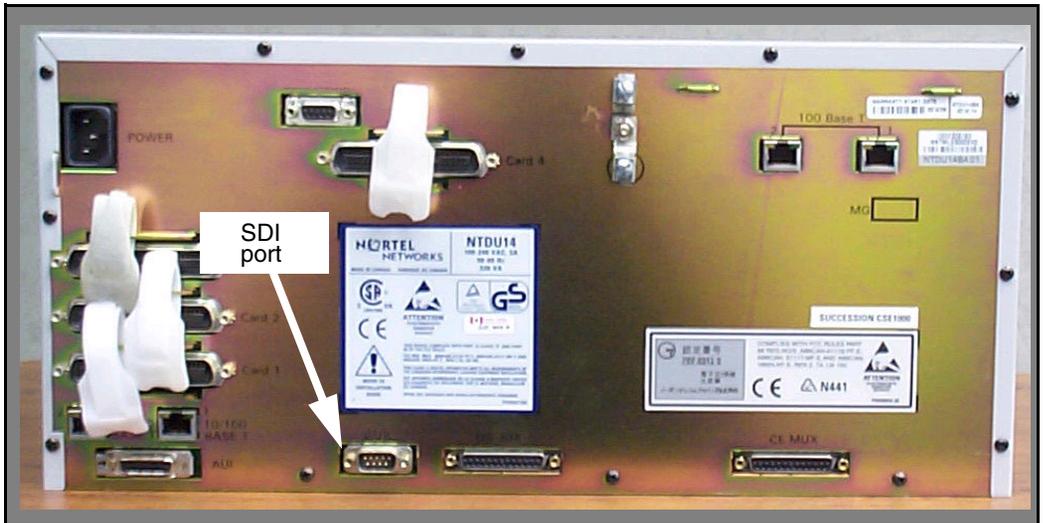
- 2 Connect the system terminal to the cable marked "port 0" on the NTBK48 3-port cable. You require a Modem Eliminator Adapter to connect the Succession 1000 system to a TTY terminal. This adapter is included in the cable kits for the Succession Call Server and the Succession Media Gateway.
- 3 If the system is accessed remotely, connect the system modem to the cable marked "port 1" on the NTBK48 cable.
- 4 When instructed, connect the modem to an outside line.
- 5 When instructed, test the modem for correct operation when the system is operating.

Note: You can use the remaining ports for other equipment, such as CDR devices or TTYs.

End of Procedure

Procedure 28**Connecting SDI ports on the Succession Media Gateways**

- 1 Connect the NTBK48 3-port SDI cable to the 9-pin SDI port (RS-232) at the back of the Succession Media Gateways (see Figure 56).

Figure 56**SDI port access to the Succession Media Gateway SSC card**

- 2 Connect the system terminal to the cable marked “port 0” on the NTBK48 3-port cable. You require a Modem Eliminator Adapter to connect the Succession 1000 system to a TTY terminal. This adapter is included in the cable kits for the Succession Call Server and the Succession Media Gateway.
- 3 If the system is accessed remotely, connect the system modem to the cable marked “port 1” on the NTBK48 cable.
- 4 When instructed, connect the modem to an outside line.
- 5 When instructed, test the modem for correct operation when the system is operating.

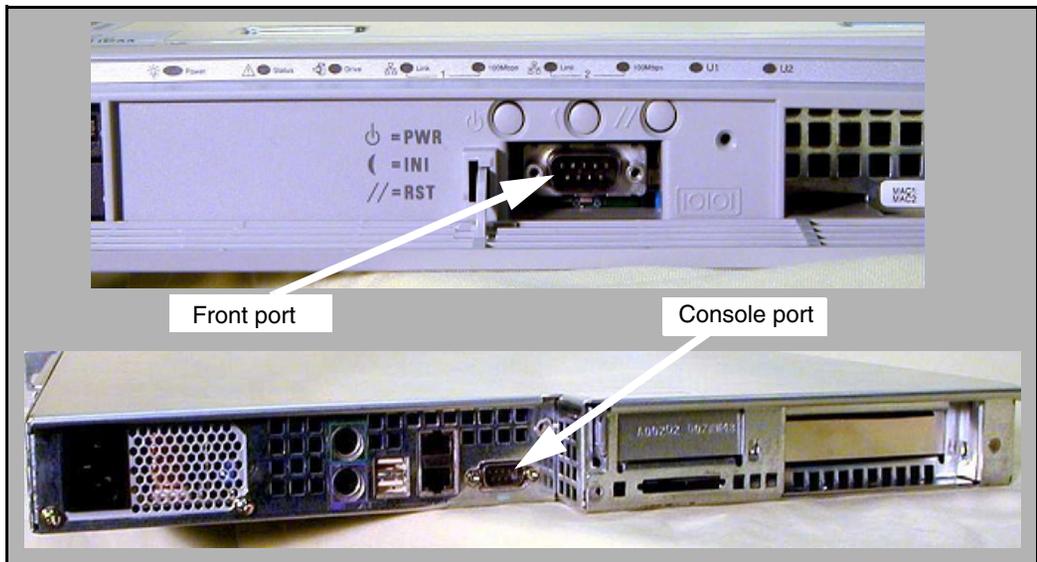
Note: You can use the remaining ports for other equipment, such as CDR devices or TTYs.

End of Procedure

Succession Signaling Server maintenance ports

The Succession Signaling Server has two maintenance ports, as shown in Figure 57 on [page 140](#). Both ports can be used for maintenance. However, the console port is used during the Succession Signaling Server software installation and basic configuration.

Figure 57
Maintenance port location on the front and rear of the Succession Signaling Server

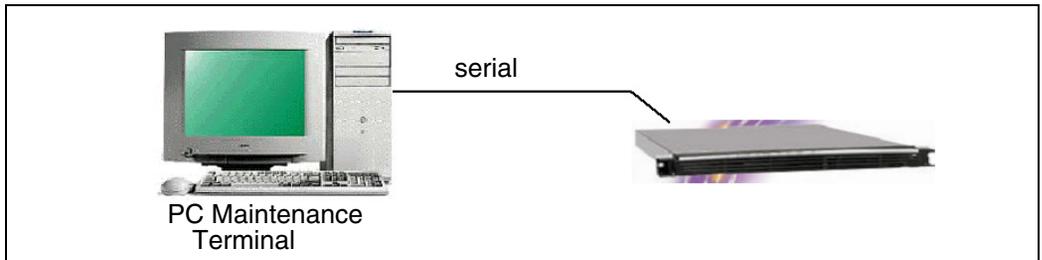


Procedure 29**Connecting the maintenance PC to a Succession Signaling Server**

- 1 Connect a DTE–DTE null modem serial cable (supplied with the Succession Signaling Server) from the back of the Succession Signaling Server to a PC workstation.

Note: The Succession Signaling Server is shipped with the Admin/Serial port set to 19200 Bit/s.

During the initial installation, the Succession Signaling Server requires the PC Maintenance terminal settings as provided in Step 2.

Figure 58**Maintenance to Succession Signaling Server connection**

- 2 The COM port on the PC Maintenance terminal should be set as follows:
 - Terminal type: VT100
 - Speed: 19200
 - Data bits: 8
 - Parity: none
 - Stop bits: 1
 - Flow control: none

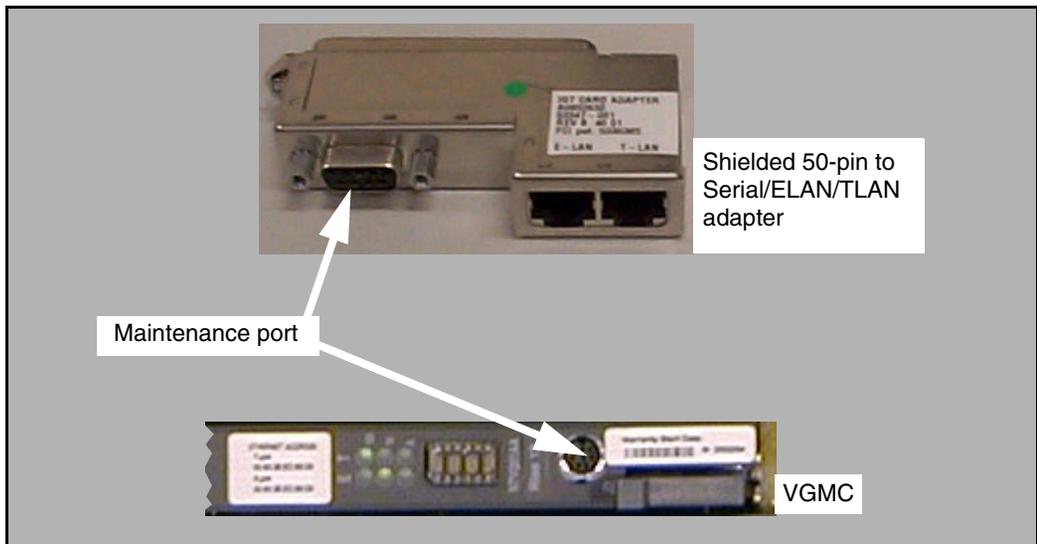
After the installation, the Succession Signaling Server maintenance port speed can be changed. See *Signaling Server: Installation and Configuration* (553-3001-212).

End of Procedure

Voice Gateway Media Card maintenance ports

The maintenance ports on a Voice Gateway Media Card can be used for basic configuration or maintenance. Figure 59 shows the maintenance port location on the Voice Gateway Media Card and the Shielded 50-pin to Serial/ELAN/TLAN Adapter.

Figure 59
Maintenance port location on the Voice Gateway Media Card and the Shielded 50-pin to Serial/ELAN/TLAN Adapter



The VGMC faceplate provides a female 8-pin mini-DIN serial maintenance port connection. The maintenance port on the Shielded 50-pin to Serial/ELAN/TLAN Adapter provides an alternative to the faceplate maintenance port.



CAUTION

Do not connect maintenance terminals or modems to the faceplate and I/O panel DB-9 male serial maintenance port at the same time.

Succession Call Server and Succession Media Gateway network configuration

Contents

This section contains information on the following topics:

Introduction	143
Configuring the 100BaseT Ethernet ports on the Succession Call Server and Succession Media Gateways.	144
Configuring the ELAN ports of the Succession Call Server and Succession Media Gateways	148
Auto-negotiation set up	154

Introduction



CAUTION

Complete the procedures in the “Succession Call Server software installation” chapter before attempting to do the “Succession Call Server and Succession Media Gateway network configuration”.

This chapter describes how to configure the Succession Call Server and Succession Media Gateways Ethernet ports, and the ELAN IP addresses using LD 117. For details on LD 117, see the *Software Input/Output: Maintenance* (553-3001-511).

This chapter contains the following procedures:

- Procedure 30 "Login and accessing LD 117" on [page 144](#).
- Procedure 32 "Configuring the Succession Media Gateway 100BaseT Ethernet ports" on [page 146](#).
- Procedure 33 "Configuring the Succession Call Server ELAN IP" on [page 148](#).
- Procedure 34 "Configuring the Succession Media Gateway ELAN IPs" on [page 150](#).
- Procedure 35 "Updating the network database and download to all Succession Media Gateways" on [page 154](#).

Configuring the 100BaseT Ethernet ports on the Succession Call Server and Succession Media Gateways

All procedures in this chapter are performed on the Succession Call Server using LD 117.

Replace the sample entry IP addresses with the IP addresses from your Planning and Engineering group.

Note: All sample entries in Procedure 31 on [page 145](#), Procedure 32 on [page 146](#), Procedure 33 on [page 148](#), and Procedure 34 on [page 150](#) are non-routeable IP addresses.

Procedure 30 Login and accessing LD 117

- 1 Log in to the Succession Call Server.
 - a. Enter **LOGI** and press **<cr>**.
The system response is **PASS?**
 - b. Enter the default password, **0000** and press **<cr>**.
- 2 To access LD 117, enter **LD 117** and press **<cr>**.

End of Procedure

Procedure 31

Configuring the Succession Call Server 100BaseT Ethernet ports

1 For default pre-configured IP addresses, suitable for point-to-point links, go to step 3. For IP addresses given by your Planning and Engineering group, go to step 2.

2 To configure each Succession Call Server 100BaseT Ethernet port, enter the command:

```
CHG IPM <port> <IP address> [<subnet mask>]
```

Where:

- **<port>** = the port number of the 100BaseT port on the Succession Call Server.
- **<IP address>** = the IP address of the 100BaseT port on the Succession Call Server.
- **[<subnet mask>]** = the subnet mask of the 100BaseT port on the Succession Call Server. (This entry is optional.)

Sample entry:

```
CHG IPM 1 192.168.0.10 255.255.255.0  
CHG IPM 2 192.168.0.20 255.255.255.0  
CHG IPM 3 192.168.0.30 255.255.255.0  
CHG IPM 4 192.168.0.40 255.255.255.0
```

3 To verify the Succession Call Server 100BaseT Ethernet port configuration, enter the command:

```
PRT IPM
```

The system response is, as follows:

port	IP Address	mask
IPM 1	192.168.0.10	255.255.255.0
IPM 2	192.168.0.20	255.255.255.0
IPM 3	192.168.0.30	255.255.255.0
IPM 4	192.168.0.40	255.255.255.0

End of Procedure

Procedure 32

Configuring the Succession Media Gateway 100BaseT Ethernet ports

- 1 For default pre-configured IP addresses, suitable for point-to-point links, go to step 2. For IP addresses given by your Planning and Engineering group, go to step 3.
- 2 If the system uses the default pre-configured IP addresses, enter the following commands to define only the MAC addresses:

```
CHG IPR <port> <MAC address>
```

Where:

- **<port>** = the port number of the 100BaseT port on the Succession Call Server.
- **<MAC address>** = the MAC address of the 100BaseT port on the Succession Media Gateway, that you noted in Procedure 12 on [page 98](#).

- 3 If your Planning and Engineering group provided specific IP addresses, enter the following commands to define the MAC addresses, IP address, and subnet masks:

```
CHG IPR <port> <MAC address> [<IP address> <subnet mask> <zero bandwidth>]
```

Where:

- **<port>** = the port number of the 100BaseT port on the Succession Call Server.
- **<MAC address>** = the MAC address of the 100BaseT port on the Succession Media Gateway, that you noted in Procedure 12 on [page 98](#).
- **<IP address>** = the IP address of the 100BaseT port on the Succession Media Gateway. (This entry is optional.)
- **<subnet mask>** = the subnet mask of the 100BaseT port on the Succession Media Gateway. (This entry is optional.)
- **<zero bandwidth>** = flag (default: NO) (This entry is optional.)



CAUTION

Service Interruption

If you are running the Succession Call Server and Succession Media Gateways in point-to-point, zero bandwidth must be NO.

If a Clock controller (T1 or E1) is in the Succession Media Gateways, zero bandwidth must be NO for that link.

Setting the zero bandwidth to NO enables the Succession Call Server to have a clock reference.

Sample entry:

```
CHG IPR 1 00:90:CD:05:9D:CB 192.168.0.11 255.255.255.0 NO
CHG IPR 2 00:90:CD:8E:29:FF 192.168.0.21 255.255.255.0 NO
CHG IPR 3 00:90:CD:45:39:6A 192.168.0.31 255.255.255.0 NO
CHG IPR 4 00:90:CD:05:38:8E 192.168.0.41 255.255.255.0 NO
```

- 4 To verify the Succession Media Gateway 100BaseT Ethernet port configuration, enter the command:

PRT IPR

```
port MAC address IP Address mask zero bandwidth
-----
IPR 1 00:90:cd:05:9d:cb 192.168.0.11 255.255.255.0 NO
IPR 2 00:90:cd:8e:29:ff 192.168.0.21 255.255.255.0 NO
IPR 3 00:90:cd:45:39:6a 192.168.0.31 255.255.255.0 NO
IPR 4 00:90:cd:05:38:8e 192.168.0.41 255.255.255.0 NO
```

Configuring the ELAN ports of the Succession Call Server and Succession Media Gateways

Procedure 33 Configuring the Succession Call Server ELAN IP

- 1 To configure the subnet mask for the Succession Call Server ELAN subnet, enter the command:

```
CHG MASK <subnet mask> [<MG #>]
```

Where:

- **<MG #>** = 0 for the Succession Call Server
- **<MG #>** = 1 for Succession Media Gateway 1
- **<MG #>** = 2 for Succession Media Gateway 2
- **<MG #>** = 3 for Succession Media Gateway 3
- **<MG #>** = 4 for Succession Media Gateway 4

Note: The above list applies wherever the **<MG #>** response is required.

For the Succession Media Gateway number you can use the system default of '0' or type '0' and your response applies to the Succession Call Server.

Sample entry:

```
CHG MASK 255.255.255.0
```

- 2 Verify the subnet mask for the Succession Call Server ELAN subnet. Enter the command:

```
PRT MASK [<MG #>]
```

The system response is as follows:

```
SUBNET MASK: "255.255.255.0"
```

- 3 To create a host entry for the Succession Call Server ELAN IP. Enter the command:

```
NEW HOST <hostname> <IP address>
```

Where:

<hostname> = your defined name

Sample entry:

NEW HOST CS_ELAN 192.11.0.100

- 4 Verify the host entries. Enter the command:

PRT HOST

The system response is, as follows:

ID	Hostname	IP Address
1	CS_ELAN	192.11.0.100

- 5 Set the active ELNK entry for the Succession Call Server. Enter the command:

CHG ELNK ACTIVE <hostname> [<MG #>]

Where:

<hostname> = your defined name

CHG ELNK ACTIVE CS_ELAN

- 6 Verify active ELNK settings. Enter the command:

PRT ELNK [<MG #>]

The system response is, as follows:

ACTIVE ETHERNET: "CS_ELAN" "192.11.0.100"

- 7 Configure routing entry for Succession Call Server, only required if ELAN is connected to other subnets through a router. Enter the command:

NEW ROUTE <destination network IP> <default gateway IP> [<MG #>]

Where:

<destination network IP> = the network IP of 0.0.0.0 for default route.

Sample entry:

NEW ROUTE 0.0.0.0 192.11.0.1

- 8 Verify routing entries. Enter the command:

PRT ROUTE

The system response is, as follows:

Call Server	ID	Destination	Gateway	Port
	1	0.0.0.0	192.11.0.1	0

End of Procedure

Procedure 34

Configuring the Succession Media Gateway ELAN IPs

- 1 Configure the subnet mask for each Succession Media Gateway ELAN subnet. Enter the command:

CHG MASK <subnet mask> [<MG #>]

Sample entry:

CHG MASK 255.255.255.0 1

CHG MASK 255.255.255.0 2

CHG MASK 255.255.255.0 3

CHG MASK 255.255.255.0 4

- 2 Verify the subnet mask for each Succession Media Gateway ELAN subnet.

syntax: PRT MASK [<MG #>]

PRT MASK 1

The system response is as follows:

SUBNET MASK: "255.255.255.0"

PRT MASK 2

The system response is as follows:

SUBNET MASK: "255.255.255.0"

PRT MASK 3

The system response is as follows:

SUBNET MASK: "255.255.255.0"

PRT MASK 4

The system response is as follows:

SUBNET MASK: "255.255.255.0"

- 3** Create a host entry for each Succession Media Gateway ELAN IP. Enter the command:

NEW HOST <hostname> <IP address> <Cab#>

Where:

<hostname> = your defined name

Sample entry:

NEW HOST MG1_ELAN 192.11.0.101 1

NEW HOST MG2_ELAN 192.11.0.102 2

NEW HOST MG3_ELAN 192.11.0.103 3

NEW HOST MG4_ELAN 192.11.0.104 4

- 4** Verify the host entries. Enter the command:

PRT HOST

The system response is as follows:

ID	Hostname	IP Address
1	CS_ELAN	192.11.0.100
2	MG1_ELAN	192.11.0.101
3	MG2_ELAN	192.11.0.102
4	MG3_ELAN	192.11.0.103
5	MG4_ELAN	192.11.0.104

- 5** Set the active ELNK entry for each Succession Media Gateway, enter the command:

CHG ELNK ACTIVE <hostname> [<MG #>]

Where:

<hostname> = your defined name

Sample entry:

CHG ELNK ACTIVE MG1_ELAN 1

CHG ELNK ACTIVE MG2_ELAN 2

CHG ELNK ACTIVE MG3_ELAN 3

CHG ELNK ACTIVE MG4_ELAN 4

- 6 Verify active ELNK settings.

syntax: PRT ELNK [<MG #>]

PRT ELNK 1

The system response is as follows:

ACTIVE ETHERNET: "MG1_ELAN" "192.11.0.101"

PRT ELNK 2

The system response is as follows:

ACTIVE ETHERNET: "MG2_ELAN" "192.11.0.102"

PRT ELNK 3

The system response is as follows:

ACTIVE ETHERNET: "MG3_ELAN" "192.11.0.103"

PRT ELNK 4

The system response is as follows:

ACTIVE ETHERNET: "MG4_ELAN" "192.11.0.104"

- 7 Configure routing entry only required if ELAN is connected to other subnets through a router, enter the command:

**NEW ROUTE <destination network IP> <default gateway IP>
[<MG #>]**

Where:

<destination network IP> = the network IP of 0.0.0.0 for default route.

Sample entry:

NEW ROUTE 0.0.0.0 192.11.0.1 1

NEW ROUTE 0.0.0.0 192.11.0.1 2

NEW ROUTE 0.0.0.0 192.11.0.1 3

NEW ROUTE 0.0.0.0 192.11.0.1 4

8 Verify routing entries. Enter the command:

PRT ROUTE

The system response is as follows:

```

Call Server
ID Destination      Gateway      Port
1  0.0.0.0          192.11.0.1  0

Media Gateway # 1
ID Destination      Gateway      Port
1  0.0.0.0          192.11.0.1  0

Media Gateway # 2
ID Destination      Gateway      Port
1  0.0.0.0          192.11.0.1  0

Media Gateway # 3
ID Destination      Gateway      Port
1  0.0.0.0          192.11.0.1  0

Media Gateway # 4
ID Destination      Gateway      Port
1  0.0.0.0          192.11.0.1  0
    
```

End of Procedure

Procedure 35
Updating the network database and download to all Succession Media Gateways

- 1 Enter the command:
UPDATE DBS
- 2 Exit from LD 117. Enter the command:

Reboot the Succession Call Server for changes to take effect.
- 3 Push the **Manual Init** button on the Succession Call Server SSC faceplate.

End of Procedure

Auto-negotiation set up

The ELAN on the Voice Gateway Media Card operates at half duplex only and is limited to 10BaseT operation due to filtering on the back planes.

The TLAN on Voice Gateway Media Card operates at half duplex or full duplex and can run at 10BaseT or 100BaseT.

Nortel Networks recommends that any network equipment connected to the ELAN or TLAN be set to auto-sense/auto-negotiate for the correct operation. Although full duplex is preferred, it is not required. For example, for the IP Line application, half duplex has ample bandwidth for a VGMC even with 24 busy channels, VAD disabled, and G.711 codec with 10 ms voice range.

It is risky to hard configure devices for speed and duplex mode. Every device and port must be correctly configured in order to avoid duplex mismatch problems which typically exhibit as lost packets and CRC errors. The VGMC cannot be set for 100BaseT/Full Duplex operation, and as a result the card's

TLAN operates in auto-negotiate mode. Duplex mismatches and lost packets occur if the TLAN interface is not configured properly.



CAUTION

Service Interruption

Duplex mismatches occur in the LAN environment when one side is set to auto-negotiate and the other is hard configured.

The auto-negotiate side adapts only to the speed setting of the fixed side. For duplex operations, the auto-negotiate side sets itself to half duplex mode. So if the forced side is full duplex, a duplex mismatch results.

Procedure 36

Logging into and accessing LD 117

1 Log in to the Succession Call Server.

a. Enter **LOGI** and press **<cr>**.

The system response is **PASS?**

b. Enter the default password, **0000** and press **<cr>**.

2 To access LD 117, enter **LD 117** and press **<cr>**.

End of Procedure

Procedure 37
Checking auto-negotiation setup on the Succession Call Server to Succession Media Gateway links

- 1 Enter the following command:

STAT AUTONEG IPM

The system responds with an output such as the following:

```
AUTO-NEGOTIATE LINK PARTNER STATUS - MAIN/CALL SERVER PORTS

PORT Bandwidth Duplex Mode AutoNegotiate
=====
IPM 1 100 Mbps full duplex ON
IPM 2 UNKNOWN UNKNOWN -
IPM 3 UNKNOWN UNKNOWN -
IPM 4 UNKNOWN UNKNOWN -
```

- 2 Enter the following command:

STAT AUTONEG IPR

The system responds with an output such as the following:

```
AUTO-NEGOTIATE LINK PARTNER STATUS - EXPANSION/MEDIA GATEWAY PORTS

PORT Bandwidth Duplex Mode
=====
IPR 1 100 Mbps full duplex ON
IPR 2 UNKNOWN UNKNOWN -
IPR 3 UNKNOWN UNKNOWN -
IPR 4 UNKNOWN UNKNOWN -
```

Note 1: The message “100 Mbps full duplex” indicates that the ports have successfully negotiated the network connection. The message “UNKNOWN” indicates a failure to negotiate to 100 Mbps full duplex. In this example, 2, 3, and 4 are not installed.

Note 2: When UNKNOWN is displayed for a connected Succession Media Gateway, perform Procedure 38 to ensure that the 100BaseT ports and the Succession Call Server ports have AUTONEG ON.

End of Procedure

Procedure 38

Changing auto-negotiation of the Succession Call Server to Succession Media Gateway links

- 1 For each Succession Call Server port configured to a Succession Media Gateway, use the following command, entering the appropriate Succession Call Server port number and selecting ON.

CHG AUTONEG IPM <port> <ON/OFF>

For example, if the port number is 1:

CHG AUTONEG IPM 1 ON

- 2 For each Succession Media Gateway port configured to a Succession Call Server, use the following command, entering the appropriate Succession Media Gateway port number and selecting ON.

CHG AUTONEG IPR <port> <ON/OFF>

For example, if the port number is 1:

CHG AUTONEG IPR 1 ON



CAUTION

Service Interruption

If a link is already up when auto-negotiation is enabled, the TTY displays a LINK DOWN message. The link goes down because the data ports must perform the bandwidth negotiation protocol to obtain the required 100 Mbps full duplex. That process takes 5 to 7 seconds. Once that process is complete, the TTY displays a LINK UP message, and the system is ready for normal operations.

End of Procedure

Installing Succession Media Gateway SSC software

Contents

This section contains information on the following topics:

Introduction	159
Software Installation Program overview	160
Installing the Succession Media Gateway SSC software	160

Introduction

**CAUTION**

Complete the procedures in the “Succession Call Server and Succession Media Gateway network configuration” chapter before attempting to do the “Installing Succession Media Gateway SSC software”.

This chapter describes the software installation on the Succession Media Gateway SSC card. This chapter contains the following procedures:

- Procedure 39 "Starting procedure for a new system installation" on [page 160](#).
- Procedure 40 "Installing Succession Media Gateway software" on [page 162](#).



CAUTION

The Succession Call Server software must be installed or upgraded prior to the Succession Media Gateways.

Please ensure the Succession Call Server installation or upgrade is complete, and the Succession Call Server is up and running prior to loading the Succession Media Gateways.

Succession Media Gateways can be installed in any order.

Software Installation Program overview

See “Software Installation Program overview” on [page 116](#).

Installing the Succession Media Gateway SSC software

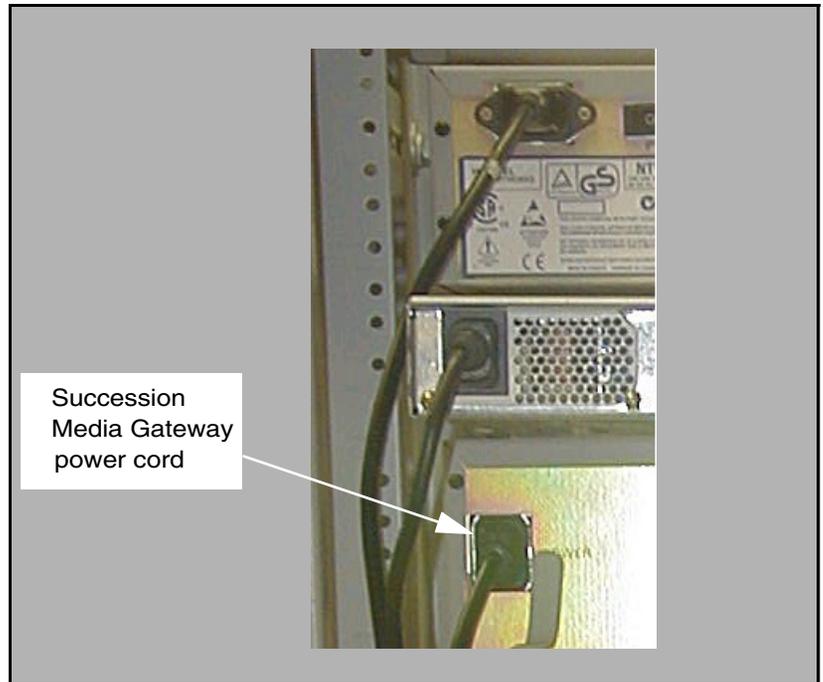
Make sure all necessary hardware is installed in the system, and connected. Check all connections, and make sure that you have installed all of the SSC cards correctly.

Procedure 39

Starting procedure for a new system installation

- 1 Test the power outlet. Make sure that the correct voltage is present before you plug the power cord into the outlet. The source must match the label on the back of the equipment.
- 2 Connect the power cord from the power connectors on the back of the Succession Media Gateway to an ac power source. See Figure 60 on [page 161](#).

Figure 60
Power connectors



- 3 Ensure that the system terminal (TTY) is connected to the cable marked "port 0" on the NTBK48 3-port cable of the Succession Media Gateway.
- 4 Turn the Media Gateway power switch to "ON".
- 5 Observe the system terminal screen. A menu-driven program called the "Software Installation Program" runs.

End of Procedure

Procedure 40
Installing Succession Media Gateway software

The following is displayed:

```
SOFTWARE INSTALLATION PROGRAM
*****
Verify
Security ID: xxxxxxxx
*****

Technology Software Installation Main Menu:
1. Media Gateway/IPExpansion Cabinet
2. Call Server/Main Cabinet
[q]uit, [h]elp or [?], <cr> - redisplay

Enter Selection:
Release:
Created: Weekday Month Day hh:mm:ss EDT Year
```

- 1** Select option 1 for the **Media Gateway/IPExpansion Cabinet** software installation.

The following is displayed:

```
Media Gateway/Expansion Cabinet Software Installation
Main Menu:
1. Media Gateway/Expansion Cabinet Installation - From
Software Delivery Card
2. Utilities

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

Enter Selection: _
```

- 2** Select option 1 for the **Media Gateway/Expansion Cabinet Installation from Software Delivery Card**.
- 3** Enter "y" to do IP configuration.

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

- 4** Select the correct option for IP configuration of your Succession Call Server to Succession Media Gateway link network configuration. Refer back to your network planning for details. Since this is a new installation, you must select option 1 or 2.

IP Configuration Menu:

1. Automatically Using BootP
2. Using Manual Configuration
3. Keep Existing Configuration

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

Enter Selection:

- 5** If you selected option 1, go to step 8. If you selected option 2, enter the IP parameters.

Enter Media Gateway New IP Parameters:

Media Gateway IP : x.x.x.x
Call Server IP : x.x.x.x
Media Gateway NetMask : x.x.x.x

- 6** In a layer-2 configuration, the following displays.

L2 Configuration...

Media Gateway Router: 0.0.0.0

- 7** In a layer-3 configuration, enter the Media Gateway Router IP.

Media Gateway Router : x.x.x.x

- 8** Confirm the IP configuration.

Media Gateway New IP Parameters:

Media Gateway IP : x.x.x.x
Call Server IP : x.x.x.x
Media Gateway NetMask : x.x.x.x
Media Gateway Router : x.x.x.x
Is this correct? (y/n/[a]bort): **Y**

9 Select the M3900 Language Set (same as on Succession Call Server).

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**

10 Enter "y" to perform the installation.

Succession Enterprise Software Rls 300x 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): **Y**

The following is displayed when software installation has completed
successfully.

Installation completed successfully.

The system then reboots.

Rebooting...

Once the installation program completes, messages appear on the
terminal screen. When the message "INIXXX" appears, the system is
operational.

End of Procedure

Succession Call Server and Succession Media Gateway network verification

Contents

This section contains information on the following topics:

Introduction	165
Confirming Succession Call Server to Succession Media Gateway link operation	166

Introduction



CAUTION

Complete the procedures in the “Installing Succession Media Gateway SSC software” chapter before attempting to do the “Succession Call Server and Succession Media Gateway network verification”.

This chapter describes how to check the Succession Call Server to Succession Media Gateway links and ELAN interfaces using LD 117, LD 135, and LD 137. For details on LD 117, LD 135, and LD 137, see the *Software Input/Output: Maintenance* (553-3001-511).

This chapter contains the following procedures:

- Procedure 41 "Checking the status of Succession Call Server to Succession Media Gateway 100BaseT links" on [page 166](#).
- Procedure 42 "Checking the status of ELAN ports" on [page 169](#).

Confirming Succession Call Server to Succession Media Gateway link operation

Procedure 41 Checking the status of Succession Call Server to Succession Media Gateway 100BaseT links

- 1 Observe the link LEDs (Layer2 network link) on all the Succession Media Gateway IP daughterboards. See Figure 61, and Figure 62 on [page 167](#).

Note: Cards in slot 1 can make viewing difficult.

Figure 61
SSC card IP daughterboard link LED location

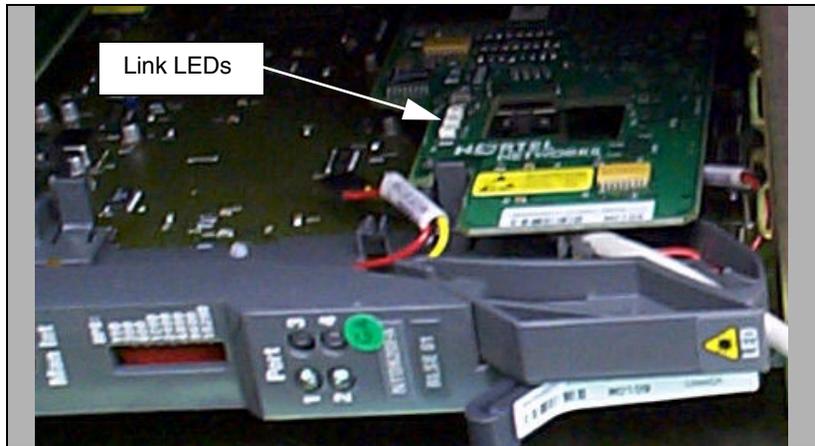
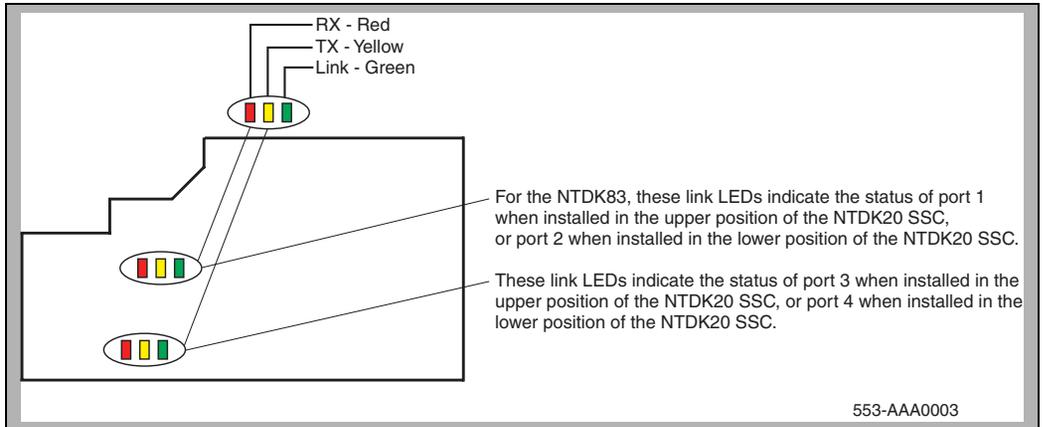


Figure 62
SSC card IP daughterboard LEDs



- a. If the Link LED is green, the Link is established.
- b. If the Link LED is not lit, check the daughterboard installation. Check all cable connections to ensure that they are connected correctly. Make sure that the cables are not damaged.

The receive and transmit LEDs should be flashing (evidence of network activity).

- 2 Observe Port LEDs (1, 2, 3, 4) on the Succession Call Server and Succession Media Gateway SSC faceplates (see Figure 63). These LEDs show OSI Layer 7 Call Processing application indications.

Figure 63
SSC faceplate Succession Call Server to Succession Media Gateways Port LEDs



- a. If Port LEDs are red, the link is disabled and voice is disabled.
- b. If Port LEDs are yellow/amber, the link is established and voice is disabled.
- c. If Port LEDs are green, the link and voice is established.

3 Observe bootstrap system messages on system terminals.

```
SRPT017 OMM: IP link is UP between cab 0 and cab 1
SRPT017 OMM: IP link is UP between cab 0 and cab 2
SRPT017 OMM: IP link is UP between cab 0 and cab 3
SRPT017 OMM: IP link is UP between cab 0 and cab 4
```

4 Log in to the Succession Call Server.

- a. Enter **LOGI** and press **<cr>**.

The system response is **PASS?**

- b. Enter the default password, **0000** and press **<cr>**.

5 To access LD 135, enter **LD 135** and press **<cr>**.

6 Display status of 100BaseT links. Enter the command:

STAT IPL

```
Media Gateway 1 : LINK UP
Media Gateway 2 : LINK UP
Media Gateway 3 : LINK UP
Media Gateway 4 : LINK UP
```

7 Exit from LD 135. Enter the command:

8 To access LD 117, enter **LD 117** and press **<cr>**.

9 Ping IP addresses on the 100BaseT links, enter the command:

PING 192.168.0.11

```
PING 192.168.0.11 SUCCESSFUL
```

PING 192.168.0.21

```
PING 192.168.0.21 SUCCESSFUL
```

PING 192.168.0.31

PING 192.168.0.31 SUCCESSFUL

PING 192.168.0.41

PING 192.168.0.41 SUCCESSFUL

Note: Replace the sample IP addresses with the IP addresses from your Planning and Engineering group.

10 Exit from LD 117. Enter the command:

End of Procedure

Procedure 42

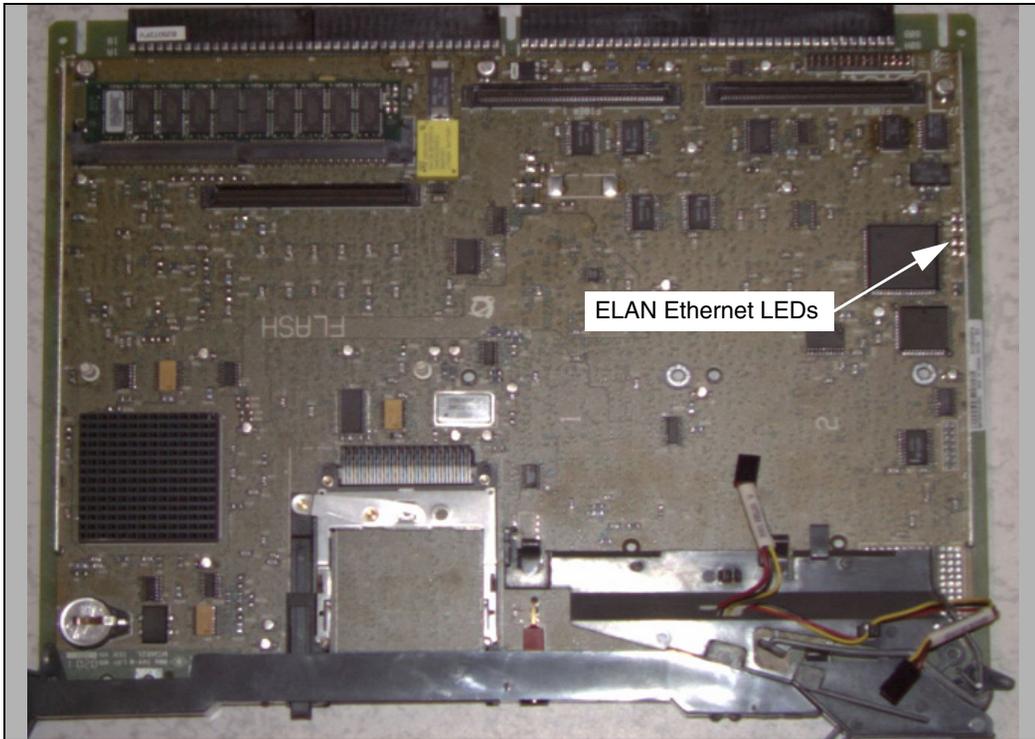
Checking the status of ELAN ports

- 1** Observe the ELAN Ethernet LEDs (Layer 2 network link) on all Succession Media Gateway SSC cards. See Figure 64 on [page 170](#).
 - a.** If the ELAN LED is green, the Link is established.
 - b.** If the Link LED is not lit, check all cable connections to ensure that they are connected correctly, and not damaged.

The ELAN red and yellow LEDs flash when there is network activity.

Note: Cards in slot 1 can make viewing difficult.

Figure 64
SSC card ELAN LED location



- 2 To access LD 137, enter **LD 137** and press **<cr>**.
- 3 Display status of CS ELAN port, enter the command:

STAT ELNK

```
ELNK  ENABLED
Ethernet (qu unit number 0):
Host: CS_ELAN
Internet address: 192.11.0.100
Broadcast address: 192.11.0.255
Ethernet address: 00:00:75:45:39:6a
Netmask: 0xffffffff00; Subnetmask: 0xffffffff00
987652 packets received; 23476 packets sent
0 input errors; 0 output errors
0 collisions
```

4 Exit from LD 137, enter the command:

5 To access LD 117, enter **LD 117** and press <cr>.

6 Verify active host table, enter the command:

STAT HOST

```
*** Active Internet Host Table ***
ID  Hostname      IP Address
--  localhost    127.0.0.1

1   CS_ELAN      192.11.0.100
2   MG1_ELAN     192.11.0.101
3   MG2_ELAN     192.11.0.102
4   MG3_ELAN     192.11.0.103
5   MG4_ELAN     192.11.0.104
```

7 Verify active routing table, enter the command:

STAT ROUTE

```
*** Active Internet Routing Table ***
ID  Destination    Gateway          Port
    1  0.0.0.0        192.11.0.1      0 [qu0]
--  192.11.0.0     192.11.0.100   0 [qu0]
--  127.0.0.1     127.0.0.1      -- [lo0]
```

8 Ping IP addresses on the ELAN network, enter the command:

PING 192.11.0.1

The system response is as follows:

```
PING 192.11.0.1 SUCCESSFUL
```

PING 192.11.0.101

The system response is as follows:

```
PING 192.11.0.101 SUCCESSFUL
```

PING 192.11.0.102

The system response is as follows:

```
PING 192.11.0.102 SUCCESSFUL
```

PING 192.11.0.103

The system response is as follows:

PING 192.11.0.103 SUCCESSFUL

PING 192.11.0.104

The system response is as follows:

PING 192.11.0.104 SUCCESSFUL

9 Exit from LD 117, enter the command:

End of Procedure

Basic system telephony configuration

Contents

This section contains information on the following topics:

Introduction	173
Basic system configuration	174
Succession Media Gateway/Succession Media Gateway Expansion card slot assignment	178
TN assignment	179

Introduction

This chapter shows overlay (LD) sequences required to configure the system with basic telephony features. Your Planning and Engineering group provides the details needed to configure basic telephony.

Note: The Command Line Interface (CLI) must be used for some configuration (for example, LD 10 and LD 11) before Element Manager can be used to further configure basic telephony.

This chapter contains Procedure 43 "Configuring the basic system" on [page 174](#).

Basic system configuration

Programming the Succession 1000 system requires loading different overlay programs and using each one to enter a specific type of information.

See *Software Input/Output: Administration* (553-3001-311) for information about overlays.

Flow charts

Figure 65 on [page 175](#) shows the programming overlay (LD) sequence for a new system. The Data entry sequence flowchart does not show all possible administration overlays.

In some cases, you have to move back and forth between overlays to complete the programming. For example, you must program the Customer Data Block (CDB) before you program the attendant console. However, there are console-related prompts in the CDB that cannot be programmed until you have programmed an attendant console. Skip the console-related prompts, complete the CDB programming, then return to the CDB after the console is programmed. Finish the CDB console-related prompts. A similar situation exists with the Speed Call lists and the Telephones. You must activate the Speed Call list(s) before you can assign the list(s) to a telephone.

Figure 66 on [page 176](#), and Figure 67 on [page 177](#) show overlay titles and gate openers for each feature group. A gate opener enables users to program a related group of features without stepping through all prompts of an overlay. NTP references are shown in the flowchart shaded boxes for those features and options beyond the scope of this guide.

Procedure 43 **Configuring the basic system**

Use the overlays (LD) to configure basic system features offered by the Succession Call Server.

- 1 Complete the configuration using the overlays (LD) in the order shown in Figure 65 on [page 175](#), Figure 66 on [page 176](#), and Figure 67 on [page 177](#).

Figure 65
Data entry sequence for new systems

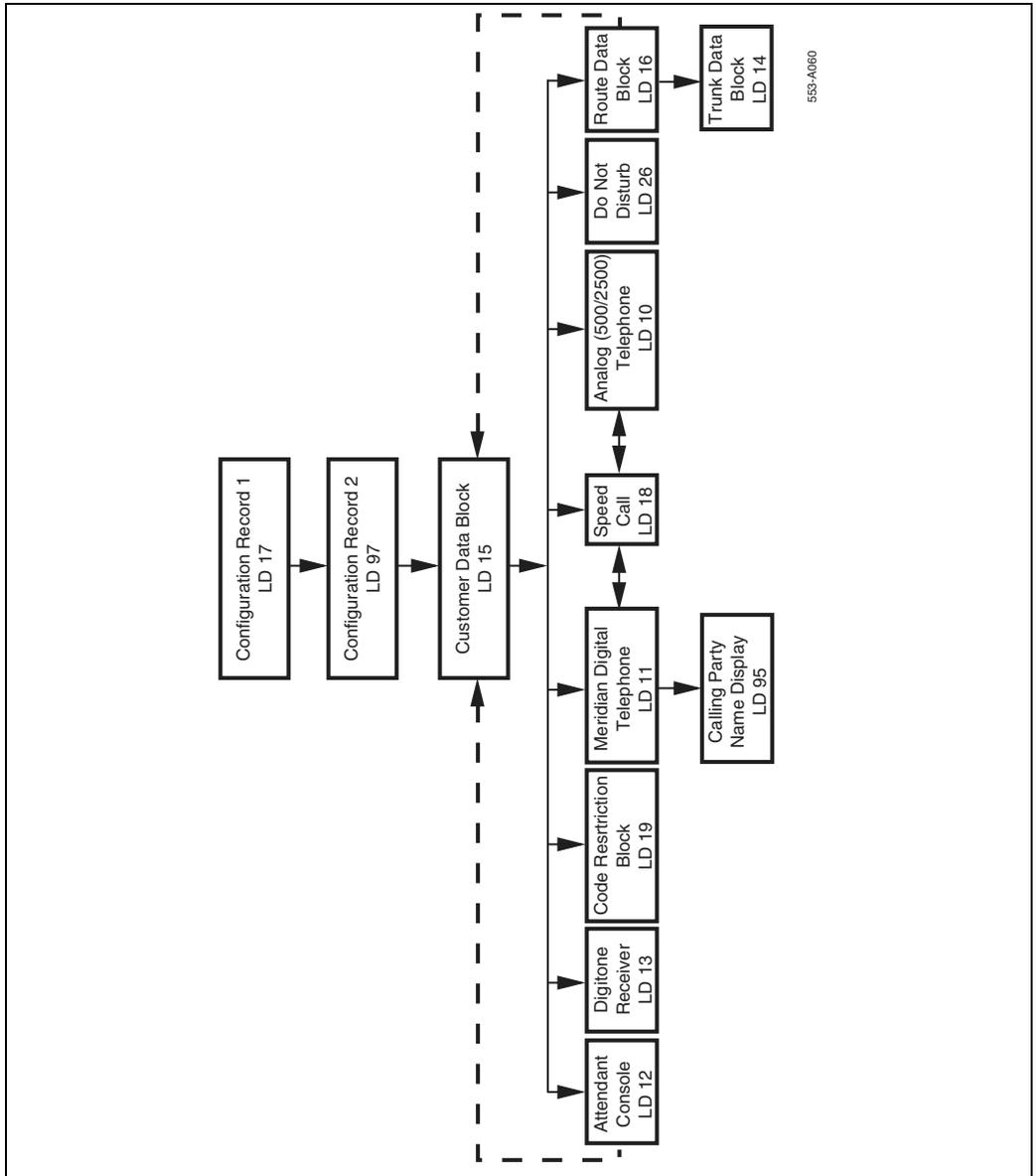
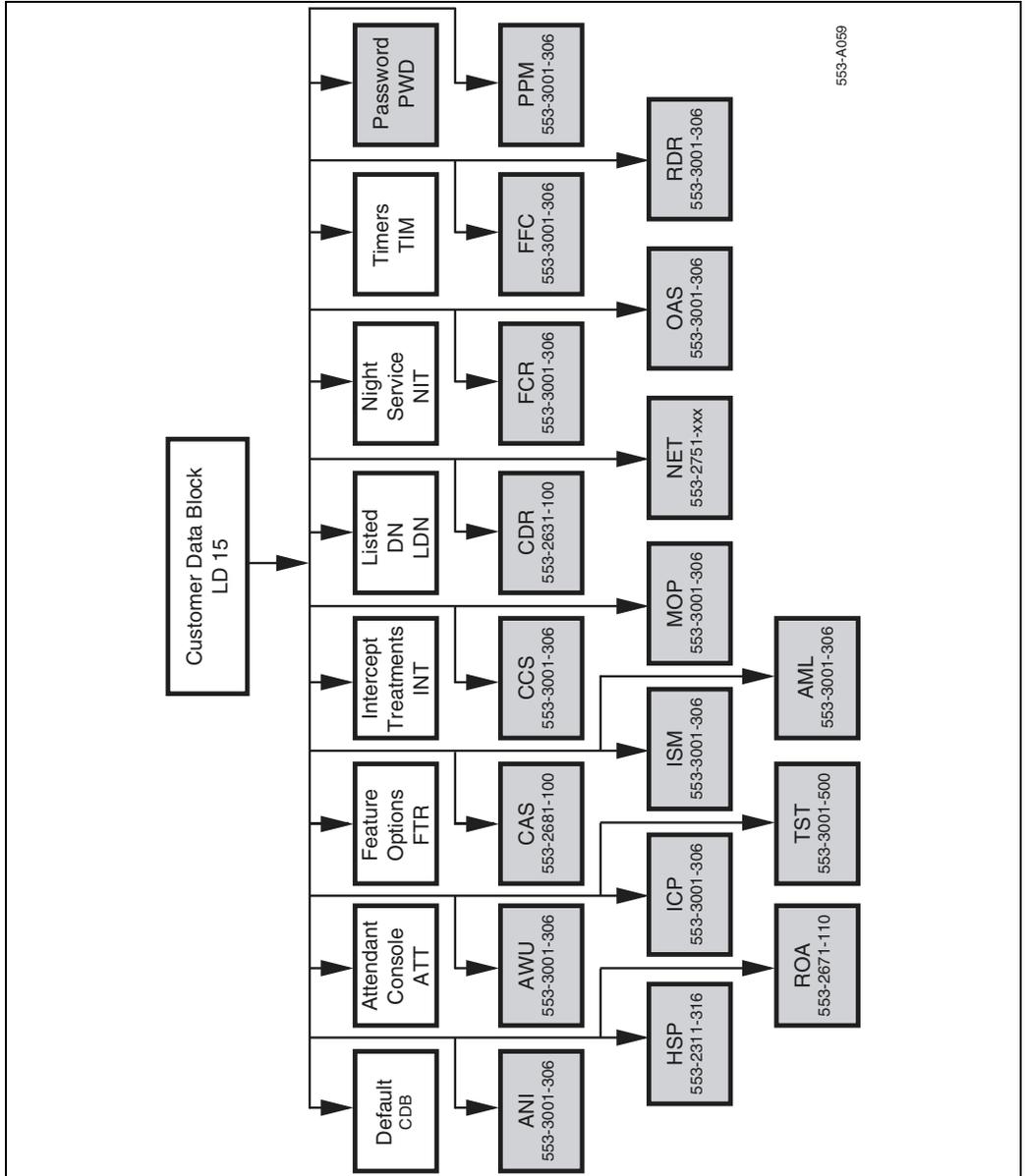


Figure 67
Customer Data Block



Succession Media Gateway/Succession Media Gateway Expansion card slot assignment

The Succession Media Gateway and Succession Media Gateway Expansion contain physical card slots numbered 1 to 10. When configuring the Succession 1000 system, the physical card slot numbers must be transposed to “logical” card slot numbers. For example, to configure a card physically located in slot 2 of the first Succession Media Gateway, use logical slot 12. To configure a card physically located in slot 2 of the second Succession Media Gateway, use logical slot 22. See Table 9.

Table 9
Succession Media Gateway/Succession Media Gateway Expansion card slot assignments

Succession Media Gateway / Succession Media Gateway Expansion									
		First		Second		Third		Fourth	
		Physical card slot	Logical card slot						
Succession Media Gateway	1	11	1	21	1	31	1	41	
	2	12	2	22	2	32	2	42	
	3	13	3	23	3	33	3	43	
	4	14	4	24	4	34	4	44	
	5	*	5	*	5	*	5	*	
	6	*	6	*	6	*	6	*	
Succession Media Gateway Expansion	7	17	7	27	7	37	7	47	
	8	18	8	28	8	38	8	48	
	9	19	9	29	9	39	9	49	
	10	20	10	30	10	40	10	50	
Legend * Not supported. The bottom most card slot in the Succession Media Gateway chassis is reserved for the SSC card.									

TN assignment

Table 10 shows the Terminal Number (TN) assignments for each Succession Media Gateway and Succession Media Gateway Expansion.

Table 10
Terminal Number assignments for first Succession Media Gateway
and Succession Media Gateway Expansion

Physical slot	Logical slot	First TN...Last TN	Cable	Chassis
1	11	11 00...11 15	Card 1	Succession Media Gateway
2	12	12 00...12 15	Card 2	Succession Media Gateway
3	13	13 00...13 15	Card 3	Succession Media Gateway
4	14	14 00...14 15	Card 4	Succession Media Gateway
7	17	17 00...17 15	Card 7	Succession Media Gateway Expansion
8	18	18 00...18 15	Card 8	Succession Media Gateway Expansion
9	19	19 00...19 15	Card 9	Succession Media Gateway Expansion
10	20	20 00...20 15	Card 10	Succession Media Gateway Expansion

Note: Refer to the labels on the back of the Succession Media Gateway. See Figure 127 on [page 293](#).

————— **End of Procedure** —————

Succession Signaling Server software installation

Contents

This section contains information on the following topics:

[Introduction](#) 181

Introduction

Refer to the *Signaling Server: Installation and Configuration* (553-3001-212) NTP for a detailed description of the Succession Signaling Server.

The *Signaling Server: Installation and Configuration* (553-3001-212) discusses items such as the following:

- description of the hardware (front and rear connectors)
- description of the Succession Signaling Server Install Tool
- explanation of how to install the Succession Signaling Server software
- explanation of how to perform basic configuration

IP Telephony node configuration

Contents

This section contains information on the following topics:

Introduction	183
IP telephony nodes	184
Element Manager	185

Introduction

This chapter describes how to configure IP telephony using Element Manager. This chapter contains the following procedures:

- Procedure 44 "Turning off browser caching in Internet Explorer" on [page 185](#).
- Procedure 45 "Enabling the Login Name option" on [page 188](#).
- Procedure 46 "Configuring login IDs and passwords" on [page 189](#).
- Procedure 47 "Enabling the multi-user option" on [page 191](#).
- Procedure 48 "Finding available TTY ports" on [page 192](#).
- Procedure 49 "Configuring pseudo-terminals (PTYs)" on [page 193](#).
- Procedure 50 "Checking PTY status" on [page 194](#).
- Procedure 51 "Logging in to Element Manager" on [page 195](#).
- Procedure 52 "Importing the existing node" on [page 197](#).

- Procedure 53 "Reviewing and submitting IP telephony node configuration" on [page 200](#).
- Procedure 54 "Adding a Follower Succession Signaling Server to the IP Telephony node in Element Manager" on [page 206](#).
- Procedure 55 "Performing a data dump using Element Manager" on [page 208](#).

IP telephony nodes

An IP telephony node must be configured in order to make the Succession 1000 system operational. The IP telephony node files are BOOTP.TAB and CONFIG.INI. The master copy of the BOOTP.TAB and CONFIG.INI files resides on the Succession Call Server, with a copy on each node component (Succession Signaling Server and Voice Gateway Media Cards).

The node database files are backed up along with the customer database by the LD 43 EDD command.

The pre-configured IP telephony configuration files from the leader Succession Signaling Server must be imported. These files are saved on the Succession Call Server as the following:

- c:/u/db/node/nodex.cfg where *x* is the node number
- c:/u/db/node/nodex.btp where *x* is the node number

Note: Do not attempt to alter the above database files manually or by importing to ITG or IP telephone management in OTM. Use Element Manager.

Element Manager

Element Manager is available to configure IP telephony parameters on the system. It is accessed by pointing a web browser (Internet Explorer 6.0.2600 or later) to the ELAN, TLAN, or node IP address of the Succession Signaling Server.

Both before and after making any changes to the customer database, perform a data dump. The customer database is not impacted in this chapter, however, the IP telephony node is, and its files are backed up at the same time as the customer database. The data dump procedure using Element Manager is outlined in Procedure 55 on [page 208](#).

Internet Explorer browser configuration for Element Manager

Element Manager requires Microsoft Internet Explorer 6.0.2600 or later. Element Manager is not supported on the Netscape browser.

Internet Explorer caching interferes with the Element Manager application, such that users cannot see real-time changes as they occur. For this reason, Internet Explorer caching must be turned off.

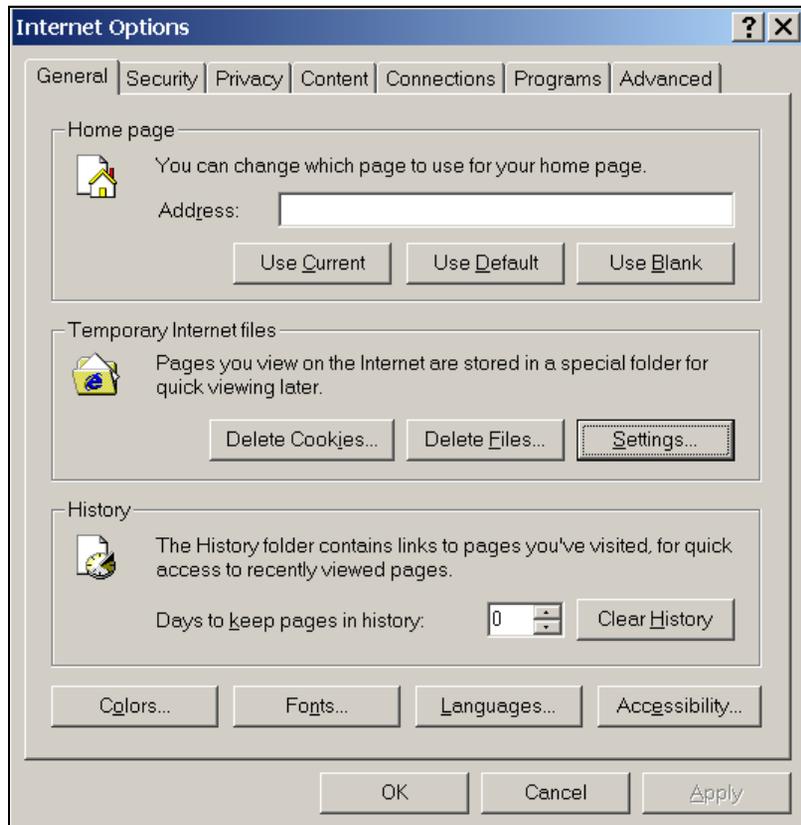
Follow the steps outlined in Procedure 44 to prevent caching of web pages by the Internet Explorer browser.

Procedure 44

Turning off browser caching in Internet Explorer

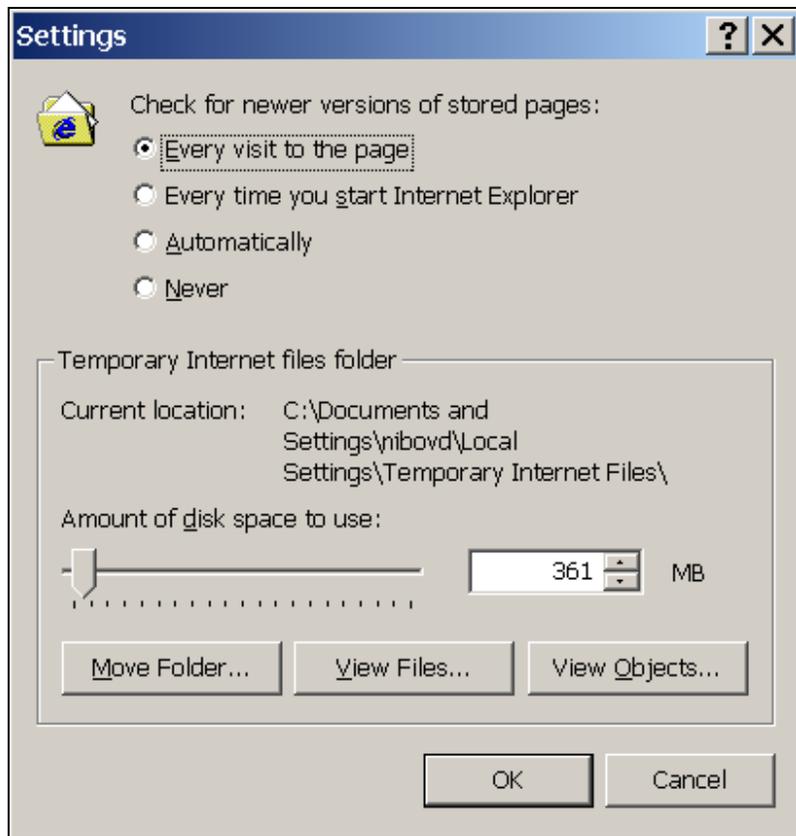
- 1 Launch Internet Explorer.
- 2 Click **Tools > Internet Options**. The Internet Options window opens (see Figure 68 on [page 186](#)).

Figure 68
Internet Explorer - Internet Options



- 3 On the **General** tab, under the **Temporary Internet files** section, click the **Settings** button. The Settings window opens (see Figure 69 on [page 187](#)).

Figure 69
Temporary Internet files – Settings window



- 4 Click the **Every visit to the page** radio button. This checks for new versions of stored pages on every visit to the web page.
- 5 Click **OK** in the Settings window.
- 6 Click **OK** in the Internet Options window.

End of Procedure

Configuring the Succession Call Server for management

For increased security:

- Change the default login username and password.
Note: The default login is username **admin1** and password **0000**, as used throughout this guide.
- Configure the Limited Access Password (LAPW) IDs and passwords.

To access CLI overlays and Element Manager at the same time, enable the multi-user option.

For more information about Limited Access to Overlays, see *Features and Services* (553-3001-306) and *Software Input/Output: Administration* (553-3001-311).

Note: In the following procedures, user input is shown in **bold**. For example, **LD 17**.

Procedure 45 Enabling the Login Name option

- 1 Login to the Succession Call Server.
Enter **logi <id>** where <id> is the login ID.
- 2 Enter **PASS? <xxxx>** where <xxxx> is the password for the login ID.

```
WARNING: THE PROGRAMS AND DATA STORED ON THIS SYSTEM  
ARE LICENSED TO OR ARE THE PROPERTY OF NT/BNR AND ARE  
LAWFULLY AVAILABLE ONLY TO AUTHORIZED USERS FOR  
APPROVED PURPOSES. UNAUTHORIZED ACCESS TO ANY PROGRAM  
OR DATA ON SYSTEM IS NOT PERMITTED. THIS SYSTEM MAY BE  
MONITORED AT ANY TIME FOR OPERATIONAL REASONS.  
THEREFORE, IF YOU ARE NOT AN AUTHORIZED USER, DO NOT  
ATTEMPT TO LOGIN.
```

```
TTY #00 LOGGED IN ADMIN2 16:17 22/10/2002
```

3 Enter 1d 17.

```
CFN000
MEM AVAIL: (U/P): 1015918 USED U P: 138773 24956
TOT:1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

4 Enter REQ chg**5 Enter TYPE pwd****6 Enter PWD2 <xxxx> where <xxxx> is your current level 2 password.****7 Enter LNAME_OPTION yes**

```
DEFAULT LOGIN NAMES SAVED
```

```
MEM AVAIL: (U/P): 1015893 USED U P: 138773 24981
TOT: 1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

8 Enter REQ ****

End of Procedure

**Procedure 46
Configuring login IDs and passwords****1 Enter 1d 17.**

```
CFN000
MEM AVAIL: (U/P): 1015918 USED U P: 138773 24956
TOT:1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

2 Enter REQ chg**3 Enter TYPE pwd**

- 4 Enter PWD2 **<xxxx>** where **<xxxx>** is your current level 2 password.
 - 5 Enter LNAME_OPTION **<cr>**
 - 6 Enter NPW1 **<xxxx>** where **<xxxx>** is the new PWD1 password or enter **<cr>** for no change.
 - 7 Enter LOGIN_NAME **<xxxx>** where **<xxxx>** is the new PWD1 login name or enter **<cr>** for no change.
 - 8 Enter NPW2 **<xxxx>** where **<xxxx>** is the new PWD2 password or enter **<cr>** for no change.
 - 9 Enter LOGIN_NAME **<xxxx>** where **<xxxx>** is the new PWD2 login name or enter **<cr>** for no change.
.....
 - 10 Enter LAPW **<nn>** where **<nn>** is the new or changed LAPW password number (0-99).
 - 11 Enter PWTP **ovly**
 - 12 Enter PWnn **<xxxx>** where **<xxxx>** is the LAPW nn password.
 - 13 Enter LOGIN_NAME **<xxxx>** where **<xxxx>** is the LAPW nn login name.
 - 14 Enter OVLA **<xx>** where **<xx>** is **a11** or the list of overlays allowed.
 - 15 Enter CUST **<xx>** where **<xx>** is **a11** or the list of customers allowed.
.....
 - 16 Enter MAT **yes**
 - 17 Enter MAT_READ_ONLY **no**
.....
- MEM AVAIL: (U/P): 1015893 USED U P: 138773 24981
TOT: 1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
- 18 Enter REQ ********

End of Procedure

Procedure 47
Enabling the multi-user option**1 Enter 1d 17.**

```
CFN000
MEM AVAIL: (U/P): 1015918 USED U P: 138773 24956
TOT: 1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

1 Enter REQ chg**2 Enter TYPE ovly**

....

3 Enter MULTI_USER on

```
MEM AVAIL: (U/P): 1015893 USED U P: 138773 24981
TOT: 1179647
DISK RECS AVAIL: 486
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

4 Enter REQ ****

End of Procedure

Procedure 48
Finding available TTY ports

Find the available TTY numbers (0-15) and PTY ports (0-7):

1 Enter **1d 22**.

PT2000

2 Enter REQ **prt**

3 Enter TYPE **adan tty**

ADAN TTY 0
TTY_TYPE SDI
CAB 00
CARD 00
PORT 0
DES
FLOW NO
USER MTC SCH BUG
TTYLOG 0
BANR YES

...

4 Enter REQ ********

End of Procedure

Procedure 49
Configuring pseudo-terminals (PTYs)

Nortel Networks recommends that you configure at least two PTYs. You can allocate a maximum of four PTYs on a Succession 1000 system.

1 Enter **1d 17**.

```
CFN000
MEM AVAIL: (U/P):1019254 USED U P:138012 22381
TOT:1179647
DISK RECS AVAIL: 491
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
```

2 Enter **REQ chg**

3 Enter **TYPE cfn**

4 Enter **ADAN new tty <x>** where **<x>** is an available TTY number (0-15).

5 Enter **TTY_TYPE pty**

6 Enter **PORT <y>** where **<y>** is an available PTY port (0-7).

7 Enter **DES <z>** where **<z>** is your designator. For example, "**ether 1**".

8 Enter **FLOW no**

9 Enter **USER mtc bug sch**

10 Enter **TTYLOG no**

11 Enter **BANR yes**

```
MEM AVAIL: (U/P):1019130 USED U P: 138064 22453
TOT: 3555327
DISK RECS AVAIL: 491
TMDI D-CHANNELS AVAIL: 0 USED: 0 TOT: 0
DCH AVAIL: 80 USED: 0 TOT: 80
AML AVAIL: 15 USED: 1 TOT: 16
ADAN DATA SAVED
```

12 Enter **ADAN ******

End of Procedure

Procedure 50
Checking PTY status

Pseudo-terminals only show enabled if you are using them.

1 Enter `1d 37`.

2 Enter `stat`

```
TTY 0: ENBL DES: ...  
TTY 1: ENBL DES: ...  
TTY 2: ENBL DES: ...  
TTY 3: ENBL DES: ...  
TTY 12: DSBL DES: ether 1  
TTY 13: DSBL DES: ether 2  
TTY 14: DSBL DES: ether 3
```

3 Enter `****`

4 Perform an EDD to save your changes.

End of Procedure

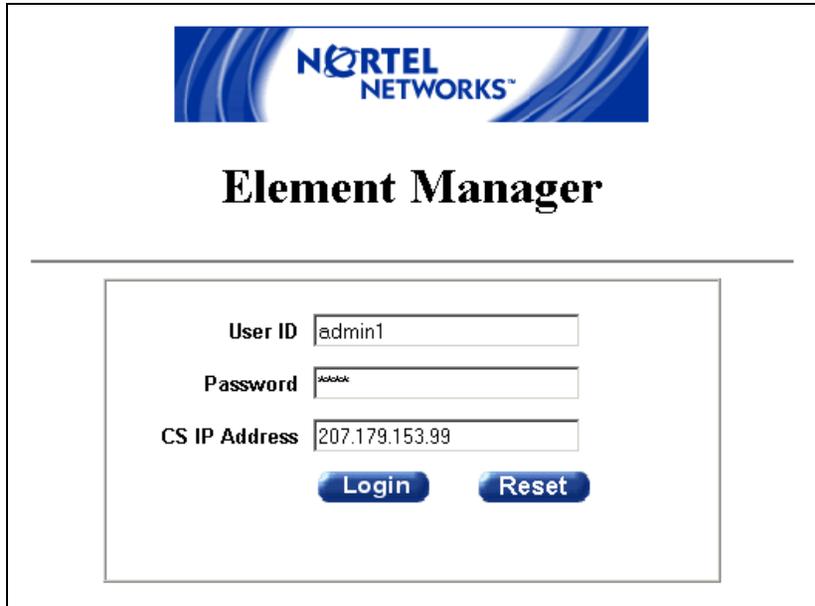
Procedure 51**Logging in to Element Manager**

- 1 Open the web browser.
- 2 Enter the **Signaling Server Node IP address** in the Address Bar of the browser window and press **Enter** on the keyboard.

Note: This can be the ELAN IP, TLAN IP, or Node IP, depending on the network in use. The ELAN IP address may be required, instead of the Node IP address, to access to the Element Manager login page in secure environments.

- 3 Element Manager opens and the **Login** page appears (see Figure 70 on [page 196](#)).
 - a. Enter the **User ID** and **Password** of the Succession Call Server.
 - User ID = `admin1` or any LAPW
 - Password = `0000`
 - b. Enter the ELAN IP Address of the Succession Call Server in the **CS IP Address** field.
 - c. Click the **Login** button.

Figure 70
Element Manager login



NORTEL NETWORKS™

Element Manager

User ID	<input type="text" value="admin1"/>
Password	<input type="password" value="admin"/>
CS IP Address	<input type="text" value="207.179.153.99"/>

End of Procedure

Importing the pre-configured IP telephony files

Procedure 52 Importing the existing node

In this procedure, you import the pre-configured IP Telephony files from the Succession Signaling Server. Figure 71 displays the Element Manager System Information home page. It provides system information.

Figure 71
Element Manager—System Information

The screenshot shows the Element Manager System Information page. The browser address bar displays `http://207.179.153.100/cgi/pwd.cgi`. The page title is "Element Manager - Microsoft Internet Explorer". The site information is "Site: 207.179.153.99 >". The main heading is "System Information" with a subtitle "Information About the System You Have Logged Into".

Product	sse
SW version	sse-2.10.75
Platform Name	ISP 1100
Build Date	Thursday August 28 13:39:00 EDT 2003
System Host Name	Innovatia
System Location	
System Contact	
Web Server Version	WindWeb2.0
H323 ID	Innovatia
Set TPS	FALSE
Virtual Trunk TPS	FALSE
Gatekeeper configuration	Primary GateKeeper
Role	Leader
Call Server Type	Succession 1000M
Call Server Version	2121
Call Server Release	300S
Call Server Redundancy State	NOT APPLICABLE
Call Server CPU and Health State	NOT APPLICABLE

The navigation tree on the left includes the following items:

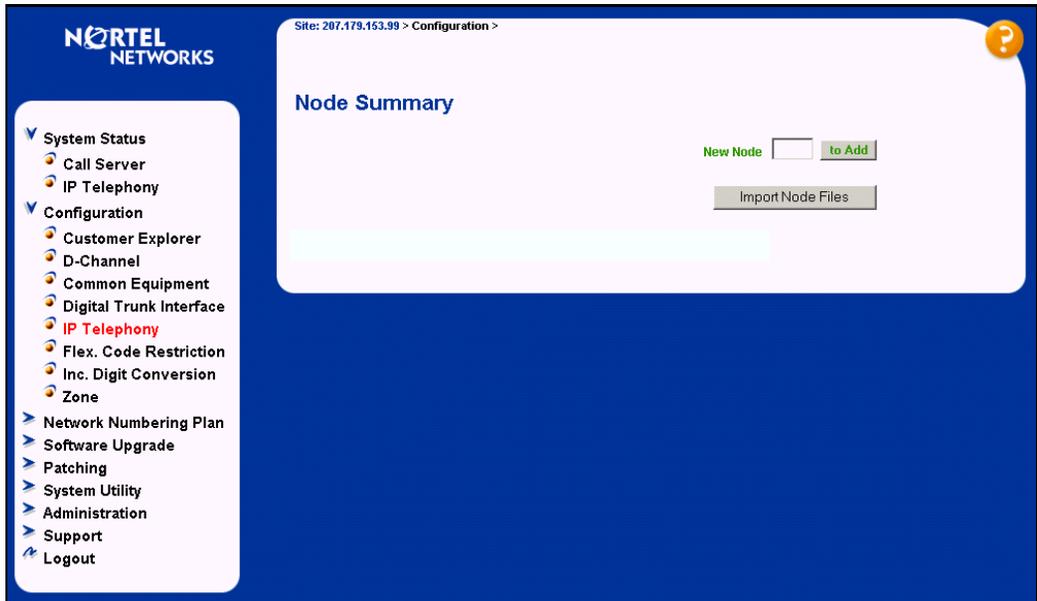
- System Status
 - Call Server
 - IP Telephony
- Configuration
 - Network Numbering Plan
 - Software Upgrade
 - Patching
 - System Utility
 - Administration
 - Support
 - Logout

An arrow points to the "Logout" option in the navigation tree. The text "Navigation Tree" is written below the tree.

- 1 Select **Configuration | IP Telephony** from the Navigation Tree menu on the left of Element Manager webpage (Figure 71),.

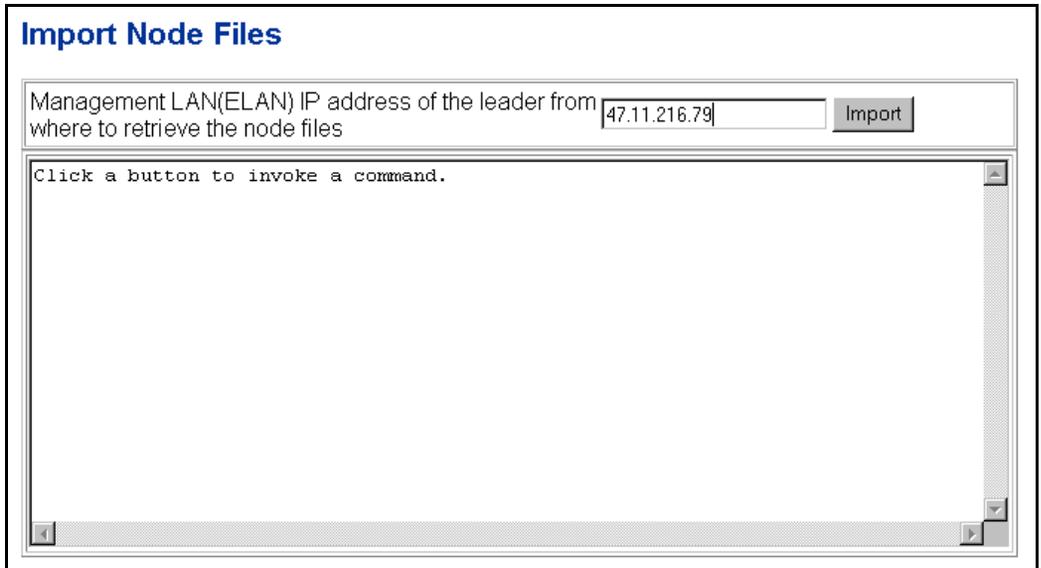
The **Node Summary** webpage (Figure 72) appears. There are no nodes defined.

Figure 72
Node Summary



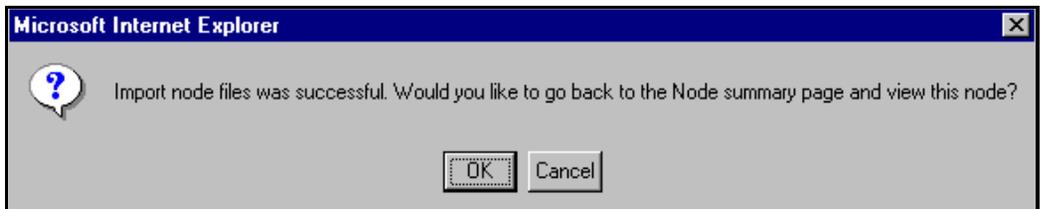
- 2 Import the Node files from the leader Succession Signaling Server.
 - a. Click the **Import Node Files** button on the Node Summary page.
The **Import Node Files** screen in Figure 73 on [page 199](#) appears.
 - b. Enter the ELAN IP address of the leader Succession Signaling Server in the input box.

Figure 73
Import Node Files—Retrieve and upgrade configuration files



- 3 Click the **Import** button.
A message appears as shown in Figure 74.
Click **OK** to go to the next procedure.

Figure 74
Success message



The Node Summary page is redisplayed; however, the new node is added (see Figure 75 on [page 200](#)).

————— **End of Procedure** —————

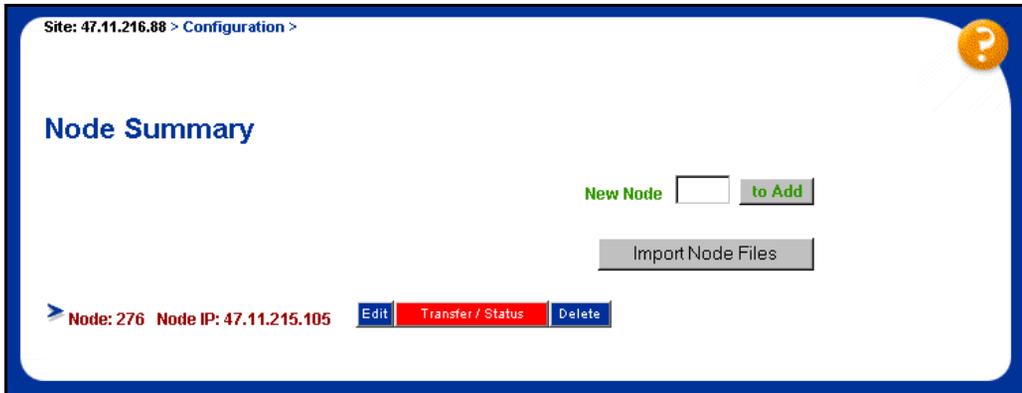
Procedure 53

Reviewing and submitting IP telephony node configuration

- 1 From the Node Summary page (see Figure 75), click the **Edit** button to view the node parameters.

The **Edit** webpage appears as shown in Figure 76 on [page 201](#).

Figure 75
Node Summary



Note 1: Clicking the **Transfer / Status** button displays the Transfer / Status page (see Figure 82 on [page 205](#)). This sends the node configuration files to all IP Telephony components in the node.

- If any element within the Node fails to transfer either BOOTP or CONFIG files, the Transfer / Status button will be highlighted in red.
- The Transfer / Status button will be highlighted in yellow if the transfer status of the node elements is unavailable.

Note 2: The **Delete** button is used to delete the corresponding node. The node is not automatically deleted. A message displays and asks if you are sure you want to delete the node.

Figure 76
Edit node parameters

Site: 207.179.153.99 > Configuration > Node Summary > IP Telephony: Node ID 8 >

Edit

Save and Transfer Cancel

- > Node
- > SNMP Add
- > VGW Profile
- > QoS
- > LAN configuration
- > SNTP
- > OM Thresholds
- > Gatekeeper
- > Firmware
- > Cards Add
- > Signaling Servers Add

Save and Transfer Cancel

**Mandatory fields of current configuration*

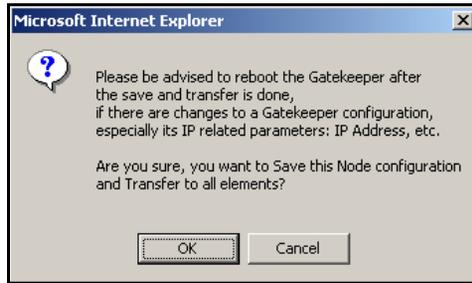
- 2 Review the node parameters by opening each tab.

Note: For detail information on each of the node parameters, refer to *IP Line: Description, Installation, and Operation* (553-3001-365).

- 3 Click the **Save and Transfer** button.

- 4 Click **OK** to save the node configuration to the Succession Call Server and transfer the configuration to all elements (see Figure 77 on [page 202](#)).

Figure 77
Save and Transfer–Gatekeeper message



After a few seconds, the **Transfer Progress** page opens and displays each of the elements in the node (see Figure 78 on [page 203](#)).

The Voice Gateway Media Cards retrieve the CONFIG.INI and BOOTP.TAB files from the Succession Call Server. A check mark is added to each field as the card receives its CONFIG.INI and BOOTP.TAB files.

The status column provides the progress of the transfer:

- The Status column displays “Starting” as the transfer begins (see Figure 78 on [page 203](#)).
- The Status column displays “Transfer” as the node configuration is transferred to the elements (see Figure 79 on [page 203](#)).
- The Status column displays “Complete” if the transfer is successful for an element (see Figure 80 on [page 204](#) and Figure 81 on [page 204](#)).
- The Status column displays “Fail” if the transfer is unsuccessful.

Figure 78
Transfer Progress—Starting

Transfer Progress

 Transfer in Progress Please Wait

Card	Status	bootp	config
47.11.216.79	Starting	<input type="checkbox"/>	<input type="checkbox"/>
47.11.216.80	Starting	<input type="checkbox"/>	<input type="checkbox"/>

* Checked means that file has transferred successfully.

Figure 79
Transfer Progress—Transferring

Transfer Progress

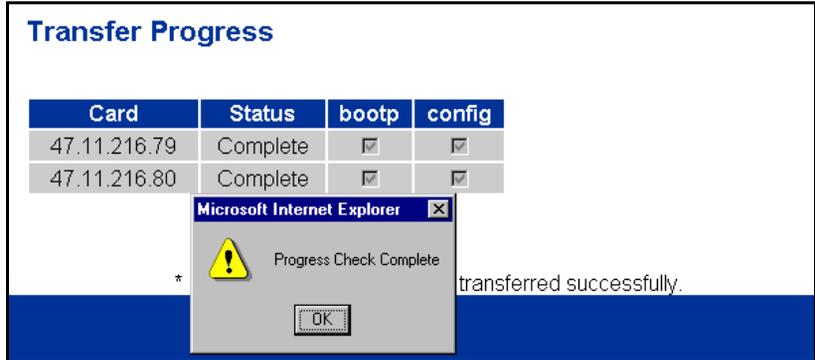
 Transfer in Progress Please Wait

Card	Status	bootp	config
47.11.216.79	Transferring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
47.11.216.80	Transferring	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* Checked means that file has transferred successfully.

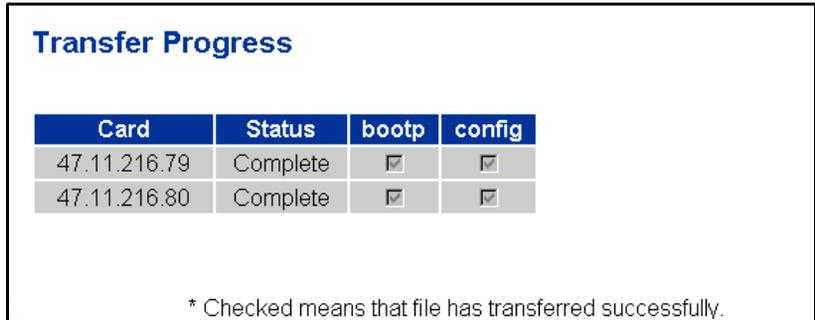
A dialog box opens which indicates that the progress check is complete.
Click **OK** (see Figure 80 on [page 204](#)).

Figure 80
Progress Check Complete dialog box



When the file transfer is complete, the Transfer Progress page displays a status of complete (see Figure 81 on [page 204](#)).

Figure 81
Transfer Progress—Complete



The **Transfer / Status** page displays.

Note: The Transfer / Status webpage (see Figure 82) can also be displayed from the Node Summary page by clicking the Transfer / Status button. This page indicates if the transfer was successful or not. For example, Figure 82 shows some elements as unreachable; you can transfer to these elements again.

Figure 82
Transfer / Status page

Site: 207.179.153.99 > Configuration > Node Summary > IP Telephony: Node ID 8 >

Transfer / Status

		Select All	Unselect All	Transfer to Selected Elements		
		Transfer to Failed Elements				
Index	ELAN IP	TN	Type	Role	Transfer Status (BOOTP)	Transfer Status (CONFIG)
<input type="checkbox"/> 2	200.20.200.30		Signaling Server	Leader	Element Unreachable	Element Unreachable
<input type="checkbox"/> 3	200.20.200.31		Signaling Server	Follower	Element Unreachable	Element Unreachable
<input type="checkbox"/> 1	200.20.200.35	13 0	ITG Pentium	Unknown	Element Unreachable	Element Unreachable

Cancel

The previous status of the node displays, and the failure reason is displayed for elements in nodes that failed to get configuration files (BOOTP.TAB and CONFIG.INI) from the Succession Call Server.

The **Transfer / Status** page displays five buttons:

- **Selected All.** Selects all the elements in the node (that is, it adds a check mark in each element's check box).
- **Unselect All.** Unselects all the elements in the node (that is, it removes the check marks for all the selected elements).
- **Transfer to Selected Elements.** Re-transfers node configuration files only to selected elements, regardless of a "Transfer Failed" state.
- **Transfer to Failed Elements.** Only transfers node configuration files to elements in a "Transfer Failed" state. The Transfer to Failed Elements button is displayed only when at least one element on the Node failed to transfer either a bootp.tab or config.ini in the previous operation.
- **Cancel.** Close the Transfer / Status pages without performing any action and displays the Node Summary page.

- 5 If the Succession Signaling Server configuration was changed on the Edit page, reboot the Succession Signaling Server.

End of Procedure

Procedure 54

Adding a Follower Succession Signaling Server to the IP Telephony node in Element Manager

After software installation and reboot, the follower Succession Signaling Server sends out BOOTP requests, and waits for a response. Since the Follower Succession Signaling Server has not booted successfully before, it waits for a non-forthcoming BOOTP response. Do not wait for this response; proceed to the next steps.

In Element Manager:

- 1 Click the **Edit** button on the IP Telephony Node Summary page (see Figure 75 on [page 200](#)).
- 2 Click the **Add** button of the Succession Signaling Server row.
- 3 Enter the follower Succession Signaling Server data to an IP telephony node, including its ELAN MAC address, which is used to answer BOOTP requests.

- 4 Click **Save and Transfer** to save the changes and the Leader Succession Signaling Server then obtains a copy of the node files.
- 5 Click **OK** to save the node configuration to the Succession Call Server and transfer the configuration to all elements.

When the file transfer is complete, the Transfer/ Status page appears.

The Leader Succession Signaling Server responds to the follower Succession Signaling Server's BOOTP request.

The follower Succession Signaling Server initializes its network interfaces.

The follower Succession Signaling Server attempts to FTP the BOOTP.TAB file from the node master (Leader Succession Signaling Server).

Note: Since the follower cannot obtain the system login and password, the FTP fails (for first-time follower Succession Signaling Server installation only). It does not have the current CONFIG.INI file that contains the Succession Call Server IP address. Subsequent FTPs succeed.

- 6 Transfer the node files again, so that the follower Succession Signaling Server obtains a copy of CONFIG.INI.
- 7 Reboot the follower Succession Signaling Server so that all its applications can start based on the new CONFIG.INI file.

The Succession Signaling Server uses BOOTP to obtain its network data, and it then FTPs the BOOTP.TAB file from the node master (Leader Succession Signaling Server).

End of Procedure

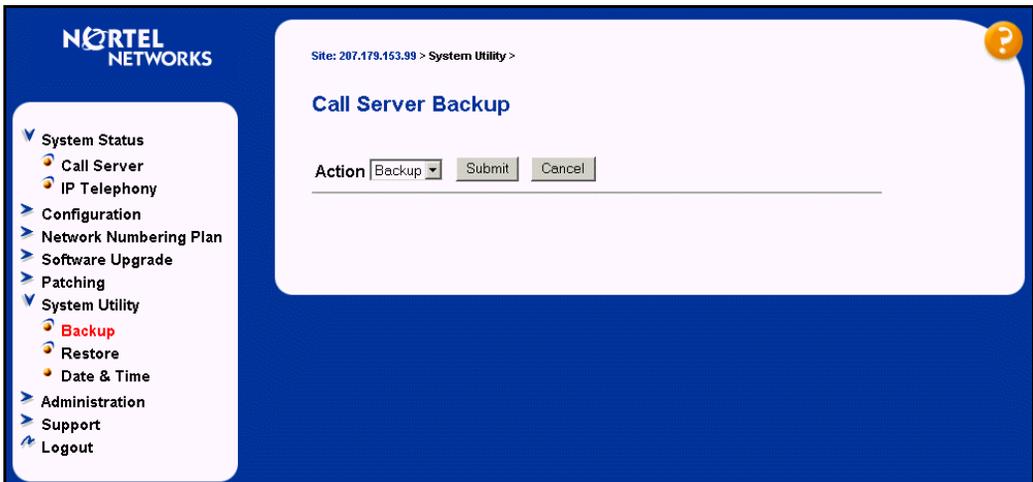
Procedure 55
Performing a data dump using Element Manager

This procedure is an alternative to using CLI to perform a data dump. The data dump backs up new IP Telephony node files on the Succession Call Server at the same time as it backs up the customer database.

From within Element Manager (see Figure 51 on page 195 for details on logging in), do the following:

- 1 Choose **System Utility | Backup** from the Navigation Tree.
- 1 The **Call Server Backup** webpage appears (see Figure 83).

Figure 83
Call Server Backup



- 2 Select **Backup** from the Action drop-down list box.
- 3 Click the **Submit** button.
The message displays indicating “Backup in progress. Please wait...”
- 4 Click **OK** in the EDD complete dialog box.
- 5 The Backup function then displays information in a tabular form indicating the actions that were performed.

————— **End of Procedure** —————

Internet Telephone installation and configuration

Contents

This section contains information on the following topics:

Introduction	210
Configuring Internet Telephones on the Succession Call Server	211
Configuring Internet Telephone Installer Passwords	217
Installing the Internet Telephones	222
Set-Based Installation	235
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Verifying Internet Telephone functionality	241
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Introduction

This chapter describes how to install and configure the Internet Telephones:

- i2002 Internet Telephone
- i2004 Internet Telephone
- i2050 Software Phone

Internet Telephones require several items of configuration as follows:

- The Internet Telephone TN blocks must be defined on the Succession Call Server (See “Configuring Internet Telephones on the Succession Call Server” on [page 211](#) or “Set-Based Installation” on [page 235](#)).
- The Internet Telephones are assigned to an IP telephony node, and use the IP telephony node properties defined using Element Manager (see “IP Telephony node configuration” on [page 183](#)).
- The Internet Telephones require local boot parameter configuration (see “Configuring the Internet Telephone boot parameters” on [page 226](#)).

This chapter contains the following procedures:

- Procedure 56 "Configuring VoIP bandwidth management zones" on [page 211](#).
- Procedure 57 "Configuring virtual superloops" on [page 213](#).
- Procedure 58 "Configuring the Internet Telephones" on [page 214](#).
- Procedure 59 "Setting passwords for the administrator and temporary Internet Telephone Installer" on [page 217](#).
- Procedure 60 "Installing the Internet Telephone components" on [page 222](#).
- Procedure 61 "Powering on using manual configuration to enter boot parameters for Internet Telephones" on [page 226](#).
- Procedure 62 "Powering on using full DHCP parameters to enter boot parameters for Internet Telephones" on [page 230](#).
- Procedure 63 "Powering on using partial DHCP configuration to enter boot parameters for Internet Telephones" on [page 232](#).

- Procedure 64 "Using Set-Based Installation" on [page 235](#).
- Procedure 65 "Configuring the i2050 Software Phone" on [page 237](#).
- Procedure 66 "Installing the USB Headset Kit" on [page 238](#).
- Procedure 67 "Installing the i2050 Software Phone on your PC" on [page 239](#).
- Procedure 68 "Viewing registered Internet Telephones" on [page 241](#).

Configuring Internet Telephones on the Succession Call Server

Procedure 56 **Configuring VoIP bandwidth management zones**

For more details on bandwidth management zones, see *IP Line: Description, Installation, and Operation* (553-3001-365).

VoIP bandwidth management zones can be configured with Element Manager or using the CLI. For more information about Element Manager, see *Succession 1000 Element Manager: Installation and Configuration* (553-3001-232) and *Succession 1000 Element Manager: System Administration* (553-3001-332).

The CLI procedure for configuring VoIP bandwidth management zones, is as follows:

- 1 Log in to the Succession Call Server.
 - a. Enter **LOGI** and press **<cr>**. The system response is **PASS?**
 - b. Enter the default password, **0000** and press **<cr>**.
- 2 To access LD 117, enter **LD 117** and press **<cr>**.
- 3 To create a new zone with default parameters, enter **NEW ZONE 0**.

Note: LD 117 also includes DIS and ENL commands to disable or enable a zone. When you create a zone, its default state is enabled. See Table 11 on [page 212](#) for the LD 117 zone commands.
- 4 Print zone and bandwidth information. Enter **PRT ZONE**.
- 5 Exit from LD 117, enter the command: ********

Table 11
Bandwidth management zones configuration commands in LD 117

Command	Description
NEW ZONE xxx p1 p2 p3 p4 p5	<p>Create a new zone, where:</p> <p>xxx = zone number = (0) - 255.</p> <p>p1 = Intrazone available bandwidth = 0 - (10000) - 100000 (Kbps)</p> <p>p2 = Intrazone preferred strategy = (BQ for Best Quality) or BB for Best Bandwidth</p> <p>p3 = Interzone available bandwidth = 0 - (10000) - 100000 (Kbps)</p> <p>p4 = Interzone preferred strategy = BQ for Best Quality or BB for Best Bandwidth</p> <p>p5 = Zone resource type = (shared) or private</p>
NEW ZONE xxx	<p>Create a new zone with default values for the parameters:</p> <p>p1 = 10000 (Kbps) p2 = BQ p3 = 10000 (Kbps) p4 = BQ p5 = shared</p>
CHG ZONE xxx p1 p2 p3 p4 p5	<p>Change parameters of a zone. All parameters must be re-entered, even those that are unchanged.</p>
OUT ZONE xxx	<p>Remove a zone.</p>
DIS ZONE xxx	<p>Disable a zone. When a zone is disabled, no new calls are established inside, from, or toward this zone.</p>
ENL ZONE xxx	<p>Enable a zone.</p>
PRT ZONE xxx	<p>Print zone and bandwidth information.</p>

————— **End of Procedure** —————

Procedure 57
Configuring virtual superloops

For more details on virtual superloops, see *IP Line: Description, Installation, and Operation* (553-3001-365).

- 1 To access LD 97, enter **LD 97** and press **<cr>**.
- 2 Enter responses shown in Table 12.

Table 12
LD 97 – Configure a Virtual Superloop.

Prompt	Response	Comment
REQ	CHG	Change.
TYPE	SUPL	Superloop.
SUPL	Vxxx	V stands for a virtual superloop and xxx is the number of the virtual superloop. xxx = 96-112 and multiple of four for Succession 1000. (See Table 13.)

Table 13
Virtual superloop/virtual card mapping

SUPL	Card	
96	61-64	81-84
100	65-68	85-88
104	69-72	89-92
108	73-76	93-96
112	77-80	97-99

- 3 Exit from LD 97, enter the command:

————— **End of Procedure** —————

Procedure 58
Configuring the Internet Telephones

Internet Telephones can be configured using OTM or CLI, as follows

- 1 To access LD 11, enter **LD 11** and press **<cr>**.
- 2 Do the following:
 - a. Enter the appropriate responses shown in Table 14.

Table 14
LD 11 – Configure an Internet Telephone. (Part 1 of 2)

Prompt	Response	Description
REQ:	NEW CHG PRT OUT CPY MOV	Action request New Change Print Out Copy Move
TYPE:	I2002 I2004 I2050	For model i2002, i2004 Internet Telephones or i2050 Software Phone. Succession 1000 accepts this response if it is equipped with packages 88 and 170.
TN		Terminal Number
	c u	Enter card (virtual slot) and unit Where unit = 0-31 (see Table 10 on page 179)
DES	d...d	Office Data Administration System Station Designator
CUST	0-31	Customer number
ZONE	0-255	Zone number to which this Internet Telephone belongs

b. Configure the dedicated soft keys, as shown in Table 15.

Table 15
Internet Telephone dedicated soft key assignment in LD 11 (Part 1 of 2)

Internet telephone key number	Response(s) Allowed
Key 16	MWK, NUL MWK - Message Waiting key
Key 17	TRN, NUL TRN - Call Transfer key
Key 18	A03 or A06, NUL AO3 - 3-party conference key AO6 - 6-party conference key
Key 19	CFW, NUL CFW - Call Forward key
Key 20	RGA, NUL RGA - Ring Again key
Key 21	PRK, NUL PRK - Call Park key
Key 22	RNP, NUL RNP - Ringing Number pickup key
Key 23	SCU-Speed Call User SSU-System Speed Call User SCC - Speed Call Controller SSC - System Speed Call Controller NUL
Key 24	PRS, NUL PRS - Privacy Release key

Table 15
Internet Telephone dedicated soft key assignment in LD 11 (Part 2 of 2)

Internet telephone key number	Response(s) Allowed
Key 25	CHG, NUL CHG - Charge Account key
Key 26	CPN, NUL CPN - Calling Party Number key

3 Repeat step 2 for all Internet Telephones.

End of Procedure

Configuring Internet Telephone Installer Passwords

The Internet Telephone Installer Passwords provide protection for changing the TN on the Internet Telephones. However, this procedure is optional. For detailed information about the Internet Telephone Installer Passwords, see *IP Line: Description, Installation, and Operation* (553-3001-365).

The Internet Telephone Installer Passwords are configured on one Succession Signaling Server or VGMC in a node. The passwords then apply to all components in the node.

Procedure 59 **Setting passwords for the administrator and temporary Internet Telephone Installer**

This procedure can also be performed from the CLI of a Succession Signaling Server or VGMC.

- 1 Log in to Element Manager, if you are not already logged in.
- 2 Select **System Status | IP Telephony** from the Navigation Tree, to display the IP Telephony Information page.
- 3 Click on the desired node to expand it.

- 4 Click the **GEN CMD** (General Commands) button for the chosen Succession Signaling Server or VGMC.
- 5 Select the **nodePwdShow** command from the **Signaling Server Command** drop-down list box (see Figure 84 on [page 218](#)).
- 6 Click the **RUN** button.

The current node password information displays in the text area at the bottom of the page.

Figure 84
General Commands

General Commands

Element IP : 200.20.200.30 Element Type : SS

Signaling Server Command	nodePwdShow	RUN
IP address	207.179.153.99	Number of Pings 3 PING
Node Password	nodePwdSet	SET
Graceful Disable Command	disServices	RUN

Click a button to invoke a command.

- 7 Enter the administrator Internet Telephone Installer Password in the **Node Password** box (see Figure 85).
- 8 Select **nodePwSet** from the drop-down list box.
- 9 Click the **SET** button.

The administrator password is set and enabled.

Figure 85
Node Password



The screenshot shows a web interface for setting a node password. On the left, the text 'Node Password' is displayed. To its right is a text input field. Further right is a dropdown menu with 'nodePwSet' selected. To the right of the dropdown is a button labeled 'SET'.

Note: The entered password appears as asterisks. The valid characters are 0-9 * #. The password can be null or 6 to 14 digits in length.



If the administrator password is null (zero length), then the Node ID, TN, and Password screens are not displayed on the Internet Telephones during their registration process. This provides security as it prevents any entry of passwords or TNs on the Internet Telephones. However, it is impossible to install new Internet Telephones (unless a temporary password is set).

- 10 Select the **nodePwShow** command from the drop-down list box in the Signaling Server Command area.
- 11 Click the **RUN** button.

The updated administrator Internet Telephone Installer Password is displayed in the text area at the bottom of the page. (see [Figure 86 on page 220](#)).

Figure 86
nodePasswordShow results after setting the password

NodeID	PwdEna	Pwd	TempPwd	Uses	TimeOut
276	Yes	123456		0	0d 0h 0m 0s

- 12 Enter the temporary Internet Telephone Installer Password (see Figure 87):
 - a. Enter the password in the **Node Password** text box.
 - b. Select **nodeTempPwdSet** from the drop-down list box.
 The area then displays the **Uses** and **Timeout** text boxes.
 - c. Enter a value for the number of uses or a value for time-out (in hours) or both.
- 13 Click the **SET** button.
 The temporary password is set.

Figure 87
Node Temp Password

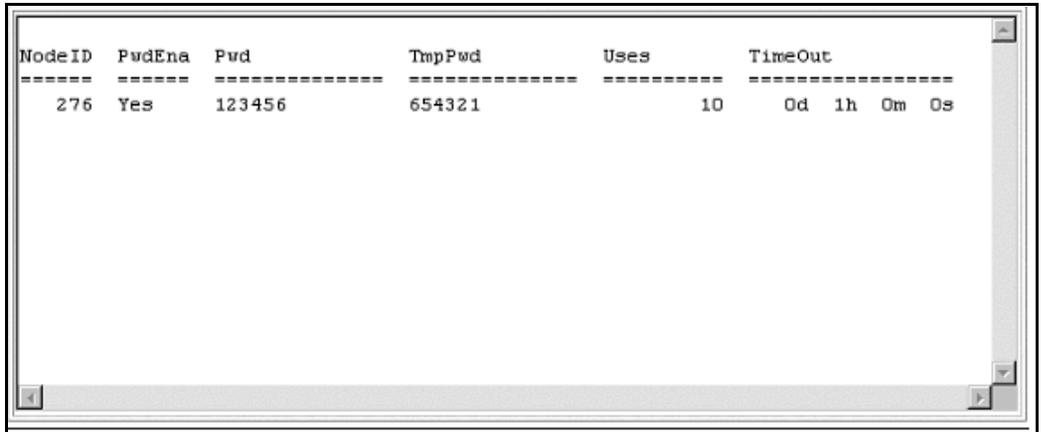
Note 1: The entered password appears as asterisks. The valid characters are 0-9 * #. The password can be 6 to 14 digits in length.

Note 2: The temporary password automatically deletes itself after it has been used the defined number of times or when the duration expires, whichever comes first.

- 14 Select the **nodePwdShow** command from the drop-down list box in the Signaling Server Command area.
- 15 Click the **RUN** button.

The updated temporary Internet Telephone Installer Password is displayed.

Figure 88
nodePasswordShow results after setting the temporary password



NodeID	PwdEna	Pwd	TmpPwd	Uses	TimeOut
276	Yes	123456	654321	10	0d 1h 0m 0s

To reset the passwords, repeat this procedure.

End of Procedure

Installing the Internet Telephones

Pre-installation checklist

One i2002 or i2004 Internet Telephone Boxed Package for each Internet Telephone is required. The Boxed Package contains:

- *NTEX00AA* i2002 or i2004 Internet Telephone
- *A0648375* 7 foot Ethernet cable, Category 5
- *PO910803* i2002/i2004 Quick Reference Card
- *A0619627* Power Transformer (117/120 V ac 50/60 Hz)
- *A0788874* Telephone Handset (Ethergray)
- *A0788682* Telephone Handset Cord (Ethergray)
- *P0886045* Telephone footstand

The following items are required:

- A dedicated 10BaseT or 100BaseT or 10/100BaseT Ethernet interface.
- A small desktop hub or switch if sharing an existing desktop Ethernet connection with a PC.
- A local power supply appropriate for the voltage in the area or an Power over LAN unit. (The i2002 Internet Telephones comes with a built-in three-port switch and is ready for LAN powering.)

Installing Internet Telephone hardware components

Procedure 60

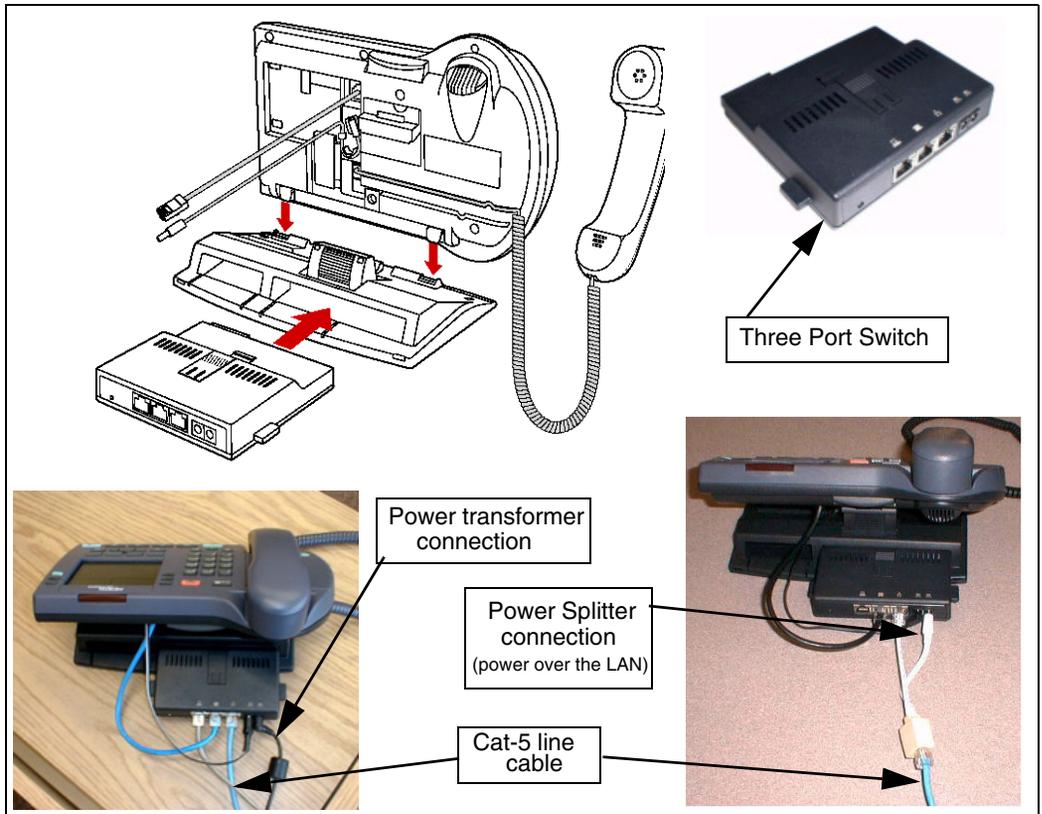
Installing the Internet Telephone components

For details on the installing the following, see *Internet Terminals: Description* (553-3001-368).

- 1 Referring to Figure 89 on [page 223](#), install the following:
 - a. Footstand
 - b. Three Port Switch only on the i2004 Internet Telephone, required if a single Ethernet connection is shared with a PC

- c. Ethernet cable from the set to the Three Port Switch
- d. Power transformer or Power Splitter for Power over LAN unit
- e. Handset
- f. Handset cord

Figure 89
i2004 Internet Telephone components



- 2 Connect one end of the Cat-5 line cable to the Ethernet jack on the back of the telephone. See Figure 89 on [page 223](#).
- 3 Connect the other end into the IP voice network (Ethernet), using an RJ-45 connector. See Figure 90 on [page 225](#).

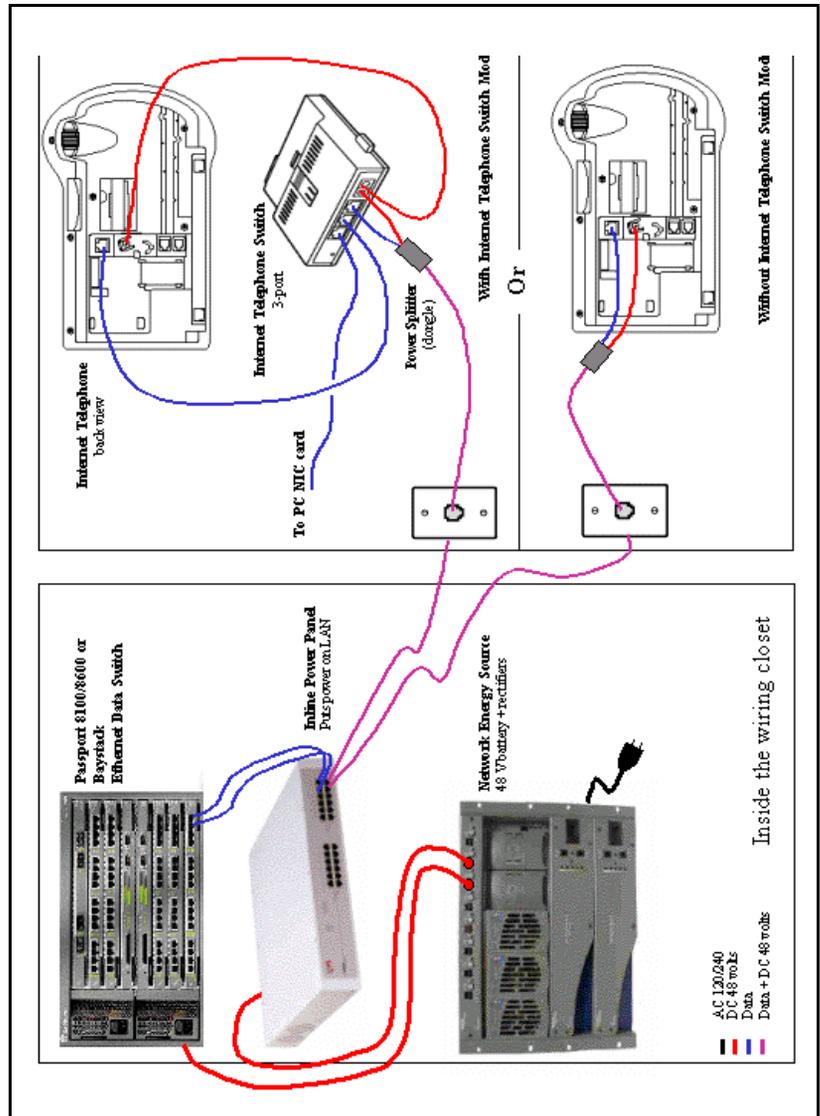


WARNING

Do not plug the Internet Telephone into an ISDN connection. Severe damage can result. Consult the system administrator to ensure that the telephone is being plugged into a 10/100BaseT Ethernet jack.

- 4 Power the Internet Telephone with one of the following methods:
 - a. Using a 16V ac power adaptor, plug the ac power transformer into the nearest power outlet. Check the Internet Telephone User Guide for country-specific parameters.
 - b. Using a Power over LAN unit, connect the Power over LAN unit as shown in Figure 90 on [page 225](#).
- 5 Secure the telephone footstand to the base of the telephone. Use the angle adjustment grip on the top back of the telephone to adjust the position.

Figure 90
Internet Telephone connections



End of Procedure

Configuring the Internet Telephone boot parameters

There are three configuration modes.

- 1 Manual configuration.** All of the Internet Telephone's boot parameters are statically configured at the Internet Telephone.
- 2 Partial DHCP mode.** Works with standard DHCP server. The DHCP server automatically provides the Internet Telephone with an IP address; the remainder of the Internet Telephone's boot parameters are statically configured at the Internet Telephone.
- 3 Full DHCP mode.** Requires special configuration of the DHCP server to recognize the Internet Telephone. The DHCP server provides all boot parameters to the Internet Telephone, including IP address and server address.

For configuration of the DHCP server, see *Data Networking for Voice over IP* (553-3001-160).

During the installation of the Internet Telephones, choose one of the following procedures:

- For manual configuration, complete Procedure 61.
- For DHCP Full configuration, complete Procedure 62 on [page 230](#).
- For DHCP Partial configuration, complete Procedure 63 on [page 232](#).

Procedure 61

Powering on using manual configuration to enter boot parameters for Internet Telephones

- 1** Power the Internet Telephone.
Within four seconds the Nortel Networks logo appears.
- 2** When the Nortel Networks logo appears on the display, you have one second to press the four feature keys at the bottom of the display in sequence from left to right.

Note: If the Nortel networks logo times-out, repeat step 1 and step 2.

- 3** For the following prompts:
- Press the **Backspace** (backspace) or **Clear** keys to change an entry.
 - Enter new values using the telephone's keypad.
 - Press the **OK** key to accept your selection.

The Internet Telephone prompts:

```
DHCP? (0-No, 1-Yes): 0
```

- 4** Enter **0** for manual boot parameter configuration.

The Internet Telephone prompts:

```
SET IP: x.x.x.x
```

- 5** Enter the Internet Telephone IP address.

The Internet Telephone prompts:

```
NETMSK: x.x.x.x
```

- 6** Enter the subnet mask.

The Internet Telephone prompts:

```
DEF GW: x.x.x.x
```

- 7** Enter the default gateway.

The Internet Telephone prompts:

```
S1 IP: x.x.x.x
```

- 8** Enter the Server 1 IP (node IP).

The Internet Telephone prompts:

```
S1 PORT: 4100
```

- 9** Enter the Server 1 port.

The Internet Telephone prompts:

```
S1 ACTION: 1
```

- 10** Enter the Server 1 action.

The Internet Telephone prompts:

```
S1 RETRY COUNT: 10
```

- 11** Enter the Server 1 retry count.

The Internet Telephone prompts:

```
S2 . . .
```

- 12** Enter same information as for Server 1.

The Internet Telephone prompts:

```
VLAN? (0-No, 1-Ma, 2-Au) 0
```

- 13** Choose one of the following:

- a.** Enter **0** to configure no VLAN.

The Internet Telephone displays:

```
Locating server...
```

After several seconds, the Internet Telephone prompts:

```
Connect Svc
```

```
Node: x
```

```
TN: x.x
```

Go to step 14 on [page 229](#).

- b.** Enter **1** to configure manual VLAN.

The Internet Telephone prompts:

```
VLAN: x
```

Go to step 14 on [page 229](#).

- c.** Press the OK key.

The Internet Telephone prompts:

```
Invalid TN: x.x
```

```
Reason: Unequipped.
```

```
Go offhook to do SBI
```

14 Enter the VLAN ID.

The Internet Telephone displays:

```
Locating server...
```

If you did not configure an Internet Telephone Installer Password, after several seconds, the Internet Telephone prompts:

```
Node: x
```

```
TN: x.x
```

15 Enter the node number and the Internet Telephone's (virtual) TN then go to Step 18.

If you configured an Internet Telephone Installer Password, the Internet Telephone prompts:

```
Node: x
```

```
PassWord: x
```

16 Enter the node number and the temporary or administrator Internet Telephone Installer Password.

Note 1: An asterisk is displayed for each password digit entered; the actual password is not displayed.

Note 2: If this screen times-out, or if you do not successfully enter the password in 3 attempts, the Internet Telephone continues its registration process as if no entry had been made to this prompt. You can reboot the telephone and try again if more tries are needed.

The Internet Telephone prompts:

```
TN: x.x
```

17 Enter the Internet Telephone's (virtual) TN.

The Internet Telephone displays the Succession logo, the date and time, and the DN keys.

18 Check for dial tone and the correct DN above the display.

End of Procedure

Procedure 62

Powering on using full DHCP parameters to enter boot parameters for Internet Telephones

- 1 Power the Internet Telephone.

Within four seconds the Nortel Networks logo appears.

- 2 When the Nortel Networks logo appears on the display, you have one second to press the four feature keys at the bottom of the display in sequence from left to right.

Note: If the Nortel Networks logo times-out, repeat step 1 and step 2.

- 3 For the following prompts:
 - a. Press the **Backspace** (backspace) or **Clear** keys to change an entry.
 - b. Enter new values using the telephone's keypad.
 - c. Press the **OK** key to accept your selection.

The Internet Telephone prompts:

```
DHCP? (0-No, 1-Yes): 0
```

- 4 Enter 1 to use DHCP.

The Internet Telephone prompts:

```
DHCP:0-Full, 1-Partial:0
```

- 5 Enter the 0 to use Full DHCP.

The Internet Telephone prompts:

```
VLAN? (0-No, 1-Ma, 2-Au) 0
```

- 6 Choose one of the following:

- a. Enter 0 to configure no VLAN.

The Internet Telephone displays:

```
Locating server...
```

After several seconds, the Internet Telephone prompts:

```
Connect Svc
```

```
Node: x
```

```
TN: x.x
```

Go to step 7 on [page 231](#).

- b. Enter **1** to configure manual VLAN.

The Internet Telephone prompts:

```
VLAN: x
```

Go to step 7.

- c. Enter **2** to configure automatic VLAN.

The Internet Telephone prompts:

```
VLAN: x
```

Go to step 7

- 7** Enter the VLAN ID.

The Internet Telephone displays:

```
Locating server...
```

If you did not configure an Internet Telephone Installer Password, after several seconds, the Internet Telephone prompts:

```
Node: x
```

```
TN: x.x
```

- 8** Enter the node number and the Internet Telephone's (virtual) TN, and then go to step 11 on [page 232](#).

If you configured an Internet Telephone Installer Password, the Internet Telephone prompts:

```
Node: x
```

```
PassWord: 0
```

- 9** Enter the node number and the temporary or administrator Internet Telephone Installer Password.

Note 1: An asterisk is displayed for each password digit entered; the actual password is not displayed.

Note 2: If this screen times-out, or if you do not successfully enter the password in 3 attempts, the Internet Telephone continues its registration process as if no entry had been made to this prompt. You can reboot the telephone and try again if more tries are needed.

The Internet Telephone prompts:

```
TN: x.x
```

- 10 Enter the Internet Telephone's (virtual) TN.

The Internet Telephone displays the Succession logo, the date and time, and the DN keys.

- 11 Check for dial tone and the correct DN above the display.

End of Procedure

Procedure 63

Powering on using partial DHCP configuration to enter boot parameters for Internet Telephones

- 1 Power up the Internet Telephone.

Within four seconds the Nortel Networks logo appears.

- 2 When the Nortel Networks logo appears on the display, you have one second to press the four feature keys at the bottom of the display in sequence from left to right.

Note: If the Nortel Networks logo times-out, repeat step 1 and step 2.

- 3 For the following prompts:
 - a. Press the **Backspace** (backspace) or **Clear** keys to change an entry.
 - b. Enter new values using the telephone's keypad.
 - c. Press the **OK** key to accept your selection.

The Internet Telephone prompts:

```
DHCP? (0-No, 1-Yes): 0
```

- 4 Enter **1** to use DHCP.

The Internet Telephone prompts:

```
DHCP:0-Full, 1-Partial:0
```

- 5 Enter the **1** to use Partial DHCP.

The Internet Telephone prompts:

```
S1 IP: x.x.x.x
```

- 6** Enter the Server 1 IP (node IP).

The Internet Telephone prompts:

```
S1 PORT: 4100
```

- 7** Enter the Server 1 port.

The Internet Telephone prompts:

```
S1 ACTION: 1
```

- 8** Enter the Server 1 action.

The Internet Telephone prompts:

```
S1 RETRY COUNT: 10
```

- 9** Enter the Server 1 retry count.

The Internet Telephone prompts:

```
S2 ...
```

- 10** Enter same information as for Server 1.

The Internet Telephone prompts:

```
VLAN? (0-No, 1-Ma, 2-Au) 0
```

- 11** Choose one of the following:

- a.** Enter **0** to configure no VLAN.

The Internet Telephone displays:

```
Locating server...
```

After several seconds, the Internet Telephone prompts:

```
Connect Svc
```

```
Node: x
```

```
TN: x.x
```

Go to step 12.

- b.** Enter **1** to configure manual VLAN.

The Internet Telephone prompts:

```
VLAN: x
```

Go to step 12 on [page 234](#).

- c. Enter 2 to configure automatic VLAN.

The Internet Telephone prompts:

VLAN: x

Go to step 12.

- 12 Enter the VLAN ID.

The Internet Telephone displays:

Locating server...

If you did not configure an Internet Telephone Installer Password, after several seconds, the Internet Telephone prompts:

Node: x

TN: x.x

- 13 Enter the node number and the Internet Telephone's (virtual) TN then go to step 16.

If you configured an Internet Telephone Installer Password, the Internet Telephone prompts:

Node: x

PassWord: 0

- 14 Enter the node number and the temporary or administrator Internet Telephone Installer Password.

Note 1: An asterisk is displayed for each password digit entered; the actual password is not displayed.

Note 2: If this screen times-out, or if you do not successfully enter the password in 3 attempts, the Internet Telephone continues its registration process as if no entry had been made to this prompt. You can reboot the telephone and try again if more tries are needed.

The Internet Telephone prompts:

TN: x.x

- 15 Enter the Internet Telephone's (virtual) TN.

The Internet Telephone displays the Succession logo, the date and time, and the DN keys.

- 16 Check for dial tone and the correct DN above the display.

End of Procedure

Set-Based Installation

This feature can be an alternative to LD 11 or OTM to configure Internet Telephones on the Succession Call Server.

The procedure for Set-Based Installation enables the delegation of telephone installation to trusted users. To have a trusted user perform this function, configure a temporary Internet Telephone Installer Password for the system. See “Configuring Internet Telephone Installer Passwords” on [page 217](#).

Procedure 64 Using Set-Based Installation

This procedure is the same as Procedure 61 on [page 226](#), Procedure 62 on [page 230](#), and Procedure 63 on [page 232](#), except when the system response, displayed on the Internet Telephone, is as follows:

If you did not configure an Internet Telephone Installer Password, the Internet Telephone prompts:

```
Node: x
TN: x.x
```

- 1 Enter the node number and the Internet Telephone's (virtual) TN, then go to Step 4.

If you configured an Internet Telephone Installer Password, the Internet Telephone prompts:

```
Node: x
PassWord: 0
```

- 2 Enter the node number and the temporary or administrator Internet Telephone Installer Password.

Note 1: An asterisk is displayed for each password digit entered; the actual password is not displayed.

Note 2: If this screen times-out, or if you do not successfully enter the password in 3 attempts, the Internet Telephone continues its registration process as if no entry had been made to this prompt. You can reboot the telephone and try again if more tries are needed.

The Internet Telephone prompts:

```
TN: x.x
```

3 Enter the Internet Telephone's (virtual) TN.

4 Press the OK key.

The Internet Telephone responds `Unequipped...`

5 Lift the handset. The system accepts the TN.

6 Listen for the continuous dial tone.

The system response, displayed on the Internet Telephone, is as follows:

`Model ? (20)`

7 Press the **#** key to select the default model, or enter the model number and press **#**.

8 Listen for a special tone.

The system response, displayed on the Internet Telephone, is as follows:

`OK, ZONE? (0)`

9 Press the **#** key to select the default zone, or enter the zone number and press **#**.

The system response, displayed on the Internet Telephone, is as follows:

`OK, EXTENSION? 2244`

10 Press the **#** key to select the default DN, or enter a DN and press **#**.

11 Listen for a relocation tone.

The system response, displayed on the Internet Telephone, is as follows:

`OK`

12 Replace the handset.

The set displays the Succession logo, the date and time, and the DN keys
The set based installation is complete.

End of Procedure

Installing the i2050 Software Phone

The following steps are necessary for installing an i2050 Software Phone:

- 1 Configure the i2050 in LD 11 with TYPE = I2050.
- 2 Install the USB Headset Kit.
- 3 Install the i2050 Software Phone application.
- 4 Run the i2050 Configuration Utility.

Procedure 65

Configuring the i2050 Software Phone

- 1 To access LD 11, enter **LD 11** and press **<cr>**.
- 2 Enter appropriate responses shown in Table 16.

Table 16
LD 11 – Configure the i2050 Software Phone.

Prompt	Response	Description
REQ:	NEW	Add new data
	CHG	Change existing data
TYPE:	I2050	Type of data block
TN	c u	Terminal number
DES	x...x	ODAS telephone designator
CUST	xx	Customer number, as defined in LD 15
...		
ZONE	0-255	Zone number
FDN	x...x	Flexible CFNA DN
...		
CLS	aaa	Class of service
		HFA - Digital Telephone Handsfree Allowed is default for i2050 to enable the USB interface

————— **End of Procedure** —————

Installing and configuring on the PC

Installing the USB Headset Kit

Installing the USB Headset Kit application after the i2050 software application enables the i2050 application to show it as an audio device option during the installation. If the USB Headset Kit is installed, you can still choose it as the audio device from the Configuration Utility.

Procedure 66

Installing the USB Headset Kit

- 1 Connect the coiled lower cord to the headset cord with the Quick Disconnect connector. Ensure the Quick Disconnect is securely fastened.
- 2 Connect the headset cord to the RJ9 jack on the adaptor.
- 3 Connect the USB cable to the headset adaptor and to one of the USB jacks on the back of your PC or USB hub.

End of Procedure

The first time the headset adapter is plugged in, there is a delay while Windows configures the device and locates appropriate driver software. During the installation you can be prompted to supply the original Windows CD-ROM so that Windows can locate the required drivers.

Installing the i2050 Software Phone application

Procedure 67

Installing the i2050 Software Phone on your PC

- 1 Insert the CD-ROM disk into the CD-ROM drive of your PC.
Note: Installation should proceed automatically. If it does not, then continue with step 1. Otherwise go directly to step 5.
- 2 On the PC desktop, double-click the **My Computer** icon.
- 3 Double-click the **CD** icon.
- 4 Double-click the **Setup** icon.
- 5 Follow the prompts that appear on the screen.
- 6 Run the i2050 Configuration Utility to assign a server address, select sound devices, and select a server type.

End of Procedure

Running the i2050 Software Phone for the first time

Installation places the i2050 Software Phone in the Windows Start menu at *Start>Programs>Nortel Networks>i2050 Software Phone*. The Configuration Utility is placed in the Windows Control Panel.

The i2050 application is started by one of the following:

- Select Start>Programs>Nortel Networks>i2050 Software Phone.
- Click the desktop shortcut (if one was created during the installation).
- Automatic startup sequence.

Note: If you want the i2050 Software Phone to start automatically when the PC boots, place a shortcut to the application in the Startup folder.

When an i2050 Software Phone starts for the first time and connects to the network, it executes a start-up sequence. The elements of the start-up sequence are as follows:

- Get the IP parameters.
- Find a gateway server, and authenticate the user.

As the i2050 Software Phone registers with the system, the following occurs:

- If a non-null node password is enabled, it prompts for a node number and password. Enter the node number and password using the keyboard or numeric keypad. After the password is verified, enter the TN of the i2050 Software Phone. See *IP Line: Description, Installation, and Operation* (553-3001-365) for more on the password feature.
- If the null node password is configured and enabled, these screens are skipped and no option is provided to change the password.
- If the node password is disabled or not configured, it prompts for a node number and TN. Enter the node number and TN using the keyboard or numeric keypad.

The i2050 Software Phone configuration is complete.

Verifying Internet Telephone functionality

You can now use the Internet Telephones. To test the telephones, make Internet Telephone to Internet Telephone calls.

To view the Internet Telephones registered on a Succession Signaling Server or Voice Gateway Media Card, perform the following procedure.

Procedure 68

Viewing registered Internet Telephones

- 1** Log in to Element Manager, if you are not already logged in.
- 2** Select **System Status | IP Telephony** from the Navigation Tree.
- 3** Click on the desired node to expand it.
- 4** Click the **GEN CMD** button for the desired Signaling Server or VGMC.
 - a.** Select **isetShow** from the drop-down list box.
 - b.** If prompted, select the range of sets to display.
 - c.** Click **RUN**.

The status of all Internet Telephones registered on this Succession Signaling Server or VGMC is displayed.

End of Procedure

Firmware upgrades

Refer to the *Succession 1000 System: Upgrade Procedures (553-3031-258)*, to check for the latest Internet Telephone firmware version and how to upgrade to the latest Internet Telephone firmware.

Voice Gateway Media Card configuration and installation

Contents

This section contains information on the following topics:

Introduction	243
Configuring the Voice Gateway Media Card	245
Installing a Voice Gateway Media Card	254
Verifying the Voice Gateway Media Card	264
Loadware upgrades	279

Introduction



CAUTION

Complete the procedures in the “Basic system telephony configuration” and “IP Telephony node configuration” chapters before attempting to do the “Voice Gateway Media Card configuration and installation”.

This chapter describes configuration and installation procedures of the Voice Gateway Media Cards.

The Voice Gateway Media Card runs the IP Line 3.1 software. For details, see *IP Line: Description, Installation, and Operation* (553-3001-365).

The VGMCs provide voice gateway channels (DSPs) to transcode voice data between IP and TDM (analog/digital). The node properties as well as the voice gateway channels must be configured.

Voice Gateway Media Cards are installed in Succession Media Gateways or Succession Media Gateway Expansions.

This chapter contains the following procedures:

- Procedure 69 "Adding VGMC to an IP telephony node" on [page 245](#).
- Procedure 70 "Adding DSP channels using Element Manager" on [page 248](#).
- Procedure 71 "Configuring VGW channels using overlays" on [page 252](#).
- Procedure 72 "Installing the CompactFlash" on [page 256](#).
- Procedure 73 "Installing VGMC into a card slot" on [page 263](#).
- Procedure 74 "Displaying status of the VGMC" on [page 264](#).
- Procedure 75 "Displaying Voice Gateway status for all voice gateway channels" on [page 266](#).
- Procedure 76 "Displaying the status of VGMC units" on [page 269](#).
- Procedure 77 "Displaying status of one unit on a VGMC" on [page 272](#).
- Procedure 78 "Printing DSP channel configuration" on [page 274](#).
- Procedure 79 "Disabling a VGMC" on [page 275](#).
- Procedure 80 "Disabling a VGMC unit" on [page 276](#).
- Procedure 81 "Enabling a VGMC" on [page 277](#).
- Procedure 82 "Enabling a VGMC unit" on [page 278](#).

Configuring the Voice Gateway Media Card

Voice Gateway Media Cards require configuration of the following:

- The VGMCs are assigned to an IP telephony node, and use the IP telephony properties defined with Element Manager, see “IP Telephony node configuration” on [page 183](#).
- The VGMC voice gateway channels must be defined on the Call Server, see “Configuring the voice gateway channels” on [page 248](#).

Adding a Voice Gateway Media Card to an IP telephony node

The VGMC can be added to an IP telephony node using Element Manager only. See *Succession 1000 Element Manager: Installation and Configuration* (553-3001-232) and *Succession 1000 Element Manager: System Administration* (553-3001-332) for details.

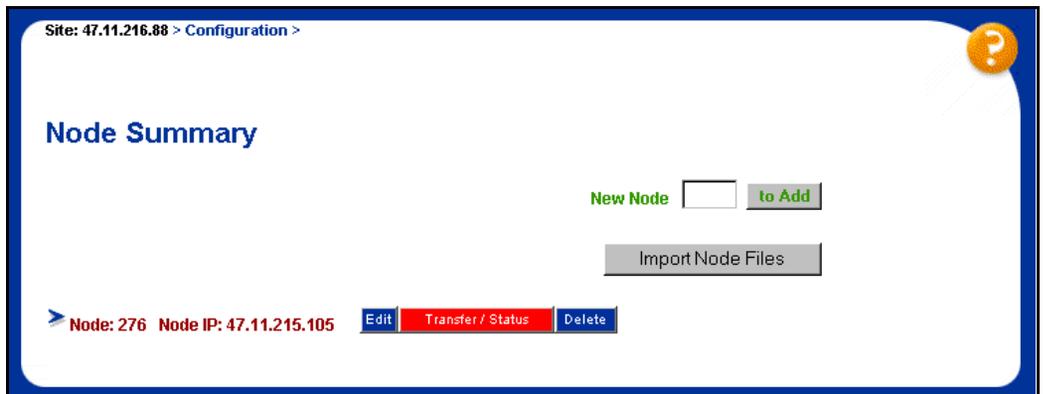
Procedure 69

Adding VGMC to an IP telephony node

- 1 Log in to Element Manager, if you are not already logged in.
- 2 Select **Configuration | IP Telephony** from the Navigation Tree.

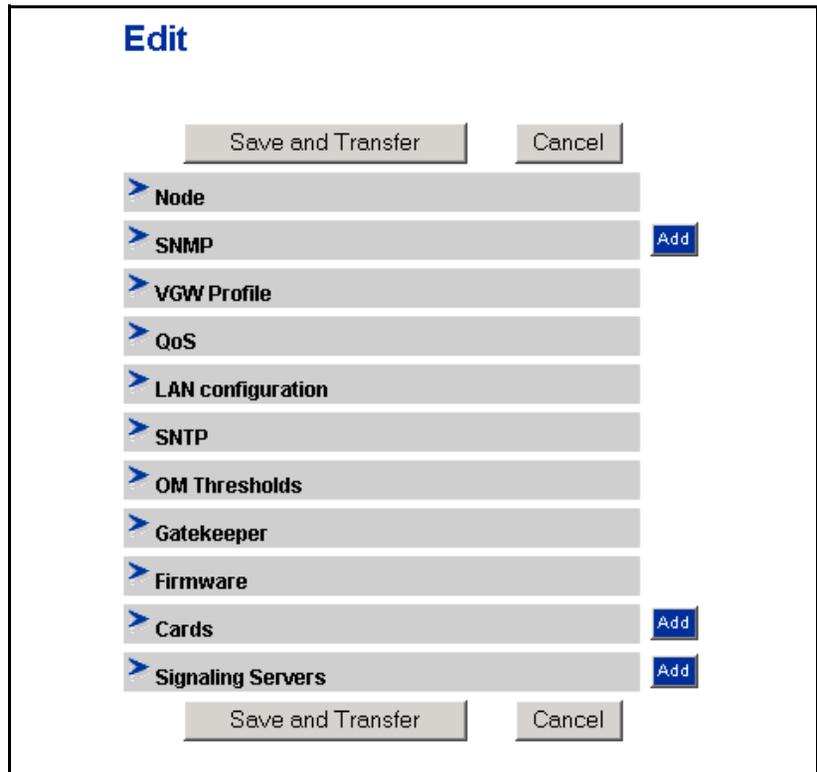
The Node Summary webpage is displayed.

Figure 91
Node Summary



- 3 Click the **Edit** button for the desired node.
The Edit webpage is displayed (see Figure 92).

Figure 92
Edit



- 4 Click the **Add** button adjacent to the **Cards** tab.
The Cards tab expands (see Figure 93 on [page 247](#)).
- 5 Enter your data for this VGMC. The ELAN MAC address is on a faceplate sticker. The TN is the VGMC logical card slot (See Table 18 on [page 262](#)).

Note: For more detail on Voice Gateway Media Card properties, see *IP Line: Description, Installation, and Operation* (553-3001-365).

Figure 93
Cards

Cards		Add
 Card 200.20.200.35 Properties		Remove
 Card 0.0.0.0 Properties		Remove
 Card 0.0.0.0 Properties		Remove
Role	Unknown	
Management LAN (ELAN) IP address	<input type="text" value="0.0.0.0"/>	*
Management LAN (ELAN) MAC address	<input type="text" value="00:00:00:00:00:00"/>	*
Voice LAN (TLAN) IP address	<input type="text" value="0.0.0.0"/>	*
Voice LAN (TLAN) gateway IP address	<input type="text" value="0.0.0.1"/>	
Card TN	<input type="text"/>	*
Card processor type	Succession Media Card ▾	
H323 ID	<input type="text" value="SCSE1_GW"/>	
Enable set TPS	<input checked="" type="checkbox"/>	
System name	<input type="text"/>	
System location	<input type="text"/>	
System contact	<input type="text"/>	

- 6 Click **Save and Transfer** at the bottom of the Edit page, then click **OK** to save this node.

————— **End of Procedure** —————

Configuring a VGMC as a node leader

Normally, in a Succession 1000 system, Voice Gateway Media Cards are “followers”; a Succession Signaling Server is the IP telephony node leader.

In an IP telephony node without a Succession Signaling Server, one of the VGMCs must be configured as a Leader. If this is your configuration, please see the *IP Line: Description, Installation, and Operation* (553-3001-365) for a detailed configuration procedure.

Normally, Voice Gateway Media Cards default as followers. If you need to configure a VGMC as a follower, please see the *IP Line: Description, Installation, and Operation* (553-3001-365) for a detailed configuration procedure.

Configuring the voice gateway channels

The voice gateway channels are also called “DSP channels” or the card’s “physical TNs”.

The DSP channels can be configured using Element Manager or LD 14. Perform either Procedure 70 on [page 248](#) or Procedure 71 on [page 252](#).

Procedure 70

Adding DSP channels using Element Manager

- 1 Select **Configuration | IP Telephony** from the Navigation Tree.
The Node Summary webpage displays.
- 2 Click on the desired node to expand it (see Figure 94 on [page 249](#)).

Figure 94
Expanded node on Node Summary webpage

The screenshot shows the 'Node Summary' page for Site: 207.179.153.99 > Configuration >. The page title is 'Node Summary'. There are two buttons: 'New Node' with an input field and 'to Add', and 'Import Node Files'. Below this, there is a section for 'Node: 8 Node IP: 200.10.200.20' with 'Edit', 'Transfer / Status', and 'Delete' buttons. Underneath, there are three sections: 'Voice LAN (TLAN) IP address' with value 'TN', 'Signaling Server' with values '200.10.200.30' and '200.10.200.31', and 'Pentium Card' with value '200.10.200.35' and '13 0'. A 'VGW Channels' button is located next to the Pentium Card information. The 'Succession Media Card' section is also visible.

- 3 Click the **VGW Channels** button for the desired card.
Since there are no VGW channels configured yet, an alert box is displayed.
- 4 Click **OK** to close the alert box.
The VGW channel configuration for this card is displayed.

Figure 95
VGW channel configuration display

The screenshot shows the 'VGW Channels - Node 8, Card 200.20.200.35, TN 13' configuration page. It features a table with columns: 'TN', 'Description', 'Customer', and 'ZONE'. Below the table are 'Add' and 'Delete' buttons.

TN	Description	Customer	ZONE

- 5 Click the **Add** button. The Add VGW channels page is displayed.

- 6 Enter the appropriate parameters to configure the VGW channels, shown in Figure 96 on page 250. The Terminal Number (TN) is the logical TN of the first VGMC unit. See Table 18 on page 262 for the logical slot numbers.

Note: The Succession Media Card has 8 or 32 channels. The ITG-P card has 24 channels.

Figure 96
Add VGW channel

Site: 207.179.153.99 > Configuration > Node Summary > VGW Channels - Node 8, Card 200.20.200.35, TN 13 >

Add VGW channel

Basic Configuration

Input Description	Input Value
Multiple VGW channel input number (MTINPUT)	<input type="text"/> Read Only
Trunk data block (TYPE)	<input type="text" value="VGW"/> Read Only
Terminal Number (TN)	<input type="text" value="013 0 00 00"/> Read Only
Designator field for trunk (DES)	<input type="text"/>
Extended Trunk (XTRK)	<input type="text" value="ITGP"/> Read Only
Customer number (CUST)	<input type="text" value="0"/> Read Only
Zone number (ZONE)	<input type="text" value="000"/> Range: 0 - 255 *

* Mandatory fields of current configuration

- 7 Click the **Submit** button.

The VGW channels for this card are displayed.

Note: If you receive an error that a pad category table does not exist for this customer, go back to your DTI configuration step (“Basic system telephony configuration” on page 173) and create a default DTI Data Block (DDB), then perform this procedure again.

Figure 97
VGW channels list

VGW Channels - Node 8, Card 200.20.200.35, TN 13

TN	Description	Customer	ZONE	Add	Delete
013 0 00 00		0	000	Edit	
013 0 00 01		0	000	Edit	
013 0 00 02		0	000	Edit	
013 0 00 03		0	000	Edit	
013 0 00 04		0	000	Edit	
013 0 00 05		0	000	Edit	
013 0 00 06		0	000	Edit	
013 0 00 07		0	000	Edit	
013 0 00 08		0	000	Edit	
013 0 00 09		0	000	Edit	
013 0 00 10		0	000	Edit	
013 0 00 11		0	000	Edit	
013 0 00 12		0	000	Edit	
013 0 00 13		0	000	Edit	
013 0 00 14		0	000	Edit	
013 0 00 15		0	000	Edit	

End of Procedure

Procedure 71
Configuring VGW channels using overlays

Configure VGMC physical TNs in LD 14.

- 1 Log in to the Succession Call Server.
 - a. Enter **LOGI** and press **<cr>**.
 The system response is **PASS?**
 - b. Enter the default password, **0000** and press **<cr>**.
- 2 To access LD 14, enter **LD 14** and press **<cr>**.
- 3 Enter responses shown in Table 17.

Table 17
LD 14 – Configure physical TNs. (Part 1 of 2)

Prompt	Response	Description
REQ:	NEW 24	Create 24 voice media gateway channels on an ITG-P Line Card.
	NEW 32	Create 32 voice media gateway channels on a Succession Media Card.
TYPE:	TIE	TIE Trunk. There is no route datablock required for IPTNs.
TN	c u	Logical TN of the first VGMC unit. See Table 18 on page 262 for the logical TN.
DES	aa.....a	Description for gateway channels. Identify the channels using the card's TLAN IP address or MAC address.
XTRK	ITG1	ITG1 is the Succession Media Card which occupies only 1 card slot. ITG1 allows the next card to be configured in the next slot.
	ITG2	ITG2 is the NTVQ55AA ITG-P Line card which occupies 2 card slots. ITG2 instructs the software to skip the next slot when configuring trunk units. (Slot cannot be used because this is a dual slot card.) Note: Entering ITG2 at the XTRK prompt works for the Succession Media Card; however, the next slot cannot be configured or used.

Table 17
LD 14 – Configure physical TNs. (Part 2 of 2)

Prompt	Response	Description
MAXU	32	32 is the maximum number of voice media gateway channels on the Succession Media Card.
	24	24 is the maximum number of voice media gateway channels on the ITG-P Line Card.
IPTN	YES	ITG Physical TN.
ZONE	0-255	Zone number to which the VGMC Physical TNs belong. Verify that the zone exists in LD 117.
CUST	0-99	The customer to which the IPTN resources are assigned. Note: This means that for multi-customer Succession 1000 systems, each customer must have a dedicated IP Telephony node for Internet Telephones.

4 Exit from LD 14, enter the command:

End of Procedure

Saving your configuration changes

To save your configuration changes, perform a data dump on the Succession Call Server. To do this, complete the steps in Procedure 55 "Performing a data dump using Element Manager" on [page 208](#).

Installing a Voice Gateway Media Card

The VGMC requires a CompactFlash card in place to operate. The CompactFlash card contains the IP Line 3.1 software.



CAUTION WITH ESDS DEVICES

Wear an anti-static device to avoid damage to the Voice Gateway Media Card.

Installing the CompactFlash

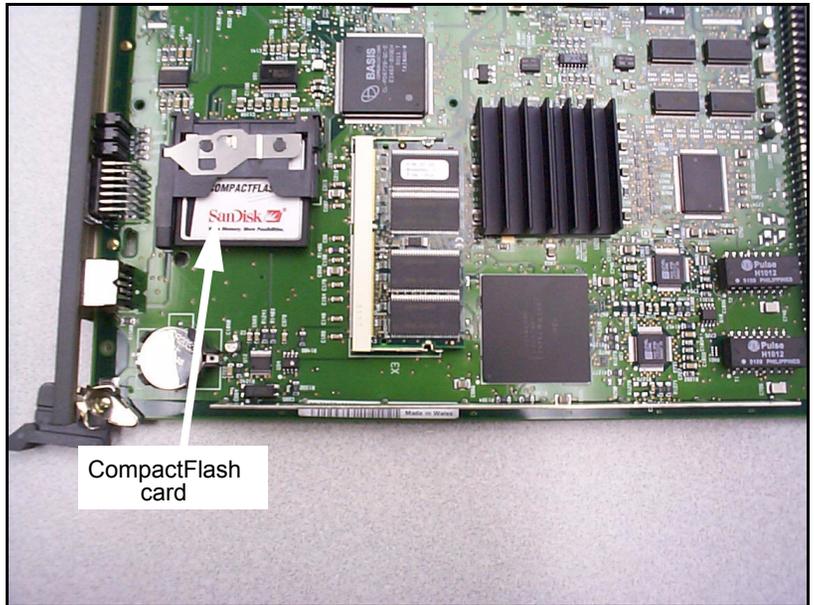
The Voice Gateway Media Card package includes the following:

- Succession Media Card
- CompactFlash card and Retaining Pin (nylon pillar)
- Shielded 50-pin to Serial/ELAN/TLAN Adapter

The CompactFlash card must be installed on the VGMC prior to installing the VGMC in the system.

Figure 98 on [page 255](#) shows the CompactFlash card location on the VGMC.

Figure 98
CompactFlash card location



When working with circuitry such as the CompactFlash, always attach an anti-static device, such as the wrist strap in Figure 99.

Figure 99
Anti-static wrist strap



The CompactFlash card and Retaining Pin are shown in Figure 100.

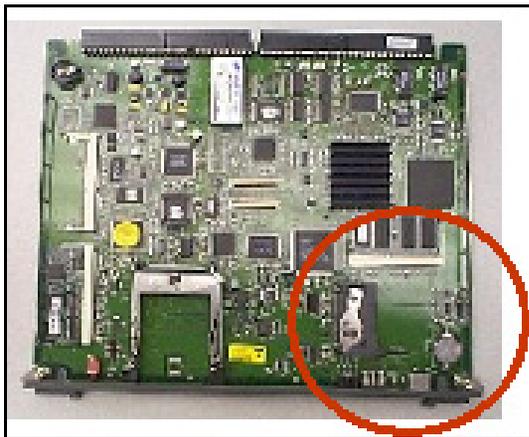
Figure 100
CompactFlash card and Retaining Pin



Procedure 72
Installing the CompactFlash

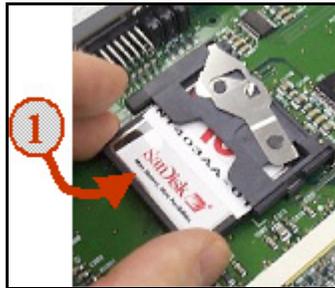
- 1 Remove the Succession Media Card, CompactFlash card, and Retaining Pin from the packaging.
- 2 Locate the CompactFlash socket in the lower left-hand corner of the VGMC (see Figure 101).

Figure 101
CompactFlash socket on Voice Gateway Media Card



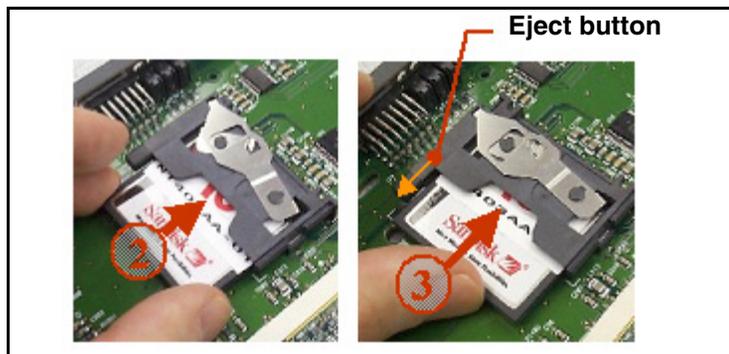
- 3 Position the CompactFlash card with the label facing up and contact pins toward the socket as shown in Figure 102.

Figure 102
Position the CompactFlash in socket



- 4 Insert the CompactFlash card in the socket.
Press firmly until it is fully seated and the Eject button extends (see Figure 103).

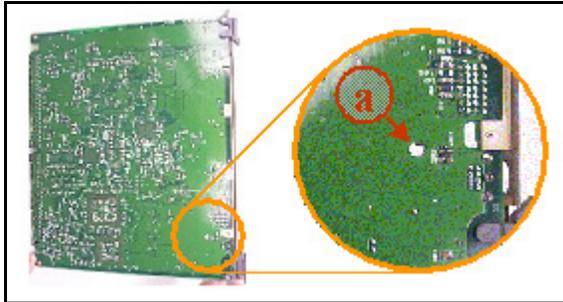
Figure 103
Insert CompactFlash to extend Eject button



- 5 Turn the VGMC over to view the back of the card.

Identify the hole for the Retaining Pin. The hole (labeled **a** in Figure 104) is located approximately 1 inch (2.5 cm) above the lower lock latch and 1 inch (2.5 cm) from the card's faceplate.

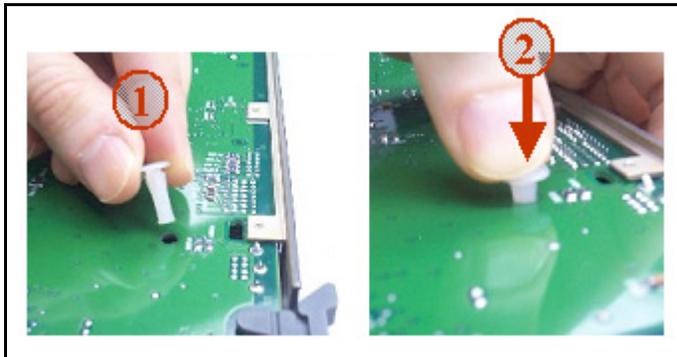
Figure 104
Retaining Pin hole



- 6 Insert the Retaining Pin in this hole (labeled 1 in Figure 105).

Press the Retaining Pin into the hole until the pin clicks as it locks into position (labeled 2 in Figure 105). The underside of the head of the Retaining Pin should be flat against the card.

Figure 105
Inserting the Retaining Pin



- 7 Turn the card over to view the front of the card. Ensure the Retaining Pin is in place as shown Figure 106 on [page 259](#).

Figure 106
Retaining Pin fully inserted



End of Procedure

Installing a VGMC into a card slot

A Voice Gateway Media Card can be installed in a Succession Media Gateway or a Succession Media Gateway Expansion slot. See Figure 107 on [page 260](#) and Figure 108 on [page 261](#) to make sure that you insert the VGMC in the correct slot.

Note: See your installation worksheet, provided by your Planning and Engineering group, for the correct slot for the VGMCs.

Figure 107 shows the circuit card assignments in the Succession Media Gateway chassis.

Figure 107
Succession Media Gateway card slot location

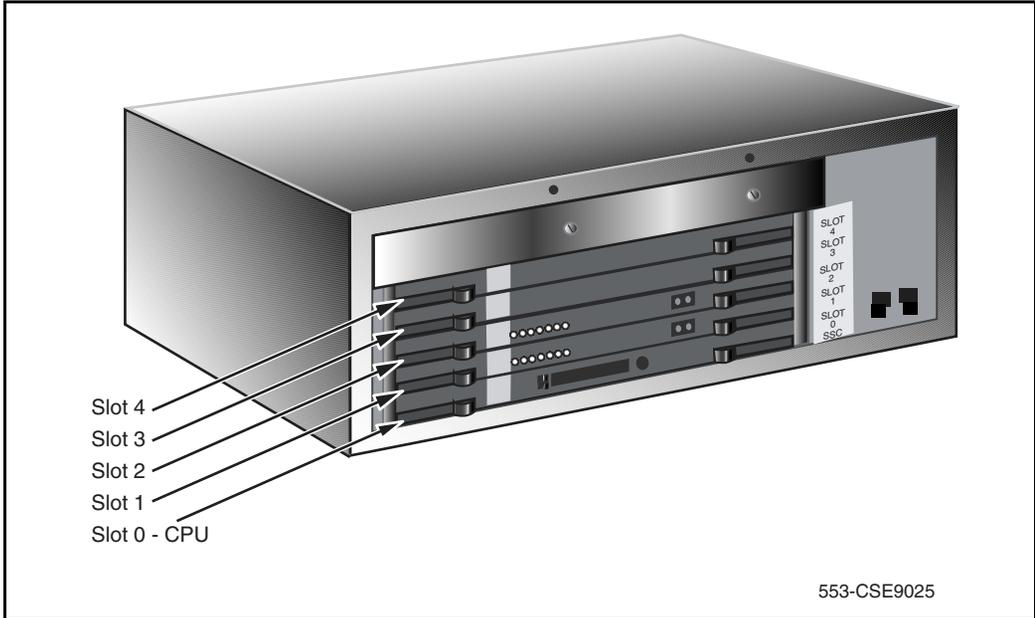


Figure 108 shows the circuit card assignments in the Succession Media Gateway Expansion chassis.

Figure 108
Succession Media Gateway Expansion card slot location

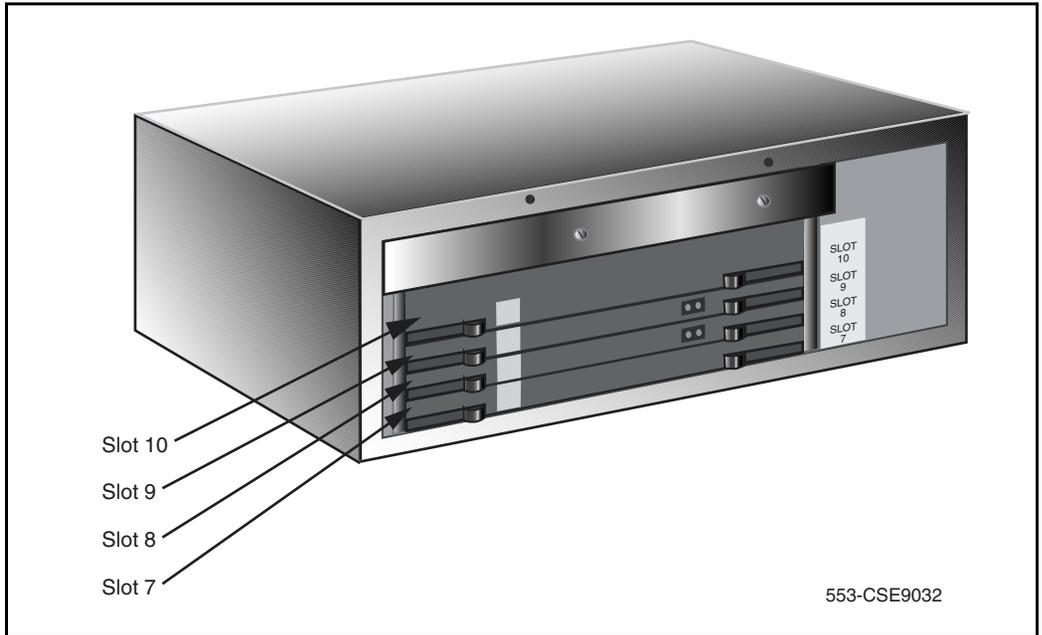


Table 18 shows the slot assignments for the Succession Media Gateway and Succession Media Gateway Expansion.

Table 18
Succession Media Gateway/Succession Media Gateway Expansion card slot assignments

Succession Media Gateway / Succession Media Gateway Expansion									
	First		Second		Third		Fourth		
	Physical card slot	Logical card slot							
Succession Media Gateway	1	11	1	21	1	31	1	41	
	2	12	2	22	2	32	2	42	
	3	13	3	23	3	33	3	43	
	4	14	4	24	4	34	4	44	
	5	*	5	*	5	*	5	*	
	6	*	6	*	6	*	6	*	
Succession Media Gateway Expansion	7	17	7	27	7	37	7	47	
	8	18	8	28	8	38	8	48	
	9	19	9	29	9	39	9	49	
	10	20	10	30	10	40	10	50	
Legend * Not supported. The bottom most card slot in the Succession Media Gateway chassis is reserved for the SSC card.									

Procedure 73**Installing VGMC into a card slot**

You should already have connected the ELAN and TLAN to the VGMC connector on the rear of the chassis. If not, refer back to “System connections” on [page 101](#).

Optionally, you can connect a maintenance terminal to the maintenance port on the VGMC, to see the VGMC’s boot messages or to perform maintenance on it. See “System connections” on [page 101](#) for more detail.

- 1** Install the VGMC into the card slot, as follows:
 - a.** Pull the top and bottom locking devices away from the card faceplate.
 - b.** Insert the VGMC into the card guides and gently push it until it makes contact with the backplane connector.
 - c.** Hook the locking devices.

Note: The VGMC boots automatically. If the VGMC is a follower, then it retrieves the node configuration files from the IP telephony node leader. If it is a leader, then you must configure it. See *IP Line: Description, Installation, and Operation* (553-3001-365) for a detailed configuration procedure.

- 2** Observe the VGMC faceplate display.

The red LED remains lit until the card is configured and enabled, at which point it turns off. When the card has finished booting, the display is either “Fxxx” or “Lxxx” (where xxx is the number of telephones registered to the card), indicating that the card is a follower or leader.

- 3** If required, you can now perform maintenance on the card using Element Manager, or through the card’s maintenance port if you connected a maintenance terminal to it. See *IP Line: Description, Installation, and Operation* (553-3001-365) for detailed maintenance procedures.

End of Procedure

Verifying the Voice Gateway Media Card

This task involves the following procedures:

- Displaying status of the VGMC (p. 264)
- Displaying status of all voice gateway channels on a VGMC (p. 266)
- Displaying the status of all units of a VGMC (p. 269)
- Displaying status of one unit of a VGMC (p. 272)
- Printing DSP channel configuration (p. 274)

Displaying status of the VGMC

Procedure 74

Displaying status of the VGMC

- 1 In Element Manager, select **System Status | IP Telephony** from the Navigation Tree.

The **IP Telephony Information** page displays (see Figure 109).

Figure 109
IP Telephony Information



- 2 Open the desired node by clicking the **Node ID** of that node.

This displays the Succession Signaling Servers and Voice Gateway Media Cards belonging to the node (see Figure 110).

Figure 110
IP Telephony Information—expanded node

Site: 207.179.153.99 > System Status >

IP Telephony Information

Node ID: 8	Node IP: 200.10.200.20	Total elements: 3								
Index	ELAN IP	Type	TN					ELAN	TLAN	
2	200.20.200.30	Signaling Server	NO TN	GEN CMD	RPT LOG	DM RPT	Reset	Telnet	Telnet	Status
3	200.20.200.31	Signaling Server	NO TN	GEN CMD	RPT LOG	DM RPT	Reset	Telnet	Telnet	Status
1	200.20.200.35	ITG Pentium	13 0	GEN CMD	SYS LOG	DM RPT	Reset	Telnet	Telnet	Status

Click buttons to invoke a command

- 3 Click the **Status** button for the desired Voice Gateway Media Card.

The output from this command is displayed in the window pane (result box).

The output can be one of the following:

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

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

```
xx.xxx.xxx.xxx : Unequipped
```

Where xx.xxx.xxx.xxx is the ELAN IP address of the Voice Gateway Media Card and the meaning of the status is:

- **Disabled** - The card is configured but out of service.
- **Enabled** - The card is configured and operational.
- **Unequipped** - The card is not configured in the Succession Call Server.

End of Procedure

Displaying status of all voice gateway channels on a VGMC

Procedure 75

Displaying Voice Gateway status for all voice gateway channels

- 1 Select **System Status | IP Telephony** from the Navigation Tree.
The IP Telephony Information webpage is displayed.
- 2 Open the desired node by clicking the Node ID of that node.
This displays all the Succession Signaling Servers and Voice Gateway Media Cards belonging to this node.
- 3 Click the **GEN CMD** button for the desired Voice Gateway Media Card.
The General Commands screen appears.
- 4 Choose the command **vgwShowAll** from the drop-down list box in the ITGL command area (see Figure 111 on [page 267](#)).

Figure 111
General Commands

General Commands

Element IP : 200.20.200.35 Element Type : ITG Pentium

ITGL Command

IP address Number of Pings

VGW Channels

Node Password

Graceful Disable Command

Click a button to invoke a command.

- 5 Click the **RUN** button.

Figure 112 on [page 268](#) shows the General Commands page with the output from the **vgwShowAll** command. The output shows information about all the voice gateway channels.

Figure 112
vgwShowAll result

```

VGW Service is: Enabled

Chan ChanState  DspMode  Codec    Tn      Reg  AirTime      rxTsap
-----
0  Unequipped  Closed   n/a      0x0438  yes   0            0.0.0.0:0000
1  Unequipped  Closed   n/a      0x0439  yes   0            0.0.0.0:0000
2  Unequipped  Closed   n/a      0x043a  yes   0            0.0.0.0:0000
3  Unequipped  Closed   n/a      0x043b  yes   0            0.0.0.0:0000
4  Unequipped  Closed   n/a      0x0448  yes   0            0.0.0.0:0000
5  Unequipped  Closed   n/a      0x0449  yes   0            0.0.0.0:0000
6  Unequipped  Closed   n/a      0x044a  yes   0            0.0.0.0:0000
7  Unequipped  Closed   n/a      0x044b  yes   0            0.0.0.0:0000
8  Unequipped  Closed   n/a      0x0438  yes   0            0.0.0.0:0000
9  Unequipped  Closed   n/a      0x0439  yes   0            0.0.0.0:0000
10 Unequipped  Closed   n/a      0x043a  yes   0            0.0.0.0:0000
    
```

The following information is provided for each VGW channel:

- Chan - Channel number
- ChanState - State of channel (Idle/Busy/Disabled/Unequipped)
- DspMode - Mode DSP is in (Voice/Closed)
- Codec - Codec frame-size used for the call
- Tn - Channel's physical TN in packed format
- Reg - Status of channel's gateway registration
- Air Time - Duration of audio stream connection in seconds. Zeroed when the audio stream is closed.
- rxTsap - IP address and port the Voice Gateway Media Card is using to receive RTP packets.
- txTsap - IP address and port the Voice Gateway Media Card is using to send RTP packets.

End of Procedure

Displaying the status of all units of a VGMC

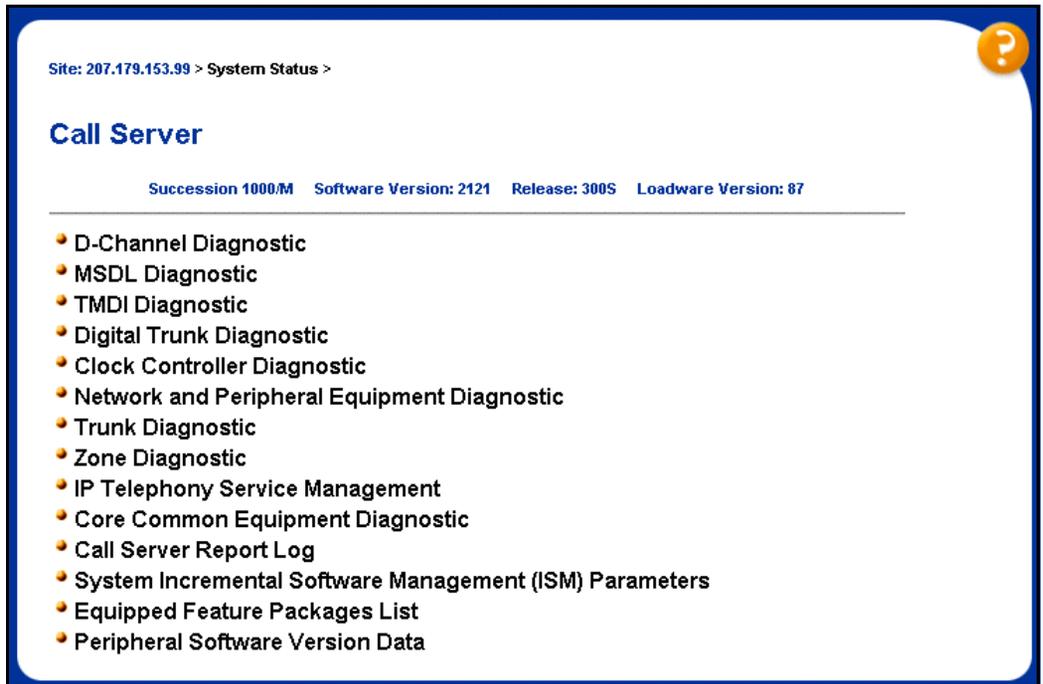
Procedure 76

Displaying the status of VGMC units

- 1 Select **System Status | Call Server** from the Navigation Tree.

The **Call Server** webpage appears as shown in Figure 113.

Figure 113
Call Server



- 2 Click the **Network and Peripheral Equipment Diagnostic** link.

The **Network & Peripheral Diagnostic** page displays (see Figure 114 on [page 270](#)).

Figure 114
Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Get card status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get unit status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Enable the shelf (ENLS) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Print status of MISP appl/card (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>

Instruction: Select command, add value and click on [Submit]

- 3 Choose the **Get card status (STAT)** command from the first drop-down list box.
- 4 Enter the TN of the card in the text box to the right of the drop-down list box.
- 5 Click the **Submit** button to the right of the text box.

The output from this command is as shown in Figure 115 on [page 271](#).

Figure 115
Get card status

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value	
Get card status (STAT) <input checked="" type="checkbox"/>	4	<input type="button" value="Submit"/>
Get unit status (STAT) <input checked="" type="checkbox"/>		<input type="button" value="Submit"/>
Enable the shelf (ENLS) <input checked="" type="checkbox"/>		<input type="button" value="Submit"/>
Print status of MISP appl/card (STAT) <input checked="" type="checkbox"/>		<input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) <input checked="" type="checkbox"/>		<input type="button" value="Submit"/>
Get status of BRI card (STAT) <input checked="" type="checkbox"/>		<input type="button" value="Submit"/>

```

Get card status (STAT) 4
-----
00 = UNIT 00 = UNEQ
01 = UNIT 01 = IDLE      (TRK) (IPTN REG )
02 = UNIT 02 = IDLE      (TRK) (IPTN REG )
03 = UNIT 03 = IDLE      (TRK) (IPTN REG )
04 = UNIT 04 = IDLE      (TRK) (IPTN REG )
05 = UNIT 05 = IDLE      (TRK) (IPTN REG )
06 = UNIT 06 = IDLE      (TRK) (IPTN REG )
07 = UNIT 07 = IDLE      (TRK) (IPTN REG )
08 = UNIT 08 = IDLE      (TRK) (IPTN REG )
09 = UNIT 09 = IDLE      (TRK) (IPTN REG )
10 = UNIT 10 = UNEQ
  
```

————— End of Procedure —————

Displaying status of one unit of a VGMC

Procedure 77

Displaying status of one unit on a VGMC

- 1 Select **System Status | Call Server** from the Navigation Tree.
The Call Server webpage appears as shown in Figure 113 on [page 269](#).
- 2 Click the **Network and Peripheral Equipment Diagnostic** link.
The Network & Peripheral Diagnostic page displays (see Figure 113 on [page 269](#)).
- 3 Choose the **Get unit status (STAT)** command from the second drop-down list box.
- 4 Enter the TN of the channel in the input box to the right of the drop-down list box.
- 5 Click the **Submit** button to the right of the input box.
The output from this command is as shown in Figure 116 on [page 273](#).

Figure 116
Get unit status

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Get card status (STAT) <input checked="" type="checkbox"/>	<input type="text"/> <input type="button" value="Submit"/>
Get unit status (STAT) <input checked="" type="checkbox"/>	4 1 <input type="button" value="Submit"/>
Enable the shelf (ENLS) <input checked="" type="checkbox"/>	<input type="text"/> <input type="button" value="Submit"/>
Print status of MISP appl/card (STAT) <input checked="" type="checkbox"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) <input checked="" type="checkbox"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) <input checked="" type="checkbox"/>	<input type="text"/> <input type="button" value="Submit"/>

```
Get unit status (STAT) 4 1
-----
IDLE
```

End of Procedure

Printing DSP channel configuration

Procedure 78

Printing DSP channel configuration

- 1 Choose **System Status | IP Telephony**. The IP Telephony Information page is display (see Figure 110 on [page 265](#)).
- 2 Open the desired node by clicking the Node ID of that node. This displays all the Signaling Servers and VGMCs belonging to this node.
- 3 Click the **GEN CMD** button for the desired VGMC (see Figure 111 on [page 267](#)).
- 4 Click the **PRINT** button beside the VGW Channels. This displays the VGMC's physical TNs (see Figure 117).

Figure 117

Print VGW channels

General Commands

Element IP : 200.20.200.35 Element Type : ITG Pentium

ITGL Command	cardRoleShow	RUN	
IP address	207.179.153.99	Number of Pings	3 PING
VGW Channels	PRINT		
Node Password		nodePwdSet	SET
Graceful Disable Command	disServices	RUN	

VGW Channel Configuration

```

-----
DES
TN      013 0 00 00
TYPE    VGW
CUST    0
XTRK    ITGP
ZONE    000

DES
TN      013 0 00 01
TYPE    VGW
CUST    0
XTRK    ITGP
        
```

————— End of Procedure —————

Disabling a VGMC

Procedure 79 Disabling a VGMC

- 1 From Element Manager, choose **System Status | Call Server**. The Call Server webpage displays (Figure 113 on [page 269](#)).
- 2 Click the **Network and Peripheral Equipment Diagnostic** link, which takes you to the Network & Peripheral Diagnostic page.
- 3 Choose the **Disable idle card (DISI)** command from the top most drop-down list box as shown in Figure 118.

Figure 118
Disable idle card

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Disable idle card (DISI) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get card status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Enable and reset card (ENLC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Print card ID (IDC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable card (DISC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable idle card (DISI) (AT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>

- 4 Enter the TN of the card in the input box to the right of the drop-down list box and click the **Submit** button to the right of the input box.
- 5 Check the message displayed in the window pane (result box) to see whether the command was executed successfully.

Note: For graceful disabling of the voice gateway channels refer to “Graceful Disable” in the *IP Line: Description, Installation, and Operation* (553-3001-365) guide.

————— **End of Procedure** —————

Disabling a VGMC unit

Procedure 80 Disabling a VGMC unit

From Element Manager:

- 1 Choose System Status | Call Server. The Call Server webpage displays (see Figure 113 on [page 269](#)).
- 2 Click the **Network and Peripheral Equipment Diagnostic** link, which takes you to the Network & Peripheral Diagnostic page.
- 3 Choose the **Disable Unit (DISU)** command from the second drop-down list box from the top as shown in Figure 119.

Figure 119
Disable unit

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Get card status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable unit (DISU) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get unit status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Enable unit (ENLU) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Print set ID (IDU) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable unit (DISU) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UICC (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>

- 4 Enter the TN of the channel in the input box to the right of the drop-down list box and click the **Submit** button to the right of the input box.
- 5 Check the message displayed in the window pane (result box) to see whether the command was executed successfully.

————— End of Procedure —————

Enabling a VGMC

Procedure 81 Enabling a VGMC

From Element Manager:

- 1 Choose **System Status | Call Server**. The Call Server webpage displays (see Figure 113 on [page 269](#)).
- 2 Click the **Network and Peripheral Equipment Diagnostic** link, which takes you to the Network & Peripheral Diagnostic page.
- 3 Choose the **Enable and reset card (ENLC)** command from the first drop-down list box as shown in Figure 120 on [page 277](#).

Figure 120
Enable and reset card

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Enable and reset card (ENLC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get card status (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Enable and reset card (ENLC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Print card ID (IDC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable card (DISC) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Disable idle card (DISI) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) <input type="text"/>	<input type="text"/> <input type="button" value="Submit"/>

- 4 Enter the TN of the card in the input box to the right of the drop-down list box and click the **Submit** button to the right of the input box.
- 5 Check the message displayed in the window pane (result box) to see whether the command was executed successfully.

————— **End of Procedure** —————

Enabling a VGMC unit

Procedure 82 Enabling a VGMC unit

From Element Manager:

- 1 Choose **System Status | Call Server**. The Call Server webpage displays (see Figure 113 on [page 269](#)).
- 2 Click the **Network and Peripheral Equipment Diagnostic** link, which takes you to the Network & Peripheral Diagnostic page.
- 3 Choose the **Enable Unit (ENLU)** command from the second drop-down list box as shown in Figure 121 on [page 278](#).

Figure 121
Enable unit

Network & Peripheral Diagnostic

Diagnostic Commands	Diagnostic Value
Enable and reset card (ENLC) ▾	<input type="text"/> <input type="button" value="Submit"/>
Enable unit (ENLU) ▾	<input type="text"/> <input type="button" value="Submit"/>
Get unit status (STAT) <input type="text"/> ▾	<input type="text"/> <input type="button" value="Submit"/>
Enable unit (ENLU)	<input type="text"/> <input type="button" value="Submit"/>
Print set ID (IDU) <input type="text"/> card (STAT) ▾	<input type="text"/> <input type="button" value="Submit"/>
Disable unit (DISU)	<input type="text"/> <input type="button" value="Submit"/>
Get status of SILC or UILC (STAT) ▾	<input type="text"/> <input type="button" value="Submit"/>
Get status of BRI card (STAT) ▾	<input type="text"/> <input type="button" value="Submit"/>

- 4 Enter the TN of the channel in the input box to the right of the drop-down list box and click the **Submit** button to the right of the input box.
- 5 Check the message displayed in the window pane (result box) to see whether the command was executed successfully.

End of Procedure

Verifying functionality

You can now use the Voice Gateway Media Card to transcode voice data between IP and TDM. To test the voice gateway channels (DSPs), perform a variety of analog or digital calls to Internet telephones and vice-versa.

Note: You require analog or digital terminals or trunks to perform this test.

Loadware upgrades

Refer to the *Succession 1000 System: Upgrade Procedures* (553-3031-258), “IP telephony loadware and firmware upgrades” chapter, to check for the latest VGMC loadware version and how to upgrade to the latest VGMC loadware.

System MDF layout and MDF connection

Contents

This section contains information on the following topics:

Introduction	281
Terminal block requirements	282
Installing the BIX cross-connect terminal	283
Installing the Reichle Masari cross-connect terminal (Germany)	285
Installing the Krone Test Jack Frame for the UK	287
Connecting the cables	291

Introduction

This chapter describes how to install and connect a Succession 1000 system using the BIX, Reichle Masari (Germany), or Krone Test Jack Frame (UK) cross-connect terminals. For detailed information, refer to the following:

- Nordex BIX documentation
- Reichle Masari documentation
- Krone documentation

This chapter contains the following procedures:

- Procedure 83: “Installing the BIX cross-connect terminal” on [page 283](#).
- Procedure 84: “Installing the Reichle Masari cross-connect terminal (Germany)” on [page 285](#).
- Procedure 85: “Installing the Krone Test Jack Frame (UK)” on [page 289](#).
- Procedure 86: “Connecting the cables” on [page 291](#).

Note: The use of the BIX system is not mandatory; however, it is the recommended option.

Terminal block requirements

The cross-connect terminal requires enough connecting blocks to terminate up to four 25 pair cables for each Succession Media Gateway and Succession Media Gateway Expansion. When Ethernet connections are used instead of traditional cabling the Succession Media Card Input/Output Adapter is used:

- For the 1.5 Mbit DTI/PRI circuit card NTAK09, use the NTBK04 cable.
- For the 2.0 Mbit DTI circuit card NTAK10, 2.0 Mbit PRI circuit card NTAK79, and 2.0 Mbit PRI circuit card NTBK50, use the NTBK05 cable.
- For up to four 25-pair cables from each Succession Media Gateway and Succession Media Gateway Expansion.
 - Each slot that is equipped with a trunk or line circuit card requires a cable.
 - If the NTAK19EC 2-port SDI cable or the NTAK19FB 4-port SDI cable are not used with the NTAK03 or NTAK02 cards, then you require a 25-pair cable for each of these cards.

- Four conductors for the AUX cable from the Succession Media Gateway.
- One 25-pair cable from each QUA6 PFTU.
- Wiring from telephones and trunks.

**DANGER**

Always use caution when installing or modifying telephone lines. Do not install telephone wiring during a lightning storm. Never touch uninsulated telephone wiring, unless the line is disconnected at the network interface.

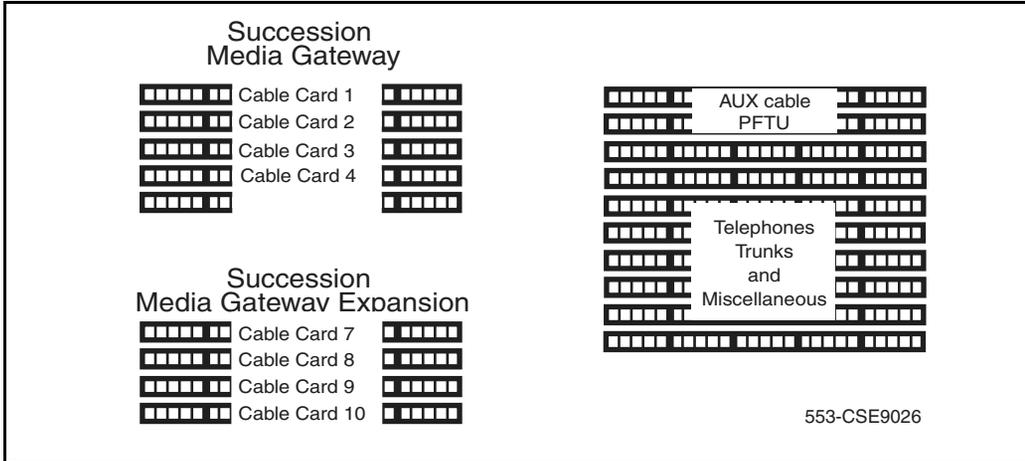
Installing the BIX cross-connect terminal

Procedure 83 describes how to install the BIX cross-connect terminal.

Procedure 83**Installing the BIX cross-connect terminal**

- 1 Refer to the equipment layout plan to determine where to place the cross-connect terminal.
- 2 Layout the terminal blocks as shown in Figure 122 on [page 284](#).
- 3 Attach labels on the cross-connect terminal to indicate the terminal blocks assigned to the following:
 - 25-pair cables from the system
 - AUX wiring
 - Power Failure Transfer Units (PFTUs)
 - Telephones and consoles
 - Trunks
 - Miscellaneous equipment

Figure 122
Typical BIX cross-connect terminal layout



————— **End of Procedure** —————

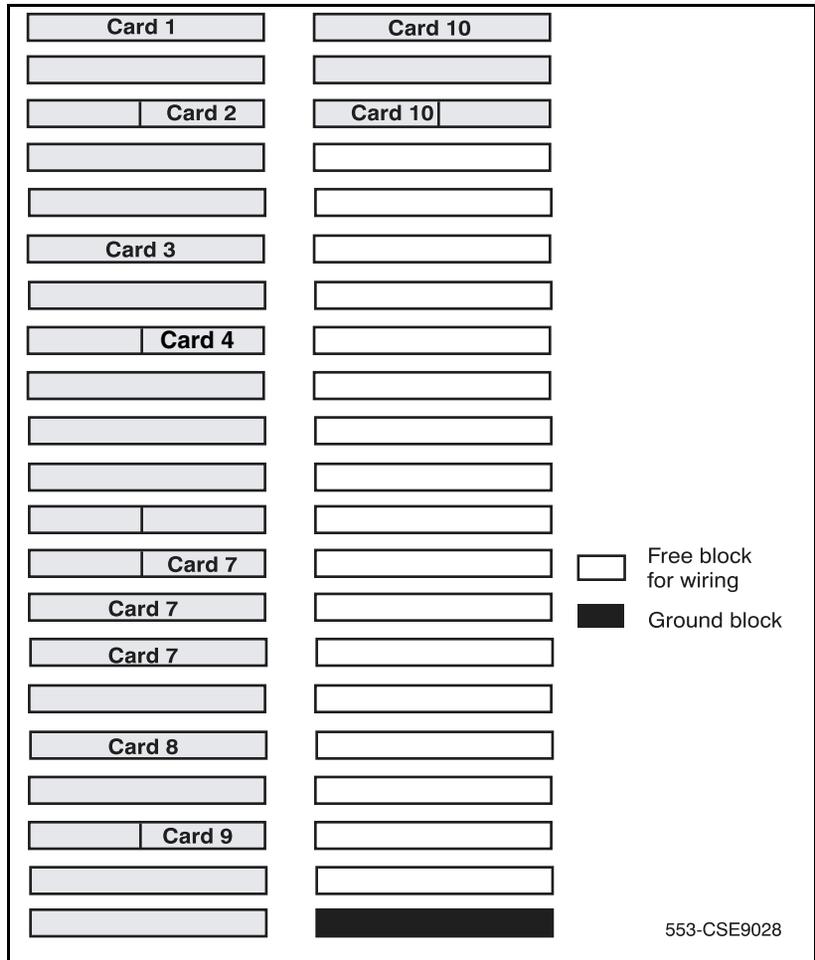
Installing the Reichle Masari cross-connect terminal (Germany)

Procedure 84 describes how to install the Reichle Masari cross-connect terminal for Germany.

Procedure 84 **Installing the Reichle Masari cross-connect terminal (Germany)**

- 1 Refer to the equipment layout plan to determine where to place the cross-connect terminal.
- 2 Lay out the terminal blocks as shown in Figure 123 on [page 286](#).
- 3 Attach labels on the cross-connect terminal to indicate the terminal blocks assigned to the following:
 - 25-pair cables from the system
 - AUX wiring
 - Telephones
 - Trunks
 - Analog line cards
 - DC5/AC15/RAN/PAG cards
 - Data Access cards
 - Power Failure Transfer Units
 - Digital line cards
 - Exchange line trunk cards
 - Direct Dialing Inward trunk cards
 - Miscellaneous equipment

Figure 123
Typical Reichle Masari cross-connect terminal layout (Germany)



End of Procedure

Installing the Krone Test Jack Frame for the UK

The Krone Test Jack Frame provides terminating strips that hold 10 pairs of cable. Generally, only 8 of the 10 pairs are used. As a result, one 25-pair cable requires three terminating strips (8 pairs/strip x 3 strips = 24 pairs).

Figure 124 on [page 288](#) shows how one 25-pair cable is divided among three terminating strips on the Krone Test Jack Frame.

Figure 124
25-pair cable on three Krone strips

Pair	Pin Number	Wire Colour	Krone Strip
1T	26	W-BL	
1R	1	BL-W	
2T	27	W-O	
2R	2	O-W	
3T	28	W-G	1
3R	3	G-W	
4T	29	W-BR	
4R	4	BR-W	
5T	30	W-S	
5R	5	S-W	
6T	31	R-BL	
6R	6	BL-R	
7T	32	R-O	
7R	7	O-R	
8T	33	R-G	
8R	8	G-R	
9T	34	R-BR	
9R	9	BR-R	
10T	35	R-S	
10R	10	S-R	
11T	36	BK-BL	2
11R	11	BL-BK	
12T	37	BK-O	
12R	12	O-BK	
13T	38	BK-G	
13R	13	G-BK	
14T	39	BK-BR	
14R	14	BR-BK	
15T	40	BK-S	
15R	15	S-BK	
16T	41	Y-BL	
16R	16	BL-Y	
17T	42	Y-O	
17R	17	O-Y	
18T	43	Y-G	
18R	18	G-Y	
19T	44	Y-BR	
19R	19	BR-Y	
20T	45	Y-S	3
20R	20	S-Y	
21T	46	V-BL	
21R	21	BL-V	
22T	47	V-O	
22R	22	O-V	
23T	48	V-G	
23R	23	G-V	
24T	49	V-BR	
24R	24	BR-V	
25T	50	V-S	
25R	25	S-V	

553-CSE0019

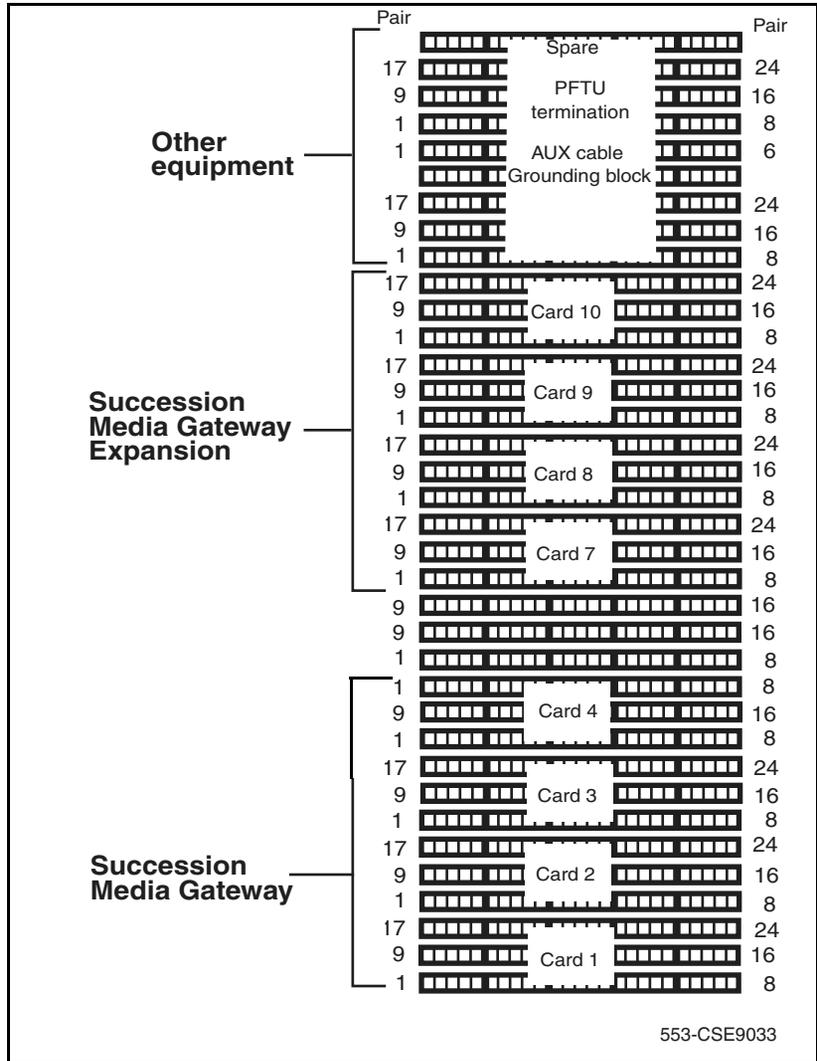
Procedure 85 describes how to install the Krone Test Jack Frame for the UK.

Procedure 85

Installing the Krone Test Jack Frame (UK)

- 1** Refer to the equipment layout plan to determine where to place the cross-connect terminal.
- 2** Lay out the terminal blocks as shown in Figure 125 on [page 290](#).
- 3** Attach labels on the cross-connect terminal to indicate the terminal blocks assigned to the following:
 - Analog line cards
 - DC15/AC15/RAN/PAG cards
 - Data Access cards
 - AUX wiring
 - Power Failure Transfer Units
 - Digital line cards
 - Telephones
 - Exchange line trunk cards
 - Direct Dialing Inward trunk cards
 - Miscellaneous equipment

Figure 125
Typical Krone cross-connect terminal layout (UK)



End of Procedure

Connecting the cables



DANGER

Always use caution when installing or modifying telephone lines. Do not install telephone wiring during a lightning storm. Never touch uninsulated telephone wiring unless the line is disconnected at the network interface.

Each Succession Media Gateway and Succession Media Gateway Expansion requires up to four 25-pair cables. The Succession Call Server requires an additional terminal block at the cross-connect terminal to terminate the 9-pin conductor auxiliary cable.

Note: Use caution when using NE-A25B cables with the NTAK02, and NTAK03 cards. These cables are not wired out to station equipment or trunk circuits. Do not use the NE-A25B cable with the NTBK45, NTAK10, NTBK50, or NTAK79 circuit cards.

Procedure 86 **Connecting the cables**

- 1 Loosen the velcro straps at each connector you plan to use.
- 2 Connect a 25-pair cable to each of the connectors that contains a line or trunk card. Refer to the card slot assignment plan.
- 3 Tag both ends of each cable with the equipment and connector numbers. See Figure 127 on [page 293](#) and Figure 127 on [page 293](#).

Figure 126
Typical Krone cross-connect terminal layout (UK)

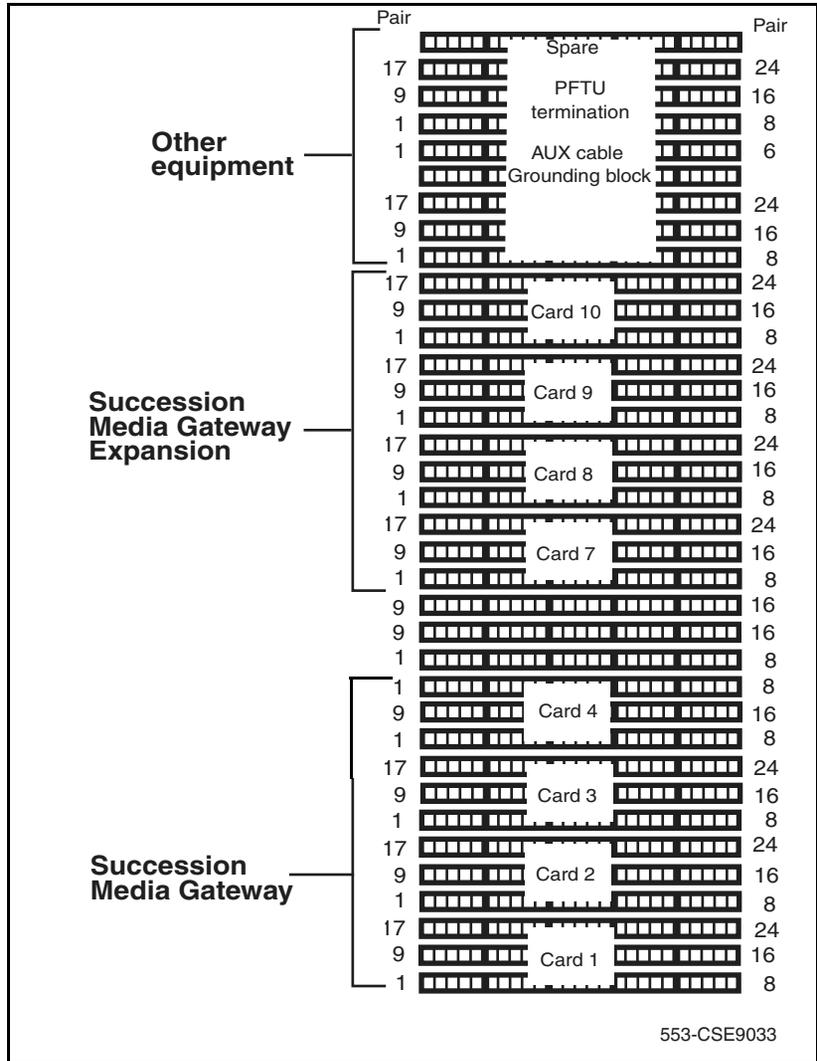


Figure 127
Cable connectors on the back of the Succession Media Gateway

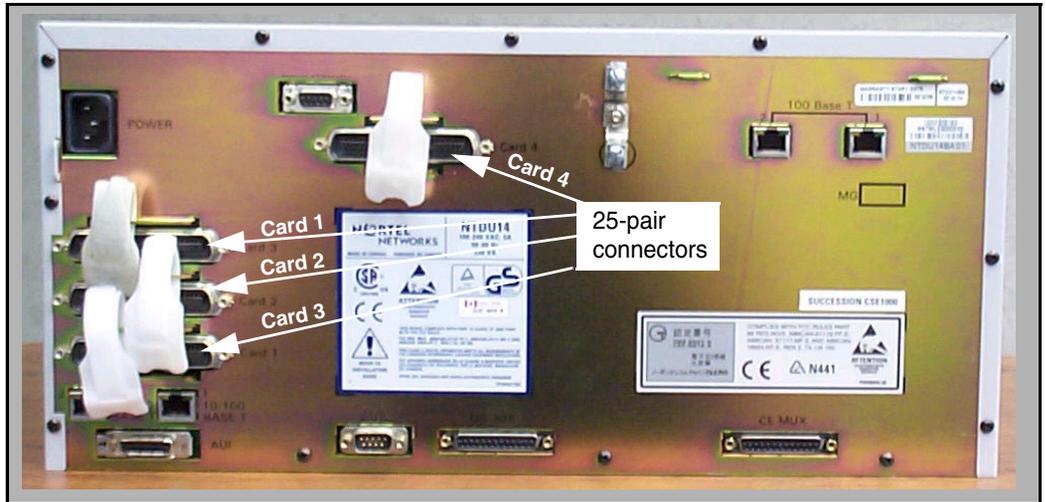
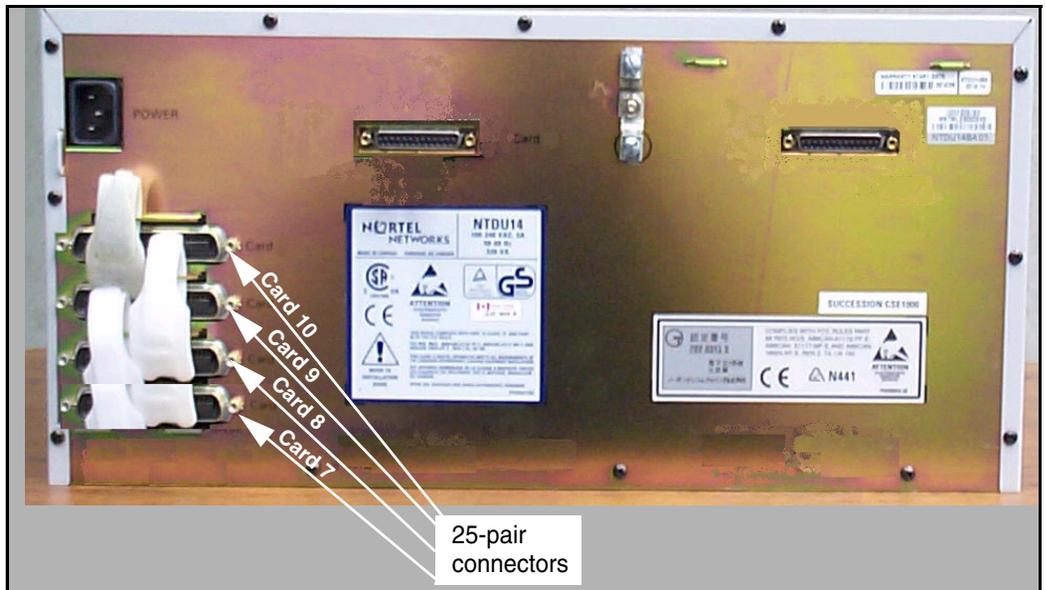
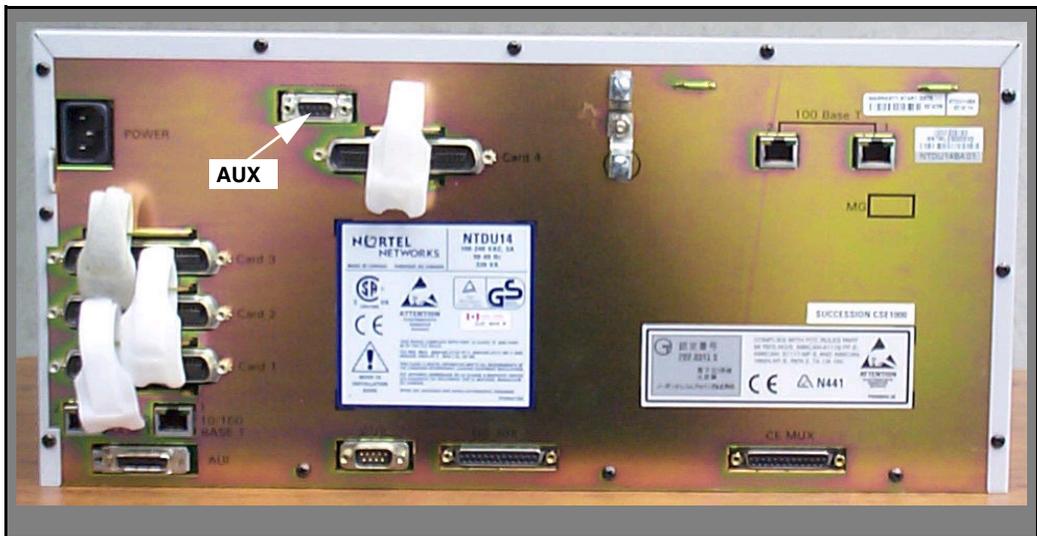


Figure 128
Cable connectors on the back of the Succession Media Gateway Expansion



- 4 Tighten the velcro straps when you have connected each cable to the system.
Note: CISPR-B Electromagnetic Compatibility (EMC) is not supported at this time.
- 5 Terminate all the 25-pair cables installed at the cross-connect terminal.
- 6 Label all the cables at the cross-connect terminal blocks according to the card slot assignment plan.
- 7 Connect the AUX cable in the upper 9-pin connector located on the top left-hand side of the Succession Media Gateway. See Figure 129 on [page 294](#).

Figure 129
AUX cable connector



- 8 Terminate the AUX cable at the QUA6 Power Fail Transfer Unit (PFTU) cross-connect terminal, according to Table 19.

Table 19
AUX cable termination information

Color	Wire number	Designation	Connection
W-BL	1	BRTN	to QUA6-J1 1R
BL-W	2	BRTN	to QUA6-J1 2R
O-W	3	-48V AUX (250mA)	to QUA6-J1 25T, 25R
W-O	4	PFTS	to QUA6-J1 2T
G-W	5	Not used	Not used
W-G	6	Not used	Not used

- 9 For installations in Germany, complete the form shown in Figure 130 on [page 296](#) for each card slot. This form provides a record of cross connections that you perform after you start the system.

Analog (500/2500-type)/digital telephone installation and cross-connection

Contents

This section contains information on the following topics:

Introduction	298
Card placement in Succession Media Gateway/ Succession Media Gateway Expansion chassis	302
Cross-connecting telephones	302
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Connecting an attendant console	308
Cross-connecting terminal Digital Subscriber Loops	310
Activating telephones	310
Verifying analog (500/2500-type)/digital telephone functionality	318

Introduction

This chapter contains instructions for connecting telephone line cards located in the Succession Media Gateway and Succession Media Gateway Expansion to the MDF cross-connect terminal.

This chapter contains the following procedures:

- Procedure 87 "Cross-connecting telephones" on [page 302](#).
- Procedure 88 "Connecting telephones without a PFTU" on [page 305](#).
- Procedure 89 "Connecting an off-premise telephone" on [page 306](#).
- Procedure 90 "Connecting attendant console" on [page 308](#).
- Procedure 91 "Activating a default model telephone with a character display" on [page 312](#).
- Procedure 92 "Activating a default model telephone without a character display" on [page 314](#).
- Procedure 93 "Activating a customized telephone" on [page 315](#).
- Procedure 94 "Activating a customized telephone" on [page 317](#).

Before you continue, install the cable from the slot that contains the line card associated with the telephone being connected. Refer to "System MDF layout and MDF connection" on [page 281](#), if you require additional cable installation.



DANGER OF ELECTRIC SHOCK

Always use caution when installing or modifying telephone lines. Do not install telephone wiring during a lightning storm. Do not install telephone jacks in wet locations unless the jack is designed for wet locations. Never touch uninsulated telephone wiring unless the line is disconnected at the network interface.

Refer to the *Circuit Card: Description and Installation* (553-3001-211) for full descriptions of country-specific IPE cards and their installation procedures.



CAUTION WITH ESDS DEVICES

Always handle circuit cards with caution to avoid damage caused by static electricity. Always store circuit cards that are not in use in an antistatic bag or the original packaging.

Wear an antistatic wrist strap, such as the one shown in Figure 131, when handling circuit cards. Static electricity can damage circuit card components.

Figure 131
Antistatic wrist strap

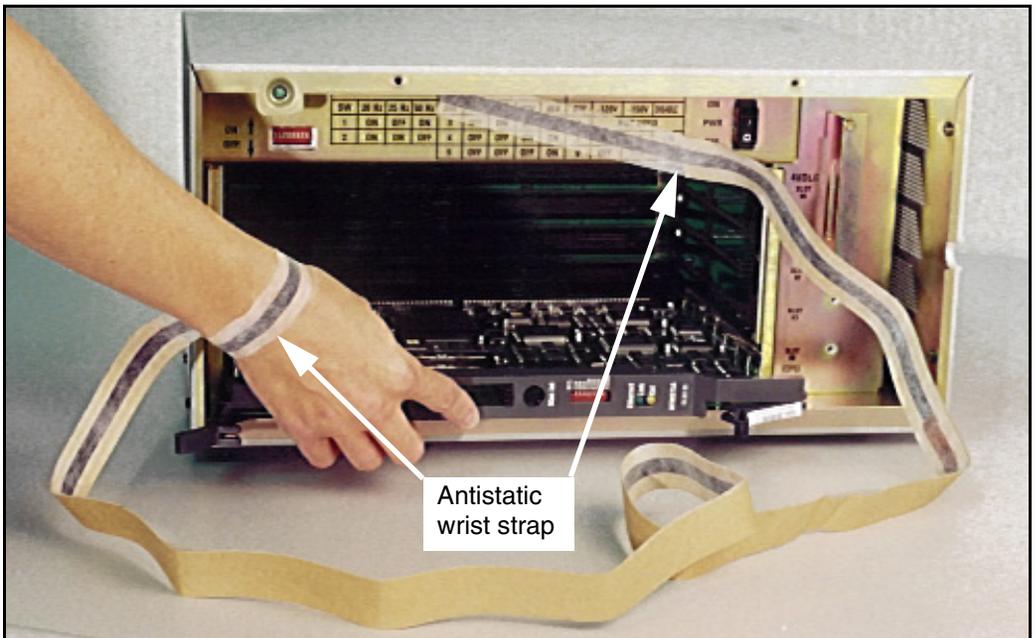
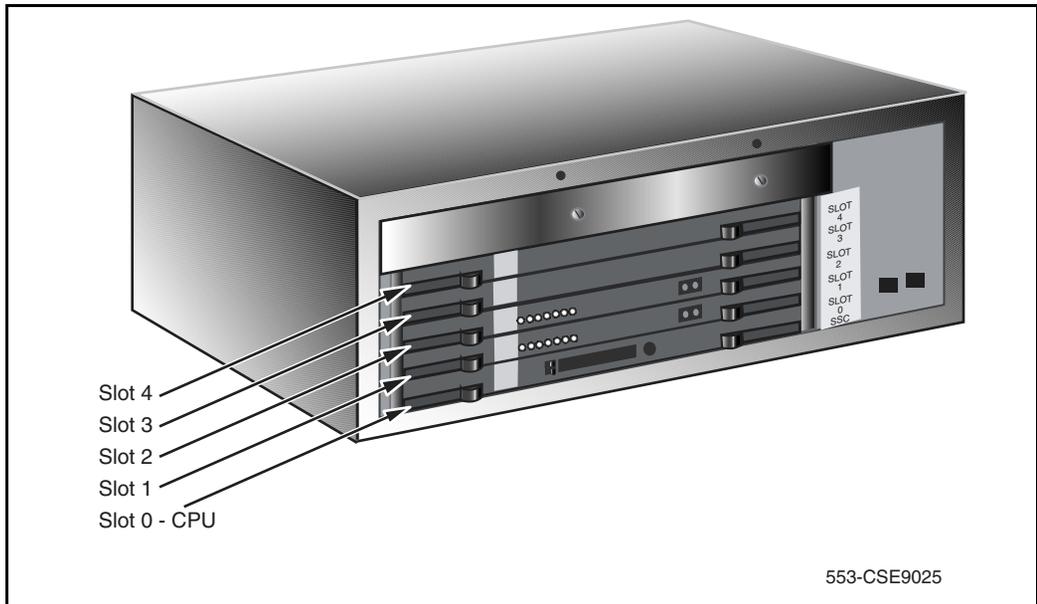


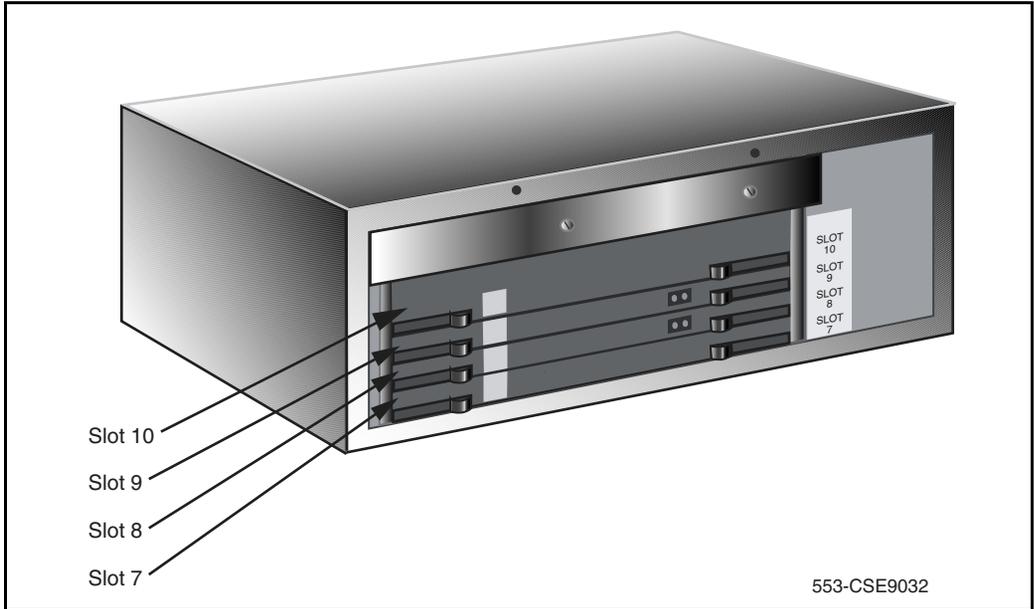
Figure 132 and Figure 133 on [page 301](#) show the circuit card assignments for the Succession Media Gateway chassis and Succession Media Gateway Expansion chassis. Follow these figures to make sure that you have all circuit cards inserted in the correct slots.

Figure 132
Circuit card assignments in the Succession Media Gateway chassis



Note 1: See your installation work sheet, provided by your Planning and Engineering group, for the cards that you can insert in the Succession Media Gateway and Succession Media Gateway Expansion chassis.

Figure 133
Circuit card assignments in the Succession Media Gateway Expansion chassis



Circuit cards features

If a circuit card has a symbol of a switch on its faceplate, it is equipped with option switches, strapping plugs, or both. Make sure that the circuit cards with option switches or strapping plugs are set correctly. Some circuit cards can have daughterboards and other add-on devices installed on them.

Card placement in Succession Media Gateway/ Succession Media Gateway Expansion chassis

Your work order which was developed from your planning and engineering department outlines the placement of peripheral cards in the Succession Media Gateway and Succession Media Gateway Expansion slots. See *Circuit Card: Description and Installation* (553-3001-211) for card placement into card slots. The 48 port DLC is not supported.

Cross-connecting telephones

Connect the telephones according to Figure 134 on [page 303](#) and Figure 135 on [page 304](#).

Procedure 87

Cross-connecting telephones

- 1 Locate the telephone terminations at the cross-connect terminal.
- 2 Connect the Z-type cross-connect wire to the leads of the telephone.
- 3 Locate line circuit card (TN) terminations at the cross-connect terminal.
- 4 Connect the other end of the cross-connect wire to the assigned TN terminal block.

Figure 134
NE-500/2500-type telephone cross connections

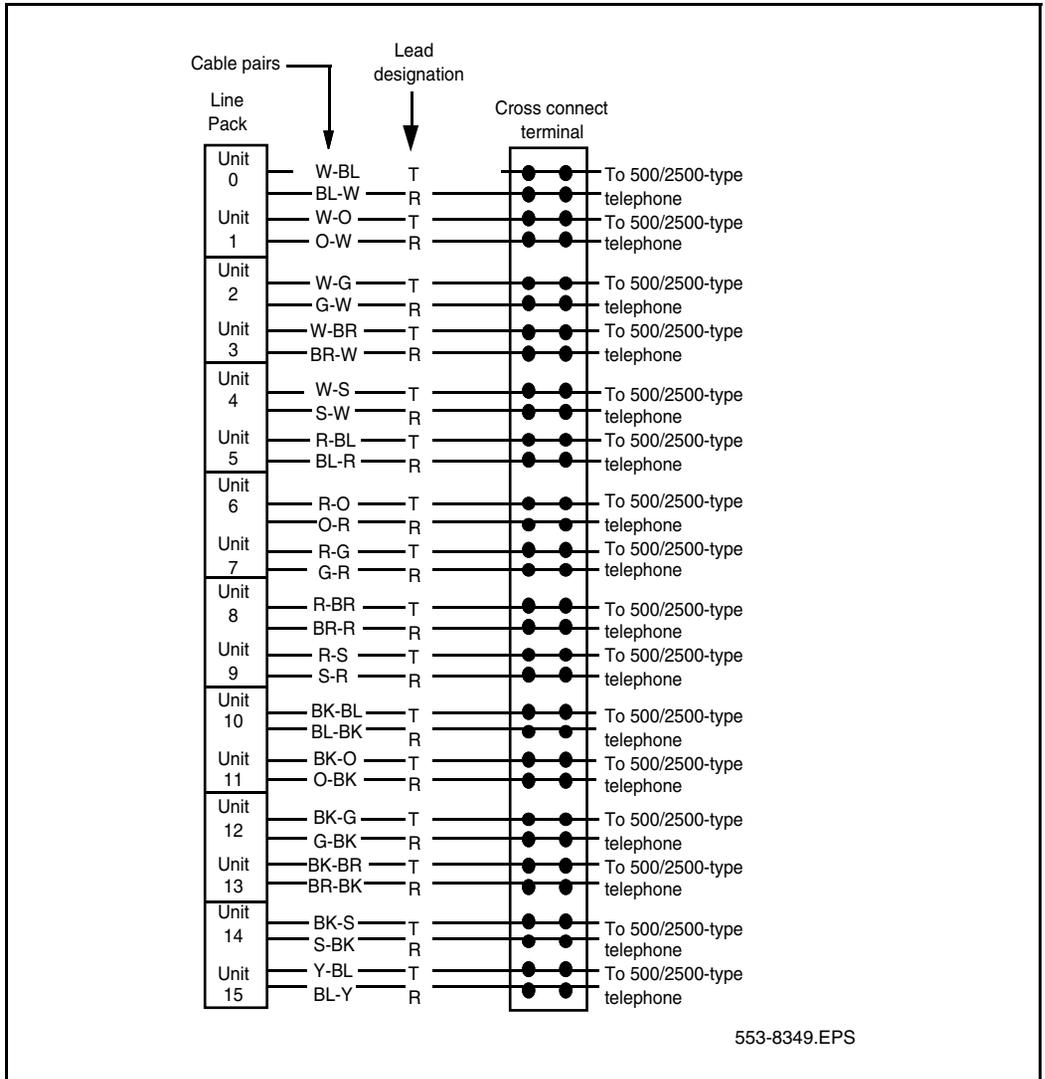
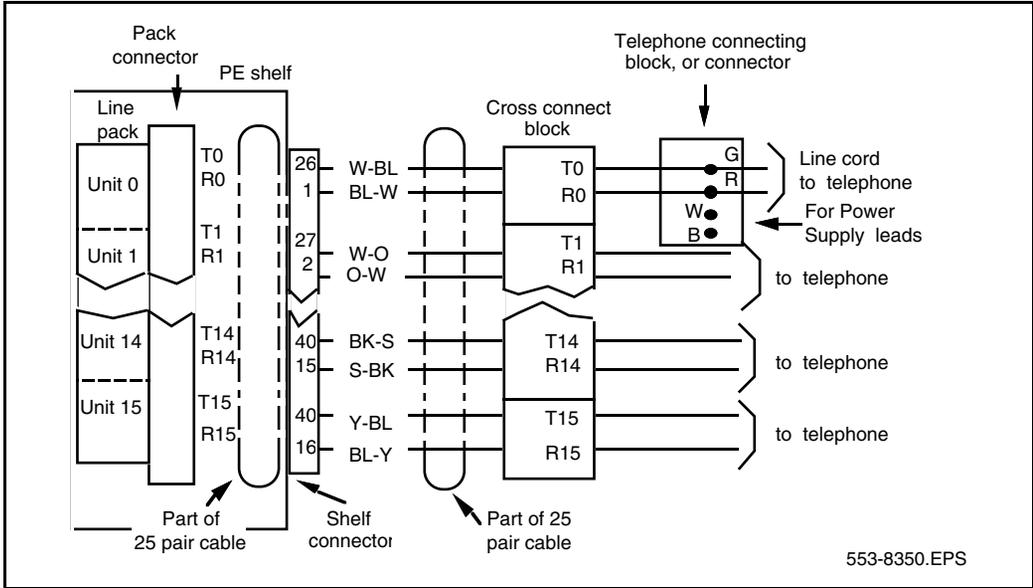


Figure 135
Digital Telephone cross connections



————— **End of Procedure** —————

Connecting telephones without a PFTU

See “Power Failure Transfer Unit installation and cross-connection” on [page 353](#) for connecting telephones with the PFTU.

Procedure 88

Connecting telephones without a PFTU

- 1 Locate the telephone terminations on the cross-connect terminal.
- 2 Connect one end of the cross-connect wire to the leads of the telephone.
- 3 Locate the line card terminations on the cross-connect terminal.
- 4 Connect the other end of the cross-connect wire to the assigned TN terminal block.

Now, you can activate the telephone, as described on [page 310](#).

End of Procedure

Connecting off-premise telephones

Connect off-premise analog (500/2500-type) telephones through an NTAK92AA Off-Premise Protection Module. Each module can connect up to four analog (500/2500-type) telephones and can interface with one of the following:

- NT8D03 Analog Line Card
- NT8D09 Message Waiting Line Card



DANGER OF ELECTRIC SHOCK

The message waiting line card produces -150 volts which is considered hazardous on off-premise telephones. Make sure that the -150 V is disabled on off-premise telephones.

The voltage is disabled when the telephone's Class of Service (CLS) is Message Waiting Lamp Denied (LPD) and Message Waiting Denied (MWD) in LD 10.

Refer to the *Software Input/Output: Administration* (553-3001-311) for information about LD 10.

Do not assign a Class of Service of LPA or MWA to an off-premise telephone.

Procedure 89

Connecting an off-premise telephone

- 1 Install the NTAK92AA Off-Premise Protection Module on the wall using four #10 1/2 in (minimum) screws.
- 2 Connect a #6 AWG (#40 Metric Wire Gauge) from the grounding lug at the bottom of the NTAK92AA Off-Premise Protection Module to an earth ground. Refer to Figure 136 on [page 307](#).

Note: In the UK, use a 2 mm² (#6 AWG) ground lug. In Europe, use a #6 AWG (16 mm²) ground lug.



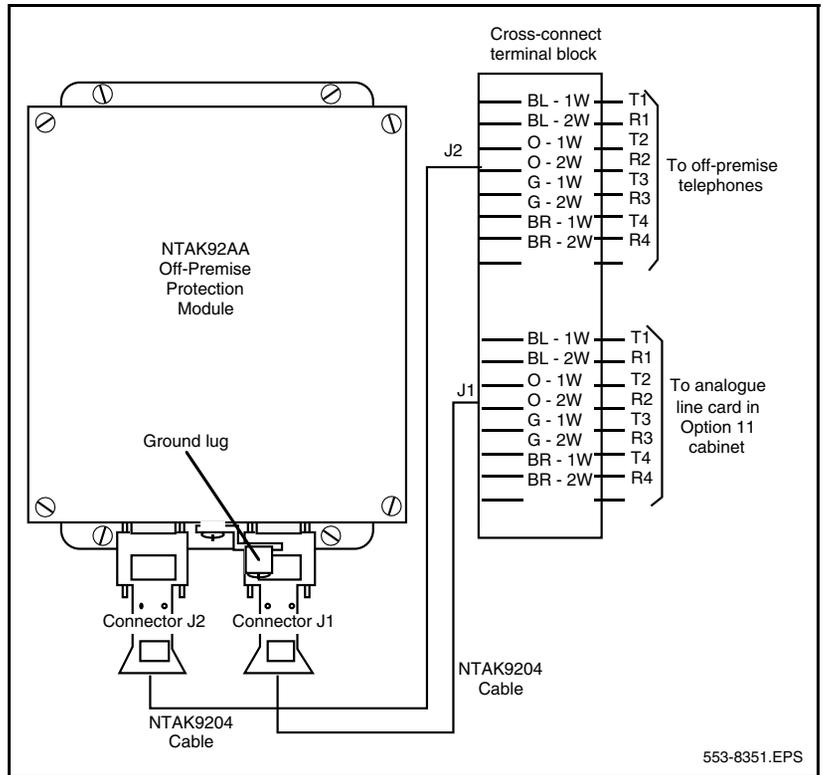
DANGER OF ELECTRIC SHOCK

If connecting to a message waiting line card, unseat the card from its assigned slot before continuing with the next step.

- 3 Connect two NTAK9204 cables (one from connector J1 and one from connector J2) from the protection module to the cross-connect terminal.
- 4 Terminate the cables as shown in Figure 134 on [page 303](#).
- 5 Cross-connect the J1 cable to the Tip and Ring connections coming from the line card.
- 6 Cross-connect the J2 cable to the off-premise telephone.

- 7 Install the regulatory label provided with the Off-Premise Protection Module on the inside right-hand wall of the chassis.
- 8 Install the line card in its assigned position.
- 9 Now, you can activate the telephone, as described on [page 310](#).

Figure 136
NTAK92AA Off-Premise Protection Module connections



End of Procedure

Connecting an attendant console

Procedure 90

Connecting attendant console

- 1 Locate the attendant console terminations at the cross-connect terminal.
- 2 Locate the line card terminations at the cross-connect terminal.
- 3 With cross-connect wire, connect the line card and other connections to the console as shown in Figure 137 on [page 309](#).

Figure 137
Attendant console connections

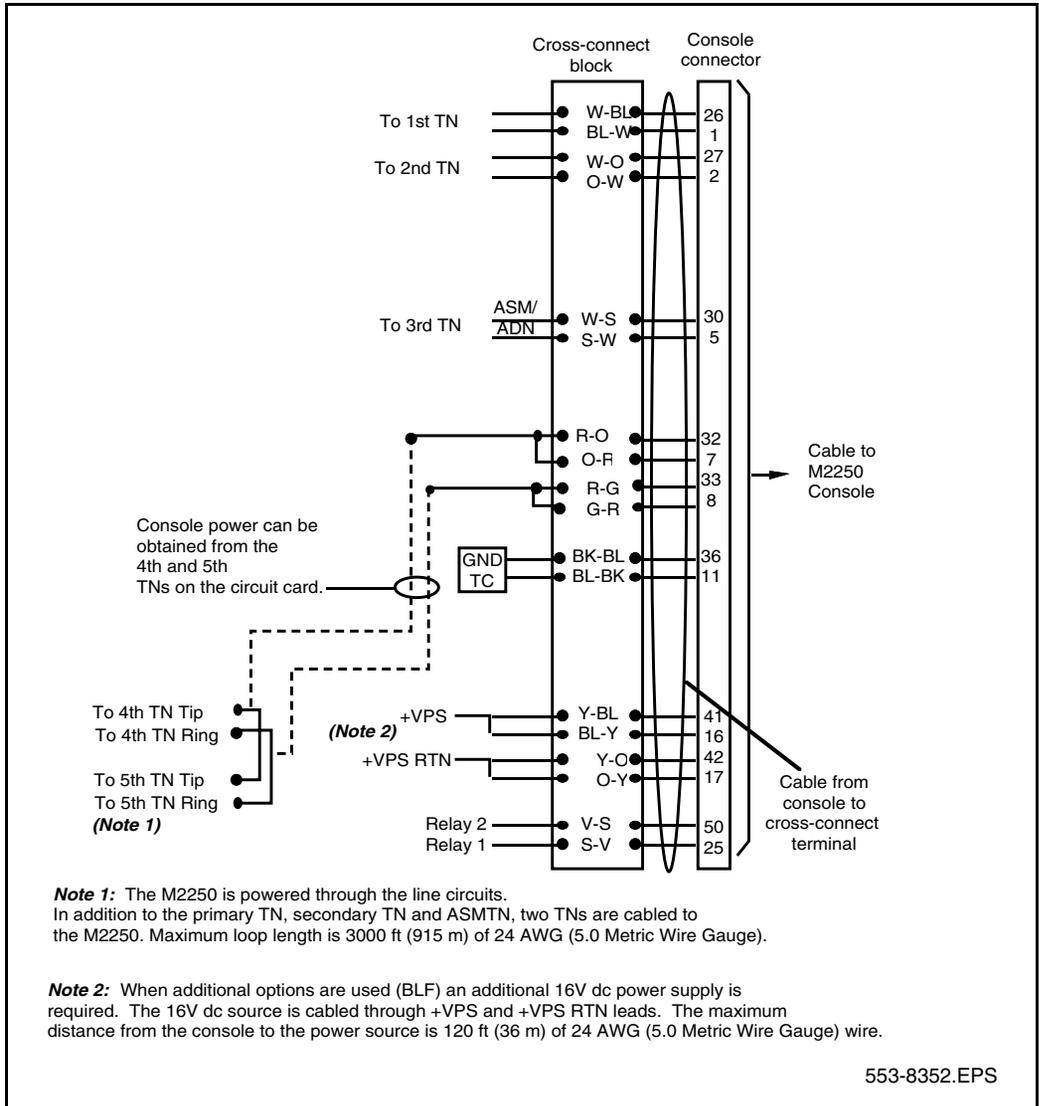


Table 20
Color combinations of cable pairs

Color	W-BI BI-W	W-O O-W	W-G G-W	W-BR BR-W	W-S S-W	R-BL BL-R	R-O O-R	R-G G-R
Unit	0	1	2	3	4	5	6	7
Color	R-BR BR-R	R-S S-R	BK-BL BL-BK	BK-O O-BK	BK-G G-BK	BK-BR BR-BK	BK-S S-BK	Y-B B-Y
Unit	8	9	10	11	12	12	14	15

————— End of Procedure —————

Cross-connecting terminal Digital Subscriber Loops

Refer to *ISDN Basic Rate Interface: Installation and Configuration* (553-3001-218) and *ISDN Basic Rate Interface: Maintenance* (553-3001-518) for a complete description of terminal Digital Subscriber Loops (DSL) cross-connecting and installation.

Activating telephones

Use Automatic Set Configuration Activate to activate each telephone.

Note: You cannot activate the data feature using the procedures in this chapter. To program a telephone with the data feature, configure it in LD 11 with Data Class of Service. See the *Software Input/Output: Administration* (553-3001-311).

This chapter contains procedures for activating the following models of telephones:

- a default model with a default extension number
- a customized model with a customized extension number

This chapter provides these procedures for telephones with and without character displays.

Telephone tones

There are many telephone tones. Table 21 lists tones that you hear during telephone activation. Table 22 lists tones that you hear during telephone activation in Germany.

Table 21
Telephone tones

Tone	Description
Dial tone	A continuous tone.
Special dial tone	Three beeps followed by continuous dial tone.
Overflow tone	Like a busy tone, except faster and higher.
Relocation tone	A short high-pitched beep that continues for 4 seconds, followed by silence.

Table 22
Telephone tones for Germany

Tone	Description	Specification	
Dial tone	Sequences of three short beeps with a pause between cycles	Beep:	420 Hz tone for 200 ms
		Pause between beeps:	275 ms
		Pause between cycles:	875 ms
Special dial tone	Six short beeps followed by continuous tone	Beep:	420 Hz tone for 125 ms
		Pause between beeps:	125 ms
Overflow tone	Continuous beeping, like a busy tone	Beep:	420 Hz tone for 200 ms
		Pause:	600 ms
Relocation tone	Short, high pitched beep followed by silence	Beep:	1400 Hz tone for 1.4 seconds

Note 1: Before you activate a telephone, decide on its final location. Also, know the model number assigned to the telephone and if it must be customized.

Note 2: When you are activating Meridian Digital telephones, remember that they are different from the older Meridian Modular telephones. Meridian Modular and Meridian Digital telephones can have a combined total of 128 model telephones. When you activate a Meridian Digital telephone, select the model associated with that telephone type, or the telephone does not work.

Activating a default model with a character display

Procedure 91

Activating a default model telephone with a character display

- 1 Plug the telephone set into the jack and wait 20 seconds before you lift the handset.

If you do not receive a dial tone, replace the handset and wait another 10 seconds before lifting the handset again. Repeat this procedure until you receive dial tone.

If successful, the character display shows either "MODEL? X" (if the telephone relocation feature is **not** in use) or "RELOC OR MODEL? X" (if the telephone relocation feature **is** in use). "X" represents the default model for the telephone that you are activating.

Note: If you do not see the prompt "MODEL X" after lifting the handset, disconnect the telephone from the wall jack. Wait five seconds, and insert the telephone into the jack again. The telephone now shows "MODEL X" when you lift the handset.

Note: The system requires the 20 second time interval to determine if the set is new or if it is being relocated using the Modular Telephone Relocation feature.

- 2 Press the pound key (#) to select the default model.

The character display shows "OK, EXTENSION? XXXX". "XXXX" represents the default extension number for this telephone type.

- 3** Press the pound key again to select the default extension number.

You hear the relocation tone. The character display shows “OK”.

OR

If the extension number is already in use by another telephone, you hear the special dial tone. If the telephone has a display it shows “MULTI-LINE, EXTENSION?”.

To accept the default extension number, press the pound key.

To select a new extension number, manually enter an extension number and press the pound key.

OR

If the extension number is not available for use, the character display shows “ERROR, EXTENSION?” and you hear overflow tone.

This situation occurs when you select an extension number manually, or when extension numbers are entered for additional keys. A default extension number is not offered if it is not available.

Repeat step 3 and manually enter a new extension number.

Note 1: If other keys require secondary extension numbers, you are prompted until you enter all of the required extension numbers for the model.

Note 2: These extension numbers cannot be defaulted. The text display that prompts for additional extension numbers is “KEY kk EXT?” where “kk” represents the key number requiring the extension number.

Note 3: Each prompt for another extension number is accompanied by special dial tone. When you are programming an extension number, the lamp associated with that number on the telephone is lit.

- 4** Hang up the telephone receiver.

After approximately 10 seconds, the telephone is configured.

Note: If you replace the handset before completing the prompt sequence, the installation automatically fails. This can be useful if you make an error and want to restart the procedure.

End of Procedure

Activating a default model without a character display

Procedure 92

Activating a default model telephone without a character display

- 1 Plug the telephone set into the jack and wait 20 seconds before you lift the handset.

If you do not receive dial tone, replace the handset and wait another 10 seconds before going off-hook again. Repeat this procedure until you receive dial tone.

Note: The system requires the 20 second time interval to determine if the set is new or if it is being relocated using the Modular Telephone Relocation feature.

- 2 Press the pound key (#) to select the default model.
- 3 Press the pound key (#) again to select the default extension number.

You hear a short, high-pitched beep which lasts four seconds followed by silence (relocation tone).

Note: If the extension number is already in use by another telephone, you hear three beeps followed by continuous dial tone (special dial tone).

To accept the default extension number press the pound key (#).

To select a new extension number, manually enter an extension number and press the pound key.

If the extension number is not available for use, you hear a fast, high-pitched broken tone (overflow tone). This happens when you select an extension number manually or when extension numbers are entered for additional keys. A default extension number is not offered if it is not available. You must repeat step 3, and you must manually enter a new extension number.

Note: If other keys require secondary extension numbers, you are prompted until you enter all of the required extension numbers for the model. These extension numbers cannot be defaulted. You are prompted for each additional extension number with three beeps followed by continuous dial tone (special dial tone). When you are programming an extension number, the lamp associated with that number on the telephone is lit.

End of Procedure

Activating a customized model with a character display

Procedure 93

Activating a customized telephone

- 1 Plug the telephone set into the jack and wait 20 seconds before you lift the handset.

If you do not receive dial tone, replace the handset and wait another 10 seconds before going off-hook again. Repeat this procedure until you receive dial tone.

If successful, the character display shows either "MODEL? X" (if the telephone relocation feature is **not** in use) or "RELOC OR MODEL? X" (if the telephone relocation feature **is** in use). "X" represents the default model for the telephone that you are activating.

Note 1: If you do not see the prompt "MODEL X" after lifting the handset, disconnect the telephone from the wall jack. Wait five seconds and plug the telephone into the jack again. The telephone now shows "MODEL X" when you lift the handset.

Note 2: The system requires the 20 second time interval to determine if the set is new or if it is being relocated using the Modular Telephone Relocation feature.

- 2 Enter the digits associated with the customized model and press the pound key (#).

Dial tone disappears after you press the first digit. You hear special dial tone after you press the pound key. If you enter a valid model number, the character display reads "OK, EXTENSION?". If you enter an invalid model, the previous prompt is reissued and you hear overflow tone.

- 3 Enter the customized extension number and press the pound key.

You hear relocation tone. The character display shows "OK".

OR

If the extension number is already in use by another telephone, you hear special dial tone again. The character display shows "MULTI-LINE, EXTENSION?".

OR

If the extension number is not available for use, you hear overflow tone. The character display shows "ERROR, EXTENSION?" and you must repeat this step.

Note: If other keys require secondary extension numbers, you are prompted until you enter all of the required extension numbers for the model. These extension numbers cannot be defaulted. The text display prompting for more extension numbers is "KEY kk EXT?" where "kk" represents the key number requiring the extension number. Each prompt for another extension number is accompanied by special dial tone. When you are programming an extension number, the lamp associated with that number on the telephone is lit.

- 4 Hang up the telephone handset.

After approximately 10 seconds, the telephone is configured.

Note: If you replace the handset before you complete the prompt sequence, the installation automatically fails. This can be useful if you make an error and want to restart the procedure.

End of Procedure

Activating a customized model without a character display

Procedure 94

Activating a customized telephone

- 1 Plug the telephone set into the jack and wait 20 seconds before you lift the handset.

If you do not receive dial tone, replace the handset and wait another 10 seconds before going off-hook again. Repeat this procedure until you receive dial tone.

Note: The system requires the 20 second time interval to determine if the set is new or if it is being relocated using the Modular Telephone Relocation feature.

- 2 Enter the digits associated with the customized model and press the pound key (#).

Dial tone disappears after you press the first digit. You hear three beeps followed by continuous dial tone (special dial tone) after you press the pound key.

- 3 Enter the customized extension number and press the pound key.

You hear a short high-pitched beep which lasts four seconds, followed by silence (relocation tone).

If the extension number is already in use by another telephone, you hear special dial tone again.

If the extension number is not available for use, you hear a fast, high-pitched broken tone (overflow tone), and you must repeat this step.

- 4 Hang up the telephone handset.

After approximately 10 seconds, the telephone is configured.

Note: If other keys require secondary extension numbers, you are prompted until you enter all of the required extension numbers for the model. These extension numbers cannot be defaulted. You are prompted for each additional extension number with three beeps followed by continuous dial tone (special dial tone). When you are programming an extension number, the lamp associated with that number on the telephone is lit.

End of Procedure

Activating terminals on a DSL

Refer to the *ISDN Basic Rate Interface: Installation and Configuration* (553-3001-218) and *ISDN Basic Rate Interface: Maintenance* (553-3001-518) for information about activating and initializing the terminals that can be connected to a terminal DSL.

Verifying analog (500/2500-type)/digital telephone functionality

You can now use the analog (500/2500-type)/digital telephones. To test the telephones, make calls.

Trunk card installation and cross-connection

Contents

This section contains information on the following topics:

Introduction	319
Circuit cards features	324
Connecting trunks without a PFTU	326
Trunk connections	327
Trunk connections (Europe)	332
Trunk connections (UK)	343
Verify trunk functionality	351

Introduction

This chapter describes how to connect trunks directly to the trunk card, without the use of a Power Failure Transfer Unit (PFTU).

This chapter contains Procedure 95: “Connecting trunks without a PFTU” on [page 326](#).

Before you continue, install the cable from the slot that contains the line card associated with the telephone being connected. Refer to “System MDF layout and MDF connection” on [page 281](#), if you require additional cable installation.



DANGER OF ELECTRIC SHOCK

Always use caution when installing or modifying telephone lines. Do not install telephone wiring during a lightning storm. Do not install telephone jacks in wet locations unless the jack is designed for wet locations. Never touch uninsulated telephone wiring unless the line is disconnected at the network interface.

Refer to the *Circuit Card: Description and Installation* (553-3001-211) for full descriptions of country-specific IPE cards and their installation procedures.



CAUTION WITH ESDS DEVICES

Always handle circuit cards with caution to avoid damage caused by static electricity. Always store circuit cards that are not in use in an antistatic bag or the original packaging

Wear an antistatic wrist strap, such as the one shown in Figure 138 on [page 321](#), when handling circuit cards. Static electricity can damage circuit card components.

Figure 138
Antistatic wrist strap

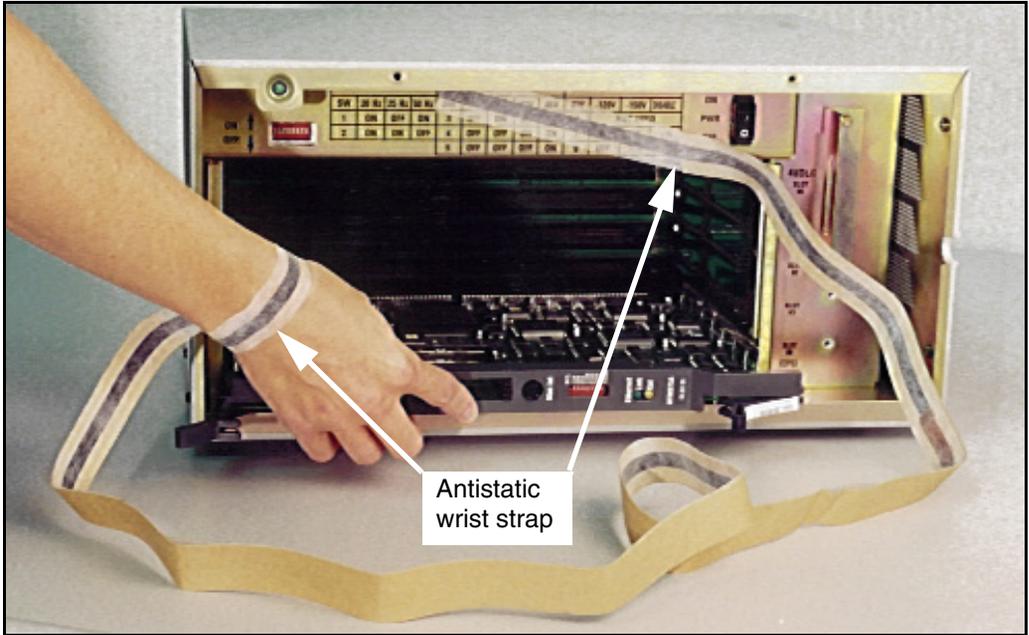
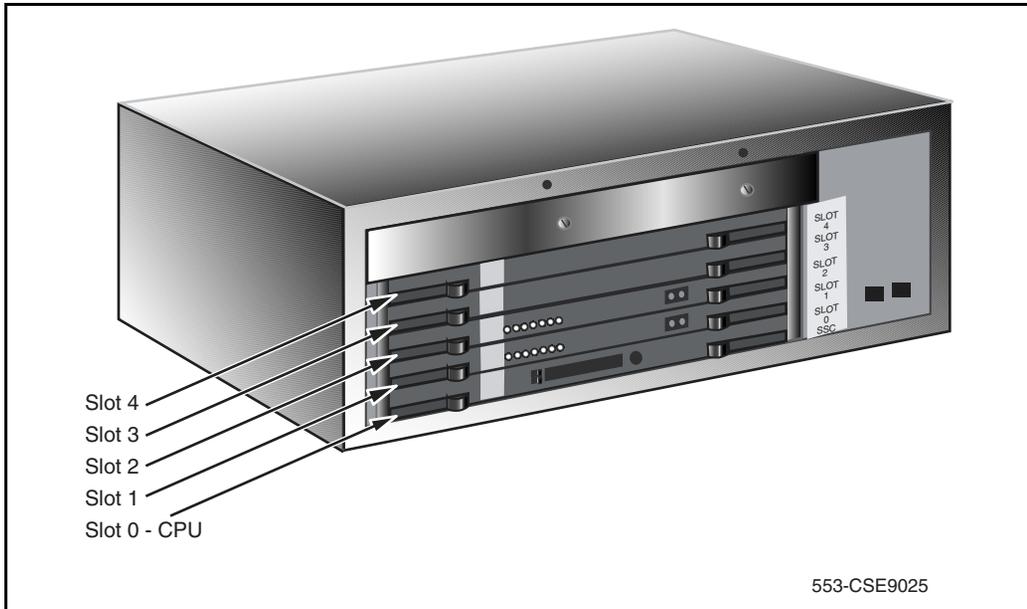


Figure 139 on [page 322](#) and Figure 140 on [page 323](#) show the circuit card assignments for the Succession Media Gateway chassis and Succession Media Gateway Expansion chassis. Reference these figures to make sure that you have all circuit cards inserted in the correct slots.

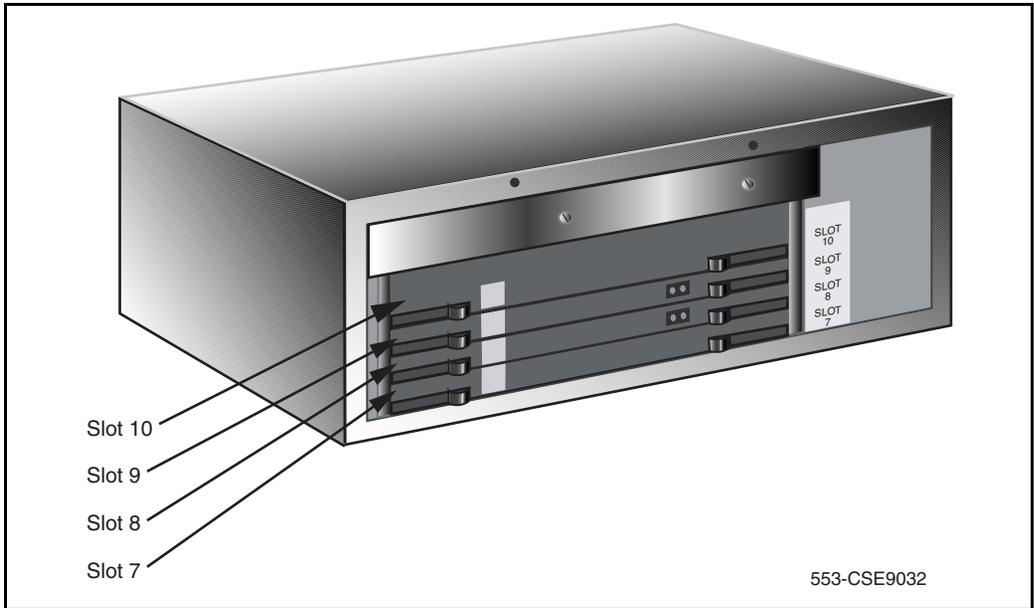
Figure 139
Circuit card assignments in the Succession Media Gateway chassis



Note 1: See your installation work sheet, provided by your Planning and Engineering group, for the cards that you can insert in the Succession Media Gateway and Succession Media Gateway Expansion chassis.

Note 2: The digital trunk cards can be installed only in slots 1 to 4 of the Media Gateway chassis. Analog trunks can be installed in both Succession Media Gateway and Succession Media Gateway Expansion chassis.

Figure 140
Circuit card assignments in the Succession Media Gateway Expansion chassis



Note: See your installation work sheet for the cards that you can insert in the Succession Media Gateway Expansion chassis.

Circuit cards features

If a circuit card has a symbol of a switch on its faceplate, it is equipped with option switches, strapping plugs, or both. Make sure that the circuit cards with option switches or strapping plugs are set correctly. Some circuit cards can have daughterboards and other add-on devices installed on them.

Card placement in Succession Media Gateway and Succession Media Gateway Expansion chassis

The work order developed from your planning and engineering department outlines the placement of peripheral cards in the Succession Media Gateway and Succession Media Gateway Expansion slots. See *Circuit Card: Description and Installation* (553-3001-211) for card placement into card slots. The QUA6 PFTU operates with loop start and ground start CO trunks. However, with ground-start trunks the related telephone set must have a ground-start button.

During initial software installation on the Succession 1000 system, you can load a default database, containing preprogrammed trunk data, into software. If necessary, you can modify the default data at any time to meet the specific needs of a customer. For a description of how to modify preprogrammed trunking data, refer to “Preprogrammed data” on [page 395](#).



WARNING

Always use caution when installing or modifying telephone lines. Avoid installing telephone wiring during a lightning storm. Do not install telephone jacks in wet locations unless the jack is designed for wet locations. Never touch uninsulated telephone wiring unless the line is disconnected at the network interface.

Digital Trunk cards

The Succession 1000 system supports the following digital trunk cards:

- NTAK09 1.5 Mbit DTI/PRI
- NTAK10 2.0 Mbit DTI
- NTAK79 2.0 Mbit PRI
- NTBK22 MISP
- NTBK50 2.0 Mbit BRI
- NTRB21 TMDI 1.5 Mbit DTI/PRI
- NT6D70 SILC
- NT6D71 UILC

Note: The digital trunk cards can be installed only in slots 1-4 of the Succession Media Gateway chassis.

If you want to install digital trunk cards, refer to the following documents for information:

- *ISDN Primary Rate Interface: Installation and Configuration* (553-3001-201)
- *ISDN Basic Rate Interface: Installation and Configuration* (553-3001-218)
- *ISDN Primary Rate Interface: Maintenance* (553-3001-517)
- *ISDN Basic Rate Interface: Maintenance* (553-3001-518)

Connecting trunks without a PFTU

Procedure 95

Connecting trunks without a PFTU

- 1 From the assignment record, determine the location of the trunk connection and its associated Terminal Number (TN) at the cross-connect terminal.
- 2 With cross-connect wire, connect the trunk to the TN.

Make sure that the wiring is not reversed and that it is on the correct terminals.

- Table 23 on [page 327](#) to Table 25 on [page 330](#) list the connections for trunks.
- For European trunk connections, see Table 26 on [page 332](#) to Table 34 on [page 342](#).
- For UK trunk connections, see Table 35 on [page 343](#) to Table 41 on [page 351](#).

Note: See “Power Failure Transfer Unit installation and cross-connection” on [page 353](#) for connecting trunks with the PFTU.

End of Procedure

Trunk connections

NT8D14 Universal trunk card

The Universal trunk card provides eight analog trunks that can function in the modes shown in Table 23.

Table 23
NT8D14 Universal trunk—modes and option settings

Modes	Location	Jumper strap
Central (CO)	J1, J2	OFF
2- way TIE trunk (loop Dial Repeat)	J1, J2	OFF
2 - way TIE trunk (Outgoing Incoming Dial)	J1, J2	OFF
Recorded Announcement (RAN)	J1, J2	OFF
Paging trunk	J1, J2	OFF
Japan CO/DID operation	J1, J2	OFF
DID operation Loop length > 2000 ¾	J1, J2	ON
DID operation Loop length < 2000 ¾	J1, J2	OFF
Note 1: OFF indicates that no strap is present.		
Note 2: J1 and J2 locations apply to all eight trunks.		

Refer to Table 24 for the connections to the NT8D14 Universal trunk at the cross-connect terminal.

Table 24
NT8D14 Universal trunk connections (Part 1 of 2)

Cable from equipment		Unit	RAN mode	Paging mode	All other modes
Pair	Color		Designations		
1T 1R	W-BL BL-W	0	T0 R0	T0 R0	T0 R0
2T 2R	W-O O-W		CP MB	A PG	
3T 3R	W-G G-W	1	T1 R1	T1 R1	T1 R1
4T 4R	W-BR BR-W		CP MB	A PG	
5T 5R	W-S S-W	2	T2 R2	T2 R2	T2 R2
6T 6R	R-BL BL-R		CP MB	A PG	
7T 7R	R-O O-R	3	T3 R3	T3 R3	T3 R3
8T 8R	R-G G-R		CP MB	A PG	
9T 9R	R-BR BR-R	4	T4 R4	T4 R4	T4 R4
10T 10R	R-S S-R		CP MB	A PG	

Table 24
NT8D14 Universal trunk connections (Part 2 of 2)

Cable from equipment		Unit	RAN mode	Paging mode	All other modes
Pair	Color		Designations		
11T 11R	BK-BL BL-BK	5	T5 R5	T5 R5	T5 R5
12T 12R	BK-O O-BK		CP MB	A PG	
13T 13R	BK-G G-BK	6	T6 R6	T6 R6	T6 R6
14T 14R	BK-BR BR-BK		CP MB	A PG	
15T 15R	BK-S S-BK	7	T7 R7	T7 R7	T7 R7
16T 16R	Y-BL BL-Y		CP MB	A PG	
Note: Remaining pairs are spare					

NT8D15 E&M Trunk card

Table 25
NT8D15 E&M Trunk card (Part 1 of 2)

Cables Card 1 through Card 10 from equipment		Unit	2W Paging mode	2W Type 1 mode	4W Type 1 mode	4W Type 2 mode
Pair	Color		Designations			
1T 1R	W-BL BL-W	0	T0 R0	T0 R0	TA TB	TA TB
2T 2R	W-O O-W				RA RB	RA RB
3T 3R	W-G G-W			E M	E M	EA EB
4T 4R	W-BR BR-W		A PG		ESC ESCG	MA MB
5T 5R	W-S S-W	1	T1 R1	T1 R1	TA TB	TA TB
6T 6R	R-BL BL-R				RA RB	RA RB
7T 7R	R-O O-R			E M	E M	EA EB
8T 8R	R-G G-R		A PG		ESC ESCG	MA MB

Table 25
NT8D15 E&M Trunk card (Part 2 of 2)

Cables Card 1 through Card 10 from equipment		Unit	2W Paging mode	2W Type 1 mode	4W Type 1 mode	4W Type 2 mode
Pair	Color		Designations			
9T 9R	R-BR BR-R	2	T2 R2	T2 R2	TA TB	TA TB
10T 10R	R-S S-R				RA RB	RA RB
11T 11R	BK-BL BL-BK		E M	E M	EA EB	
12T 12R	BK-O O-BK		A PG	ESC ESCG	MA MB	
13T 13R	BK-G G-BK	3	T3 R3	T3 R3	TA TB	TA TB
14T 14R	BK-BR BR-BK				RA RB	RA RB
15T 15R	BK-S S-BK		E M	E M	EA EB	
16T 16R	Y-BL BL-Y		A PG	ESC ESCG	MA MB	

Note: A and B are the transmit and receive pairs, where:
 TA = Transmit Tip, and RA = Receive Tip
 TB = Transmit Ring, and RB = Receive Ring

Trunk connections (Europe)

Table 26
E&M TIE trunk card (2-Wire)

Cables Card 1 through Card 10 from equipment				Column 1 Paging	Column 2 Paging	Column 3 Type 5(BPO)
Pair	Color	Unit	Pins	Lead Designations		
1T 1R	W-O O-W	0	27 2	T0 R0	T0 R0	T0 R0
2T 2R	W-BR BR-W		29 4	A PG	SIGB SIGA	E M
3T 3R	R-BL BL-R	1	31 6	T1 R1	T1 R1	T1 R1
4T 4R	R-G G-R		33 8	A PG	SIGB SIGA	E M
5T 5R	R-S S-R	2	35 10	T2 R2	T2 R2	T2 R2
6T 6R	BK-O O-BK		37 12	A PG	SIGB SIGA	E M
7T 7R	BK-BR BR-BK	3	39 14	T3 R3	T3 R3	T3 R3
8T 8R	Y-BL BL-Y		41 16	A PG	SIGB SIGA	E M

Table 27
E&M 2-wire Type 2

Lead designations	Pins	Pair color	Unit number
T0 R0	27 2	W-O O-W	0
E1 E2	28 3	W-G G-W	
M1 M2	29 4	W-G G-W	
T1 R1	31 6	R-BL BL-R	1
E1 E2	32 7	R-O O-R	
M1 M2	33 8	R-G G-R	
T2 R2	35 10	R-S S-R	2
E1 E2	36 11	BK-BL BL-BK	
M1 M2	37 12	BK-O O-BK	
T3 R3	39 14	BK-BR BR-BK	3
E1 E2	40 15	BK-S S-BK	
M1 M2	41 16	Y-BL BL-Y	

Table 28
E&M TIE trunk card (4-Wire) (Part 1 of 2)

Cables Card 1 through Card 10 from equipment				Column 1 Type 1 & 5	Column 2 Type 1 & 5
Pair	Color	Unit #	Pins	Lead Designations	
1T 1R	W-BL BL-W	0	26 1	RA RB	TA TB
2T 2R	W-O O-W		27 2	TA TB	RA RB
3T 3R	W-G G-W		28 3	E M	E M
4T 4R	W-S S-W	1	30 5	RA RB	TA TB
5T 5R	R-BL BL-R		31 6	TA TB	RA RB
6T 6R	R-O O-R		32 7	E M	E M
7T 7R	R-BR BR-R	2	34 9	RA RB	TA TB
8T 8R	R-S S-R		35 10	TA TB	RA RB
9T 9R	BK-BL BL-BK		36 11	E M	E M

Table 28
E&M TIE trunk card (4-Wire) (Part 2 of 2)

Cables Card 1 through Card 10 from equipment				Column 1 Type 1 & 5	Column 2 Type 1 & 5
10T	BK-G	3	38	RA	TA
10R	G-BK		13	RB	TB
11T	BK-BR-		39	TA	RA
11R	BR-BK		14	TB	RB
12T	BK-S		40	E	E
12R	S-BK		15	M	M
<p>Note: The cable pair designated TA, TB is the transmit pair. The pair designated RA, RB is the receive pair.</p>					

Table 29
E&M TIE trunk card (Part 1 of 2)

Cables Card 1 through Card 10 from equipment				Column 1 Type 2	Column 2 Type 2
Pair	Color	Unit #	Pins	Lead Designations	
1T 1R	W-BL BL-W	0	26 1	RA RB	RA RB
2T 2R	W-O O-W		27 2	TA TB	TA TB
3T 3R	W-G G-W		28 3	E1 E2	E M
4T 4R	W-BR BR-W		29 4	M1 M2	SIG0A SIG0B
5T 5R	W-S S-W	1	30 5	RA RB	RA RB
6T 6R	R-BL BL-R		31 6	TA TB	TA TB
7T 7R	R-O O-R		32 7	E1 E2	E M
8T 8R	R-G G-R		33 8	M1 M2	SIG1A SIG1B
9T 9R	R-BR BR-R	2	34 9	RA RB	RA RB
10T 10R	R-S S-R		35 10	TA TB	TA TB
11T 11R	BK-BL BL-BK		36 11	E1 E2	E M
12T 12R	BK-O O-BK		37 12	M1 M2	SIG2A SIG2B

Table 29
E&M TIE trunk card (Part 2 of 2)

Cables Card 1 through Card 10 from equipment				Column 1 Type 2	Column 2 Type 2
13T 13R	BK-G G-BK		38 13	RA RB	RA RB
		3			
14T 14R	BK-BR BR-BK		39 14	TA TB	TA TB
15T 15R	BK-S S-BK		40 15	E1 E2	E M
16T 16R	Y-BL BL-Y		41 16	M1 M2	SIG3A SIG3B
<p>Note: The cable pair designated TA, TB is the transmit pair. The pair designated RA, RB is the receive pair.</p>					

E&M TIE trunk card (2280Hz)

Table 30
E&M 2280 Hz TIE trunk connections

Lead designations	Pins	Pair color	Unit number
TA TB	26 1	W-BL BL-W	0
RA RB	27 2	W-O O-W	
TA TB	30 5	W-S S-W	1
RA RB	31 6	R-BL BL-R	
TA TB	34 9	R-BR BR-R	2
RA RB	35 10	R-S S-R	
TA TB	38 13	BK-G G-BK	3
RA RB	39 14	BK-BR BR-BK	

E&M TIE trunk card (RAN)

Table 31
E&M 2-wire Recorded Announcement trunk connections

Lead designations	Pins	Pair color	Unit number
T0 R0	26 1	W-BL BL-W	0
SIG B SIG A	29 4	W-BR BR-W	
T1 R1	30 5	W-S S-W	1
SIG B SIG A	33 8	R-G G-R	
T2 R2	34 9	R-BR BR-R	2
SIG B SIG A	37 12	BK-O O-BK	
T3 R3	38 13	BK-G G-BK	3
SIG B SIG A	41 16	Y-BL BL-Y	

E&M TIE trunk card (MUS)

Table 32
E&M 2-wire Music trunk connections

Lead designations	Pins	Pair color	Unit number
T0 R0	26 1	W-BL BL-W	0
T1 R1	30 5	W-S S-W	1
T2 R2	34 9	R-BR BR-R	2
T3 R3	38 13	BK-G G-BK	3

CO & DID trunk card

Table 33
Central Office & Direct Inward Dial trunk connections (Part 1 of 2)

Cable from equipment		Unit	Pins	Column 1	Column 2	Column 3
Pair	Color			Lead designations		
1T 1R	W-BL BL-W	0	26 1	T0 R0	T0 R0	A0 B0
2T 2R	W-O O-W		27 2		PPM0 —	C0 Spare
3T 3R	W-G G-W	1	28 3	T1 R1	T1 R1	A1 B1
4T 4R	W-BR BR-W		29 4		PPM1 —	C1 Spare

Table 33
Central Office & Direct Inward Dial trunk connections (Part 2 of 2)

Cable from equipment		Unit	Pins	Column 1	Column 2	Column 3
Pair	Color			Lead designations		
5T 5R	W-S S-W	2	30 5	T2 R2	T2 R2	A2 B2
6T 6R	R-BL BL-R		31 6		PPM2 —	C2 Spare
7T 7R	R-O O-R	3	32 7	T3 R3	T3 R3	A3 B3
8T 8R	R-G G-R		33 8		PPM3 —	C3 Spare
9T 9R	R-BR BR-R	4	34 9	T4 R4	T4 R4	A4 B4
10T 10R	R-S S-R		35 10		PPM4 —	C4 Spare
11T 11R	BK-BL BL-BK	5	36 11	T5 R5	T5 R5	A5 B5
12T 12R	BK-O O-BK		37 12		PPM5 —	C5 Spare
13T 13R	BK-G G-BK	6	38 13	T6 R6	T6 R6	A6 B6
14T 14R	BK-BR BR-BK		39 14		PPM6 —	C6 Spare
15T 15R	BK-S S-BK	7	40 15	T7 R7	T7 R7	A7 B7
16T 16R	Y-BL BL-Y		41 16		PPM7 —	C7 Spare

Central Office trunk card

Table 34
Central Office trunk connections (Part 1 of 2)

Cable from equipment		Unit	Pins	Lead designations
Pair	Color			
1T 1R	W-BL BL-W	0	26 1	T0 R0
2T 2R	W-O O-W		27 2	
3T 3R	W-G G-W		28 3	
4T 4R	W-BR BR-W		29 4	
5T 5R	W-S S-W	1	30 5	T1 R1
6T 6R	R-BL BL-R		31 6	
7T 7R	R-O O-R		32 7	
8T 8R	R-G G-R		33 8	
9T 9R	R-BR BR-R	2	34 9	T2 R2
10T 10R	R-S S-R		35 10	
11T 11R	BK-BL BL-BK		36 11	
12T 12R	BK-O O-BK		37 12	

Table 34
Central Office trunk connections (Part 2 of 2)

Cable from equipment		Unit	Pins	Lead designations
Pair	Color			
13T 13R	BK-G G-BK	3	38 13	T3 R3
14T 14R	BK-BR BR-BK		39 14	
15T 15R	BK-S S-BK		40 15	
16T 16R	Y-BL BL-Y		41 16	

Trunk connections (UK)

NT5K17 Direct Inward Dial card terminations

Cross connect the NT5K17 DDI card as follows:

Table 35
NT5K17 Direct Inward Dial card terminations (Part 1 of 2)

Pair	Pins	Pair color	Unit
T0 R0	26 1	W-BL BL-W	0
	27 2	W-O O-W	
T1 R1	28 3	W-G G-W	1
	29 4	W-BR BR-W	

Table 35
NT5K17 Direct Inward Dial card terminations (Part 2 of 2)

Pair	Pins	Pair color	Unit
T2 R2	30 5	W-S S-W	2
	31 6	R-BL BL-R	
T3 R3	32 7	R-O O-R	3
	33 8	R-G G-R	
T4 R4	34 9	R-BR BR-R	4
	35 10	R-S S-R	
T5 R5	36 11	BK-BL BL-BK	5
	37 12	BK-O O-BK	
T6 R6	38 13	BK-G G-BK	6
	39 14	BK-BR BR-BK	
T7 R7	40 15	BK-S S-BK	7
	41 16	Y-BL BL-Y	

NT5K18 Exchange line trunk card terminations

Cross connect the NT5K18 Exchange line trunk card as shown in Table 36.

Note: The connections on the NT5K18 Exchange line trunk card are polarity sensitive. Make sure the ground side of the trunk is connected to the A leg of the NT5K18 circuit. Make sure the -50 Volt side of the trunk is connected to the B leg of the NT5K18 circuit.

Table 36
NT5K18 Exchange line trunk card cross-connect terminations
(Part 1 of 2)

Pair	Pins	Pair color	Unit
T0 R0	26 1	W-BL BL-W	0
	27 2	W-O O-W	
T1 R1	28 3	W-G G-W	1
	29 4	W-BR BR-W	
T2 R2	30 5	W-S S-W	2
	31 6	R-BL BL-R	
T3 R3	32 7	R-O O-R	3
	33 8	R-G G-R	
T4 R4	34 9	R-BR BR-R	4
	35 10	R-S S-R	

Table 36
NT5K18 Exchange line trunk card cross-connect terminations
(Part 2 of 2)

Pair	Pins	Pair color	Unit
T5 R5	36 11	BK-BL BL-BK	5
	37 12	BK-O O-BK	
T6 R6	38 13	BK-G G-BK	6
	39 14	BK-BR BR-BK	
T7 R7	40 15	BK-S S-BK	7
	41 16	Y-BL BL-Y	

NT5K19 Analog TIE line trunk card terminations

Cross connect the NT5K19 analog TIE line trunk card as shown in Table 37.

Note: The speech pairs on the NT5K19 card are polarity insensitive. The E&M signalling pairs, however, are polarity sensitive. Make sure the ground side of the trunk is connected to the A leg of the NT5K19 circuit. Make sure the -50 Volt side of the trunk is connected to the B leg.

Table 37
NT5K19 2W paging mode terminations

Pair	Pins	Pair color	Unit
T0 R0	27 2	W-O O-W	0
A PG	29 4	W-BR BR-W	
T1 R1	31 6	R-BL BL-R	1
A PG	33 8	R-G G-R	
T2 R2	35 10	R-S S-R	2
A PG	37 12	BK-O O-BK	
T3 R3	39 14	BK-BR BR-BK	3
A PG	41 16	Y-BL BL-Y	

Table 38
NT5K19 2W Type 1 mode terminations

Pair	Pins	Pair color	Unit
T0 R0	27 2	W-O O-W	0
E M	28 3	W-G G-W	
T1 R1	31 6	R-BL BL-R	1
E M	32 &	R-O O-R	
T2 R2	35 10	R-S S-R	2
E M	36 11	BK-BL BL-BK	
T3 R3	39 14	BK-BR BR-BK	3
E M	40 15	BK-S S-BK	

Table 39
NT5K19 4W Type 1 mode terminations

Pair	Pins	Pair color	Unit
TA TB	26 1	W-BL BL-W	
RA RB	27 2	W-O O-W	0
E M	28 3	W-G G-W	
RA RB	30 5	W-S S-W	
TA RB	31 6	R-BL BL-R	1
E M	32 7	R-O O-R	
TA TB	34 9	R-BR BR-R	
RA RB	35 10	R-S S-R	2
E M	36 11	BK-BL BL-BK	
TA TB	38 13	BK-G G-BK	
RA TB	39 14	BK-BR BR-BK	3
E M	40 15	BK-S S-BK	

Table 40
NT5K19 AC15 mode pair terminations

Pair	Pins	Pair color	Unit
TA TB	26 1	W-BL BL-W	0
RA RB	27 2	W-O O-W	
TA TB	30 5	W-S S-W	1
RA RB	31 6	R-BL BL-R	
TA TB	34 9	R-BR BR-R	2
RA RB	35 10	R-S S-R	
TA TB	38 13	BK-G G-BK	3
RA TB	39 14	BK-BR BR-BK	

Table 41
NT5K19 Recorded Announcement mode pair terminations

Pair	Pins	Pair color	Unit
T0 R0	26 1	W-BL BL-W	0
SIG B SIG A	29 4	W-BR BR-W	
T1 R1	30 5	W-S S-W	1
SIG B SIG A	33 8	R-G G-R	
T2 R2	34 9	R-BR BR-R	2
SIG B SIG A	37 12	BK-O O-BK	
T3 R3	38 13	BK-G G-BK	3
SIG B SIG A	41 16	Y-BL BL-Y	

Verify trunk functionality

You can now use the trunks. To test the trunks, make trunk calls.

Power Failure Transfer Unit installation and cross-connection

Contents

This section contains information on the following topics:

Introduction	353
Installing the PFTU	354
Installing analog (500/2500-type) telephones for power failure	359
Connecting analog (500/2500-type) telephones with a PFTU	361
Connecting trunks with a PFTU	363

Introduction

This chapter describes how to install a QUA6 Power Failure Transfer Unit (PFTU).

This chapter contains the following procedures:

- Procedure 96 "Installing the PFTU" on [page 354](#).
- Procedure 97 "Connecting analog (500/2500-type) telephones with a PFTU" on [page 361](#).
- Procedure 98 "Connecting trunks with a PFTU" on [page 363](#).

Power failure transfer occurs when the main power to the Succession 1000 system is cut off. When this power interruption occurs, the PFTU connects pre-determined analog (500/2500-type) telephones directly to the Central Office (CO) trunks. The PFTU is capable of supporting a maximum of five or eight telephones, depending on the PFTU used.

You can connect PFTUs to the Succession Media Gateway.

Note: The QUA6 PFTU operates with loop start and ground start CO trunks. With ground start trunks, the associated telephone set must have a ground start button.

If you require power failure backup as a fail safe for this system, use analog trunks. A PFTU does not support digital trunks.

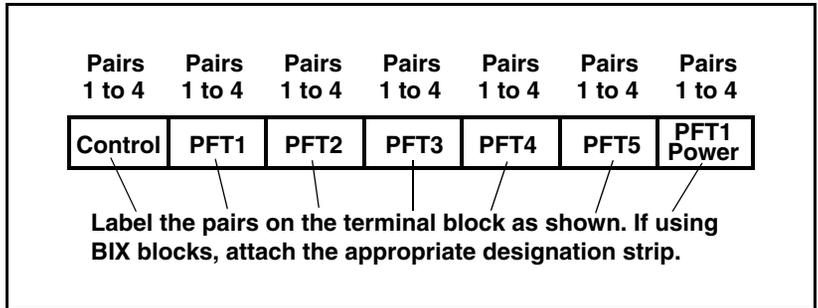
Installing the PFTU

Refer to the equipment layout plan to determine where to locate the PFTU.

Procedure 96 **Installing the PFTU**

- 1 Install the PFTU on the wall near the system cross-connect terminal.
Fasten the PFTU in position with four screws.
- 2 Install an NE-A25B-type 25-pair cable from connector J1 on the faceplate of the PFTU to its assigned location at the cross-connect terminal.
- 3 Label the pairs of the J1 cable on the cross-connect terminal block as shown in Figure 141 on [page 355](#).

Figure 141
J1 cable labels



- 4 Connect the PFTU power and control connections to the AUX connector on the Succession Media Gateway. See Figure 142, Table 42 on [page 356](#), and Figure 143 on [page 357](#).

Figure 142
AUX cable connector on Succession Media Gateway

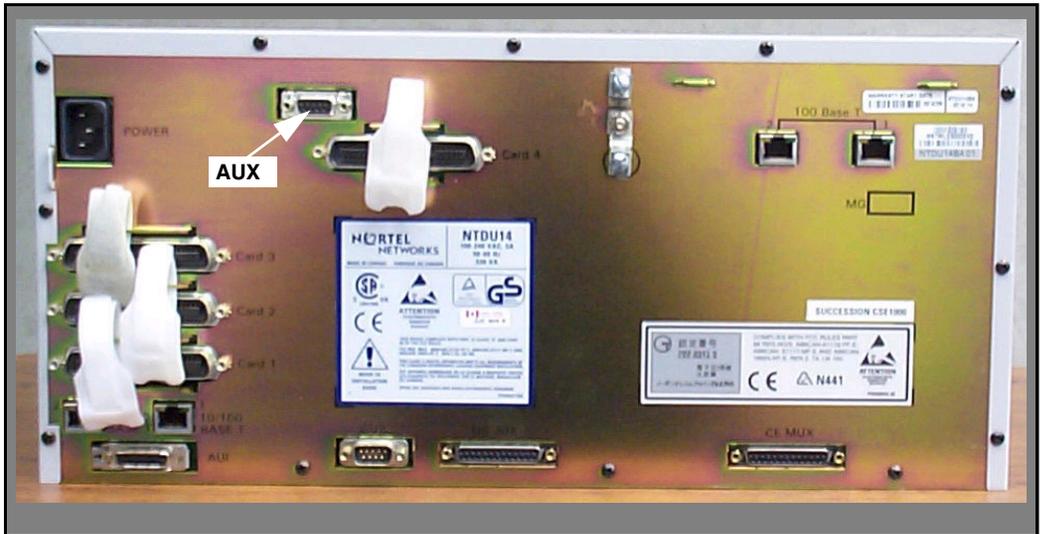
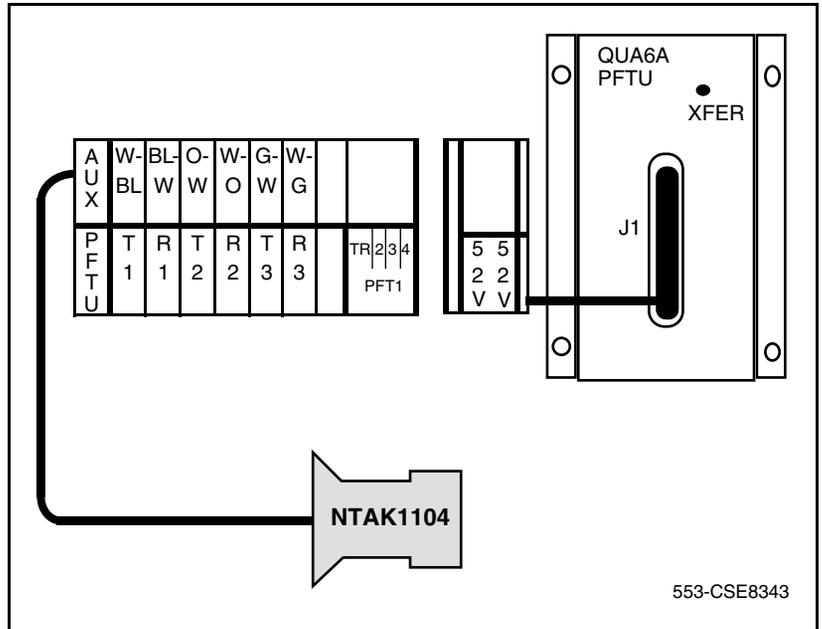


Table 42
Control and power connections on cable J1

J1 Cable from QUA6				
Function	Pair Number	Pair Color	Connects to	Cross-connects to
Control	1T	W-BL	(ALM)	Not used
	1R	BL-W	BRTN	W-BL 1-dot connection on AUX cable from the chassis
	2T	W-O	PFTS	W-O 1-dot connection on AUX cable from the chassis. Transfer begins by applying ground to this lead.
	2R	O-W	BRTN	BL-W 1-dot connection on AUX cable from the chassis
	3T	W-G	(TC)	Console transfer switch. See console connections. Transfer begins by applying ground to this lead.
	3R	G-W		Not used
	4T	W-BR		Not used
	4R	BR-W		Not used
PFTU power	25T 25R	S-V V-S	-48 V -48 V	O-W 1-dot connection on AUX cable. Maximum 250 mA draw on O-W lead.

Figure 143
Power fail transfer



End of Procedure

PFTU control lead signals

To connect PFTUs from other manufacturers, use the information provided in Table 43.

Table 43
PFTU control lead signals

NTAK1104 AUX cable lead	Lead State	
	When PFTU is in non-transferred state	When PFTU is in transferred state
BRTN	GROUND	GROUND
BRTN	GROUND	GROUND
-48V AUX	-48V dc (250 mA max.)	-48V dc (250 mA max.)
PFTS	OPEN	GROUND

Note 1: Refer to Figure 142 on [page 355](#) to see where the Auxiliary cable connects to the Succession 1000 system.

Note 2: If power is removed from the QUA6, a transfer of the PFTU can occur.

Installing analog (500/2500-type) telephones for power failure

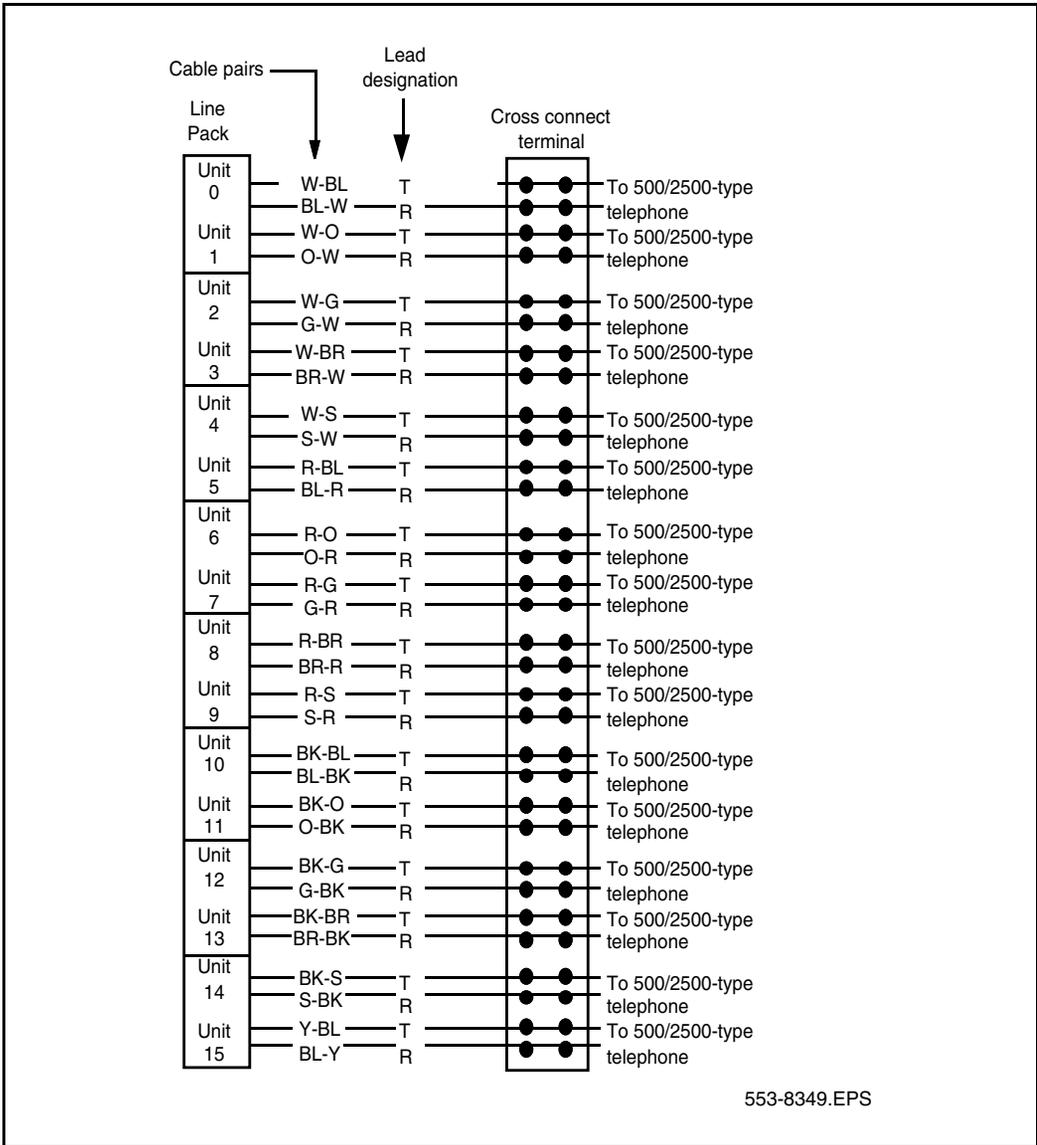
Before you continue, install the cable from the slot that contains the line card associated with the telephone being connected. Refer to “System MDF layout and MDF connection” on [page 281](#).



DANGER

Always use caution when installing or modifying telephone lines. Do not install telephone wiring during a lightning storm. Do not install telephone jacks in wet locations unless the jack is designed for wet locations. Never touch un-insulated telephone wiring unless the line is disconnected at the network interface.

Figure 144
Analog (500/2500-type) telephone cross connections



Connecting analog (500/2500-type) telephones with a PFTU

Procedure 97

Connecting analog (500/2500-type) telephones with a PFTU

- 1 Locate the telephone terminations on the cross-connect terminal.
- 2 Connect one end of the cross-connect wire to the leads of the telephone.
- 3 Locate the PFTU connections (unit PFT 1 through PFT 5) assigned to this telephone at the cross-connect terminal. See Table 44.
- 4 Connect the other end of the cross-connect wire to the pair assigned to the telephone on the PFTU.
- 5 Connect a second cross-connect wire to the pair assigned to the line card on the PFTU.
- 6 Locate the line card terminations on the cross-connect terminal.
- 7 Connect the other end of the cross-connect wire to the assigned TN terminal block.

————— **End of Procedure** —————

Table 44
Power Failure Transfer Unit connections (Part 1 of 3)

QUA6 J1 Cable			
Function	Pair	Color	Connects to
PFT 1	5T 5R	W-S S-W	the telephone
	6T 6R	R-BL BL-R	the telephone line card
	7T 7R	R-O O-R	the central office trunk
	8T 8R	R-G G-R	the trunk line card

Table 44
Power Failure Transfer Unit connections (Part 2 of 3)

QUA6 J1 Cable			
Function	Pair	Color	Connects to
PFT 2	9T 9R	R-BR BR-R	the telephone
	10T 10R	R-S S-R	the telephone line card
	11T 11R	BK-BL BL-BK	the central office trunk
	12T 12R	BK-O O-BK	the trunk line card
PFT 3	13T 13R	BK-G G-BK	the telephone
	14T 14R	BK-BR BR-BK	the telephone line card
	15T 15R	BK-S S-BK	the central office trunk
	16T 16R	Y-BL BL-Y	the trunk line card
PFT 4	17T 17R	Y-O O-Y	the telephone
	18T 18R	Y-G G-Y	the telephone line card
	19T 19R	Y-BR BR-Y	the central office trunk
	20T 20R	Y-S S-Y	the trunk line card

Table 44
Power Failure Transfer Unit connections (Part 3 of 3)

QUA6 J1 Cable			
Function	Pair	Color	Connects to
PFT 5	21T 21R	V-BL BL-V	the telephone
	22T 22R	V-O O-V	the telephone line card
	23T 23R	V-G G-V	the central office trunk
	24T 24R	V-BR BR-V	the trunk line card

Connecting trunks with a PFTU

Procedure 98 Connecting trunks with a PFTU

- 1 Locate the PFTU terminal blocks at the cross-connect terminal.
- 2 Cross-connect the first pair of the assigned PFT to the telephone.
See Table 45 on [page 364](#) for PFTU connections.
- 3 Cross-connect the second pair of the PFT to the TN assigned to the telephone.
- 4 Cross-connect the third pair of the PFT to the central office trunk.
- 5 Cross-connect the third pair of the PFT to the TN assigned to the trunk.
- 6 Repeat for each trunk assigned to the PFTU.

————— **End of Procedure** —————

Table 45
Power Failure Transfer Unit connections (Part 1 of 2)

QUA6 J1 cable				
Function	Pair	Color	Connects to	Connects to
P F T 1	5T 5R	W-S S-W	Connect to the telephone	
	6T 6R	R-BL BL-R	Connect to the telephone line card	the TN assigned to the telephone
	7T 7R	R-O O-R	Connect to the central office trunk	
	8T 8R	R-G G-R	Connect to the trunk line card	the TN assigned to the trunk
P F T 2	9T 9R	R-BR BR-R	Connect to the telephone	
	10T 10R	R-S S-R	Connect to the telephone line card	the TN assigned to the telephone
	11T 11R	BK-BL BL-BK	Connect to the central office trunk	
	12T 12R	BK-O O-BK	Connect to the trunk line card	the TN assigned to the trunk
P F T 3	13T 13R	BK-G G-BK	Connect to the telephone	
	14T 14R	BK-BR BR-BK	Connect to the telephone line card	the TN assigned to the telephone
	15T 15R	BK-S S-BK	Connect to the central office trunk	
	16T 16R	Y-BL BL-Y	Connect to the trunk line card	the TN assigned to the trunk

Table 45
Power Failure Transfer Unit connections (Part 2 of 2)

QUA6 J1 cable				
Function	Pair	Color	Connects to	Connects to
P F T 4	17T 17R	Y-O O-Y	Connect to the telephone	
	18T 18R	Y-G G-Y	Connect to the telephone line card	the TN assigned to the telephone
	19T 19R	Y-BR BR-Y	Connect to the central office trunk	
	20T 20R	Y-S S-Y	Connect to the trunk line card	the TN assigned to the trunk
P F T 5	21T 21R	V-BL BL-V	Connect to the telephone	
	22T 22R	V-O O-V	Connect to the telephone line card	the TN assigned to the telephone
	23T 23R	V-G G-V	Connect to the central office trunk	
	24T 24R	V-BR BR-V	Connect to the trunk line card	the TN assigned to the trunk

External alarm from PFTU installation and cross-connection

Contents

This section contains information on the following topics:

Introduction	367
Alarm port assigned in software	368
Alarm through a QUA6 PFTU	369

Introduction

This chapter describes the procedures for connecting an external alarm to the Succession 1000 system.

This chapter contains the following procedure: Procedure 99 "Installing an alarm using an alarm port" on [page 368](#).

The following are the two methods of connecting an external alarm to the Succession 1000 system:

- through an alarm port assigned in software
- through contacts in a QUA6 Power Failure Transfer Unit (PFTU)

Alarm port assigned in software

The system can be equipped with an alarm port. Connect an analog line to an analog (500/250 type) telephone or another similar type of ringing or alerting device.

Procedure 99

Installing an alarm using an alarm port

- 1 Install an analog (500/2500 type) line as described in “Internet Telephone installation and configuration” on [page 209](#).
- 2 Connect an analog (500/2500 type) telephone, or another similar alerting device used as an alarm, to the line.
- 3 Use LD 15 and make the following changes.

Note: The following list only contains the prompts requiring a response. Use a carriage return, <cr>, to accept the default values for the other prompts.

- a. Enter CHG in response to the REQ prompt.
- b. Enter CDB in response to the TYPE prompt.
- c. Enter the customer number in response to the CUST prompt.
- d. Enter the DN of the line assigned as an alarm port in response to the ALDN prompt.

Note: If the DN assigned to the alarm is accidentally called, the alarm activates. To avoid false alarms, make sure the DN is not already assigned.

- e. Press <cr> in response to the remaining prompts.

End of Procedure

Alarm through a QUA6 PFTU

A QUA6 PFTU can be used to connect an external alarm through normally open or normally closed contacts of one of its units. The contacts operate under the same conditions as the PFTU, and can support the capacities listed in Table 46.

Table 46
The ac capacities

Maximum	The ac capacities
Switching power	50.0 V A
Switching voltage	125.0 V rms
Switching current	0.5 A

Figure 145 on [page 370](#) shows an example of the contacts on one unit (PFT1) of the PFTU. Figure 145 also shows the contacts in normal operating mode, not in failure mode. Table 47 on [page 370](#) provides the connections for all units on the PFTU.

Figure 145
Contacts in PFTU

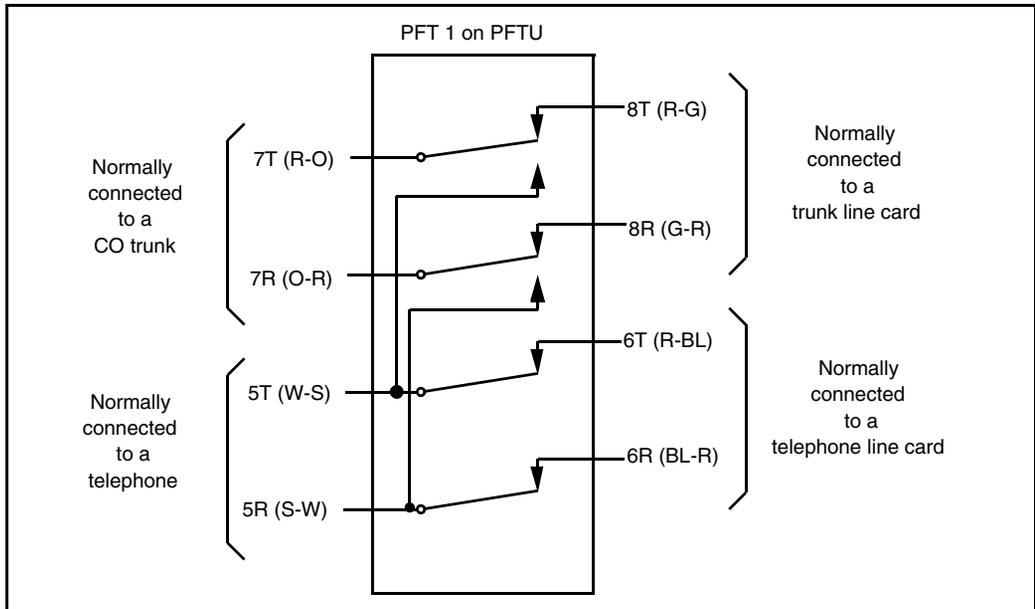


Table 47
Power Failure Transfer Unit connections (Part 1 of 3)

Unit	Pair	Color	Normal mode	Failure mode
P F T 1	5T 5R	W-S S-W	Makes with 6T and 6R	Opens 6T and 6R Makes with 7T and 7R
	6T 6R	R-BL BL-R	Makes with 5T and 5R	Open
	7T 7R	R-O O-R	Makes with 8T and 8R	Opens 8T and 8R Makes with 5T and 5R
	8T 8R	R-G G-R	Makes with 7T and 7R	Open

Table 47
Power Failure Transfer Unit connections (Part 2 of 3)

Unit	Pair	Color	Normal mode	Failure mode
P F T 2	9T 9R	R-BR BR-R	Makes with 10T and 10R	Opens 10T and 10R Makes with 11T and 11R
	10T 10R	R-S S-R	Makes with 9T and 9R	Open
	11T 11R	BK-BL BL-BK	Makes with 12T and 12R	Opens 12T and 12R Makes with 9T and 9R
	12T 12R	BK-O O-BK	Makes with 11T and 11R	Open
P F T 3	13T 13R	BK-G G-BK	Makes with 14T and 14R	Opens 14T and 14R Makes with 15T and 15R
	14T 14R	BK-BR BR-BK	Makes with 13T and 13R	Open
	15T 15R	BK-S S-BK	Makes with 16T and 16R	Opens 16T and 16R Makes with 13T and 13R
	16T 16R	Y-BL BL-Y	Makes with 15T and 15R	Open
P F T 4	17T 17R	Y-O O-Y	Makes with 18T and 18R	Opens 18T and 18R Makes with 19T and 19R
	18T 18R	Y-G G-Y	Makes with 17T and 17R	Open
	19T 19R	Y-BR BR-Y	Makes with 20T and 20R	Opens 20T and 20R Makes with 17T and 17R
	20T 20R	Y-S S-Y	Makes with 19T and 19R	Open

Table 47
Power Failure Transfer Unit connections (Part 3 of 3)

Unit	Pair	Color	Normal mode	Failure mode
P F T 5	21T 21R	V-BL BL-V	Makes with 22T and 22R	Opens 22T and 22R Makes with 23T and 23R
	22T 22R	V-O O-V	Makes with 21T and 21R	Open
	23T 23R	V-G G-V	Makes with 24T and 24R	Opens 24T and 24R Makes with 21T and 21R
	24T 24R	V-BR BR-V	Makes with 23T and 23R	Open

Alternate Succession Call Server and survivability configuration

Contents

This section contains information on the following topics:

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Retrieving CDR records from a survivable Succession Media Gateway	390

Introduction

This chapter provides procedures to configure Alternate Succession Call Server and survivability on a Succession 1000 system.

This chapter contains the following procedures:

- Procedure 100 "Configuring for survivability" on [page 384](#).
- Procedure 102 "Verifying the operation of an Voice Gateway Media Card in a Succession Media Gateway in Survivable Mode" on [page 389](#).
- Procedure 103 "Retrieving CDR files using XModem" on [page 390](#).

Switchover to Survival Mode

If Survivability is configured on a Succession Media Gateway, the following two scenarios can trigger a switchover to Survival Mode:

- Automatic Switchover is triggered when the Succession Media Gateway loses communication with the Succession Call Server and the Switchover Time Out (SWOTO) timer expires. This can occur if there is a catastrophic failure of the Succession Call Server, or the IP link is lost between the Succession Call Server and the Succession Media Gateway.
- Manual Switch Over is triggered with the Switchover to Survival (SOTS) command in LD 135.

Automatic switch over to Survival Mode

When a Succession Media Gateway, with survivability configured, loses communication with the Succession Call Server, the Succession Media Gateway automatically switches over to Survival Mode when the SWOTO timer expires.

If the IP link is detected as down again before the expiration of the SWOTO timer, the timer stops, and the Succession Media Gateway remains in Survival operating mode.

The state of communication between the Succession Call Server and the Succession Media Gateway is monitored by a simple polling mechanism called a Heartbeat.

The following example illustrates the tasks performed by a Succession Media Gateway when communication with the Succession Call Server is lost.

- 1 The Succession Media Gateway attempts to re-establish the connection to the Succession Call Server. After four re-connection attempts with a pre-defined delay between each attempt, the SWOTO starts.
- 2 The SWOTO expires after the time defined in LD 117.
- 3 The Succession Media Gateway re-starts. As the Succession Media Gateway is going through the re-start procedure, it attempts to register with the Succession Call Server.
- 4 If a connection cannot be made to the Succession Call Server, the Succession Media Gateway comes up in Survival Mode.

Manual switchover to Survival Mode

Manual commands are provided to enable a technician to force a switchover to Survival Mode. These commands are only available on the Succession Call Server. They can be used only if there is an established IP link between the Succession Call Server and a Succession Media Gateway. To manually switch over to Survival Mode, use the SOTS command in LD 135.



CAUTION

Service Interruption

A manually invoked switchover causes a restart of the Succession Media Gateway.

After the SOTS command has been successfully executed, the Succession Media Gateway remains in Survival Mode until the Switch Back From Survival (SBFS) command is issued in LD 135 by the technician.



CAUTION

System Failure

If the software is upgraded on the Succession Call Server, it must also be upgraded on the Succession Media Gateway in order for Survivability to function.

In Survival Mode, a valid database must be downloaded to the Succession Media Gateway in order to function. The database is downloaded or

'synchronized' each time a datadump is performed. A carbon copy of the database on the Succession Call Server is downloaded to the Succession Media Gateway with every data dump.

Switchback from Survival Mode

A Succession Media Gateway can switch back to Normal Mode after communication with the Succession Call Server is restored.

The following two scenarios can trigger a chassis in Survival Mode, to return to Normal Mode.

- Automatic Switch Back (AUTOSB) enables a Succession Media Gateway to automatically switch back from Survival Mode to Normal Mode as soon as the IP link with the Succession Call Server is restored, and the SWOTO timer has expired. A restart is initiated on the Succession Media Gateway. At the end of the system start, the Succession Media Gateway is ready to operate in Normal Mode.
- Manual Switch Back enables a technician to force the system into Normal Mode by issuing the SBFS command. This command returns the system to Normal Mode after the SOTS command has been used.

Automatic Switch Back from Survival Mode

When the Automatic Switch Back option is configured for a Survivable Succession Media Gateway, the Succession Media Gateway automatically switches back from Survival Mode to Normal Mode as soon as the IP link with the Succession Call Server is restored and the SWOTO timer expires.

A valid database is required for the Succession Media Gateway for survivability.

The AUTOSB command is available in LD 117:

```
CHG AUTOSB <cab#> <Switchback setting>
```

Where:

cab# = **1-4**, Succession Media Gateway

Switchback setting = **(YES) NO**

When the switchback parameter is set to YES, the Succession Media Gateway automatically switches back from Survival Mode as soon as the SWOTO timer expires. If switchback is set to NO, the Succession Media Gateway remains in Survival Mode until a technician enters the SBFS command.

Switchover Timer

The timer is started on a Survivable Succession Media Gateway as soon as the IP link with the Succession Call Server goes up or down. When the timer expires, the switchover (or switch back) is triggered. The timer is used to avoid instability in the Operating Mode of the Succession Media Gateway when the IP link with the Succession Call Server becomes unstable.

The switchover timer is also used during the start-up of a Survivable Succession Media Gateway to enable the Succession Media Gateway to go into Survival Mode if the Succession Media Gateway cannot connect to the Succession Call Server on system start-up.

When the IP link restores for a Succession Media Gateway in Survival Mode with AUTOSB configured, the SWOTO timer is started.

If the timer expires, a switch back is initiated to change from Survival Mode to Normal Mode. If the IP link is detected as down again before the expiration of the SWOTO timer, the timer stops, and the Succession Media Gateway remains in Survival operating mode.

Manual Switch back from Survival Mode

After the SOTS command has been successfully executed, the Succession Media Gateway remains in Survival Mode until the technician issues the Switch Back From Survival (SBFS) command in LD 135.

LOCK and UNLOCK commands

The LOCK and UNLOCK commands are available from the Succession Call Server.

The LOCK/UNLOCK command can be used in any mode by a technician to keep a Succession Media Gateway in the current mode, regardless of the state of the IP link to the Succession Call Server. For example, a technician can issue a SOTS command. This forces the selected Succession Media Gateway into Survival Mode prior to restarting the Succession Call Server. A LOCK command can be issued from the Succession Call Server prior to a restart. This keeps the selected Succession Media Gateway in Survival Mode, until manually returned to Normal Mode. Manually returning to Normal Mode reboots the Succession Media Gateway.

These commands are applicable to both modes and can be used to keep a Succession Media Gateway in Survival Mode after the Automatic Switch Back occurs.

The LOCK/UNLOCK command is issued in LD 135.

LOCK <cab #>

Where:

cab# = specified Survivable Succession Media Gateway

UNLOCK <cab #>

Where:

cab# = specified Survivable Succession Media Gateway

Database synchronization

The DWL command is available in LD 43:

DWL [<cab#>]

Where:

cab# = specified Survivable Succession Media Gateway

Programming the cab# parameter is optional. If omitted, the database is downloaded to all connected Survivable Succession Media Gateways.

EDD LCL command (local EDD)

The Invoke Datadump Program (EDD) command introduces the Invoke Datadump Program Local (EDD LCL) command. It performs a local datadump where data is dumped only on the Succession Call Server. The databases on the Survivable Succession Media Gateways are not updated. This operation is used when the database changes are tested by the technician prior to downloading them to the Survivable Succession Media Gateways.

The sequence of operations for the EDD LCL command is as follows. Prior to an actual dump, the Succession Call Server performs a security check. If the security check fails, the datadump operation is aborted. If the security check passes, the existing database files on the primary flash drive are renamed with the extension “.bak”. The data is then written to the primary flash drive. When the database files in the primary flash drive are updated, data and patches are written to the internal backup flash drive (z:).

Note: LD 43 and LD 143 are not available on a Succession Media Gateway in Survival Mode.

SWP, RES, RIB, and DAT commands for survivability

To ensure the database synchronization on the Succession Call Server and the Survivable Succession Media Gateway(s), the Swap (SWP), Restore (RES) and Restore Backup (RIB) commands are modified to produce the same results on the Survivable Succession Media Gateway(s), as on the Succession Call Server.

The optional parameter, [*cab#>*], enables the technician to select a specific Succession Media Gateway in order to restrict the effect of the command to a specific Succession Media Gateway. If no parameter is provided, the command is first performed on the Succession Call Server. The technician is then prompted with a confirmation request. If *<YES>*, the command is performed on all Survivable Succession Media Gateways.

As with the database download operation, preliminary security checks are performed by the Succession Call Server against the Survivable Succession Media Gateways' security ID and software release. If these security checks fail for any Succession Media Gateway, synchronization is aborted for that Succession Media Gateway.

SWP command

The SWP command is used to swap the regular and “*.bak” copies of the database on the primary flash drive. It restores the database to the state prior to the most recent datadump.

Figure 146 on [page 381](#) illustrates the operation of the SWP command. Only one Succession Media Gateway is shown for illustration purposes.

RES and RIB commands

The RES command restores data from the Succession Call Server’s external PC Card drive to the Succession Call Server’s (c:) drive and all Survivable Succession Media Gateways’ (c:) drives.

The RES command is illustrated in Figure 147 on [page 382](#).

The RIB command restores data from the Succession Call Server’s internal backup flash drive to the Succession Call Server’s (c:) drive and from the Survivable Succession Media Gateways’ internal backup flash drive to the (c:) drive.

The RIB command is illustrated in Figure 148 on [page 383](#).

Only one Succession Media Gateway is shown for illustration purpose; however, the synchronization is performed sequentially on all Survivable Succession Media Gateways.

DAT command

Use the DAT command to print the data issue and creation date of the Call Server’s primary and backup databases, as well as those of the Survivable Media Gateways. The software release of the Survivable Media Gateways must match that of the Call Server.

The DAT command is available in LD 43.

Figure 146
SWP command operation

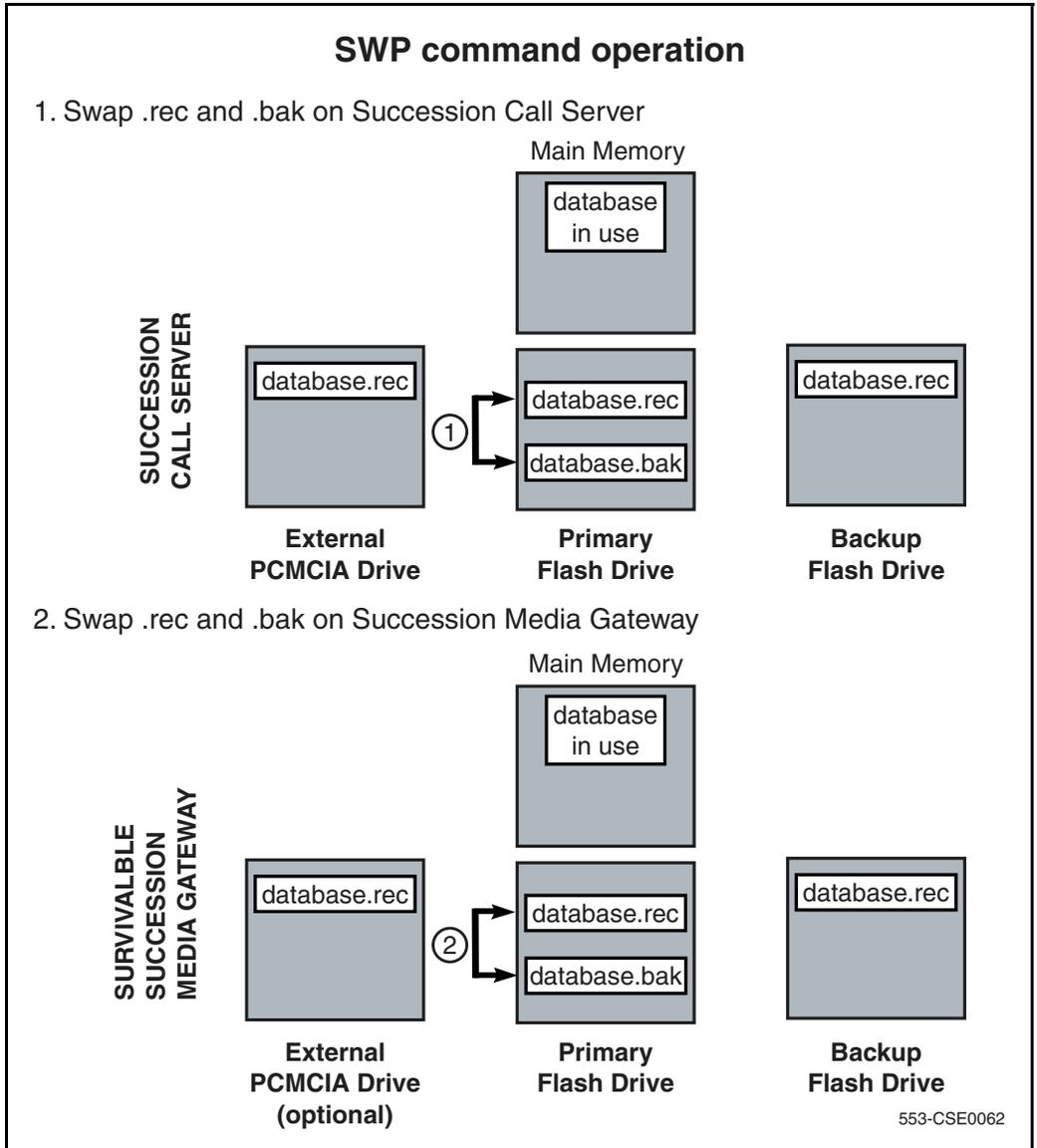


Figure 147
RES command

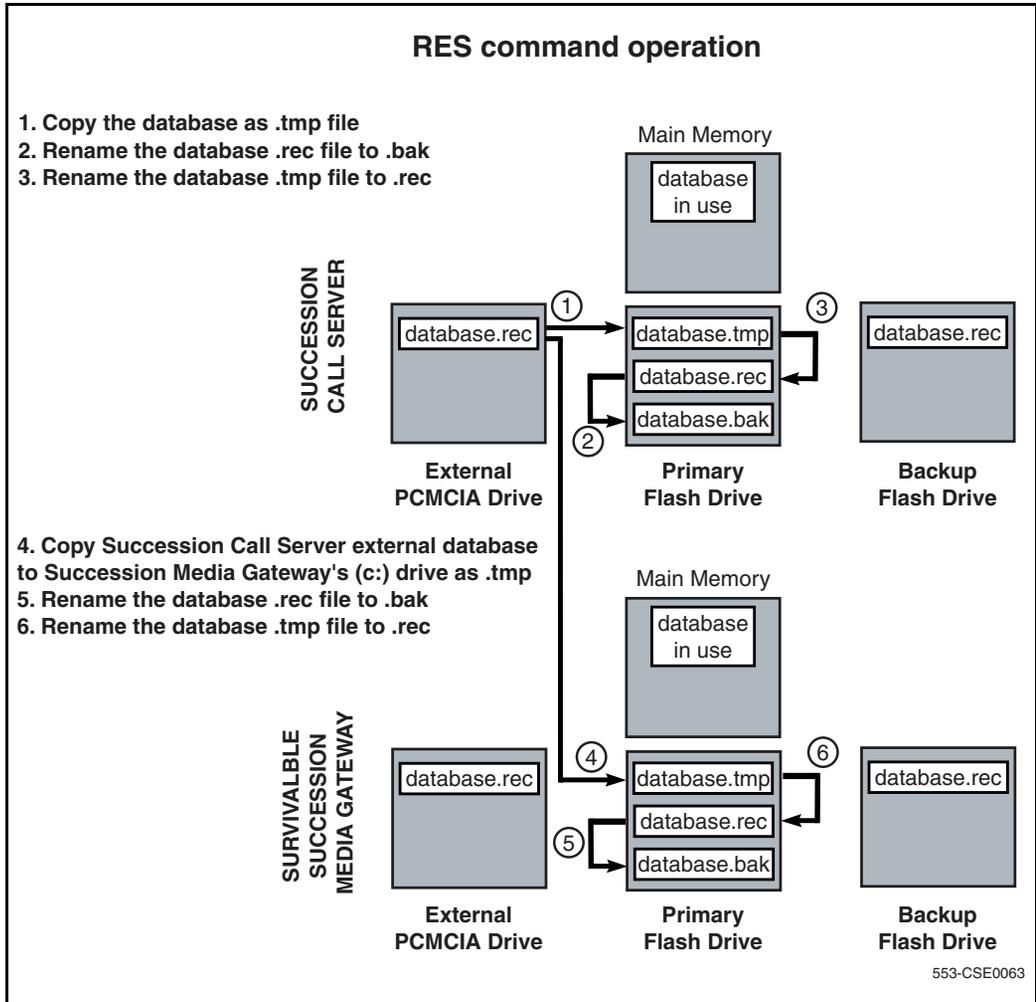
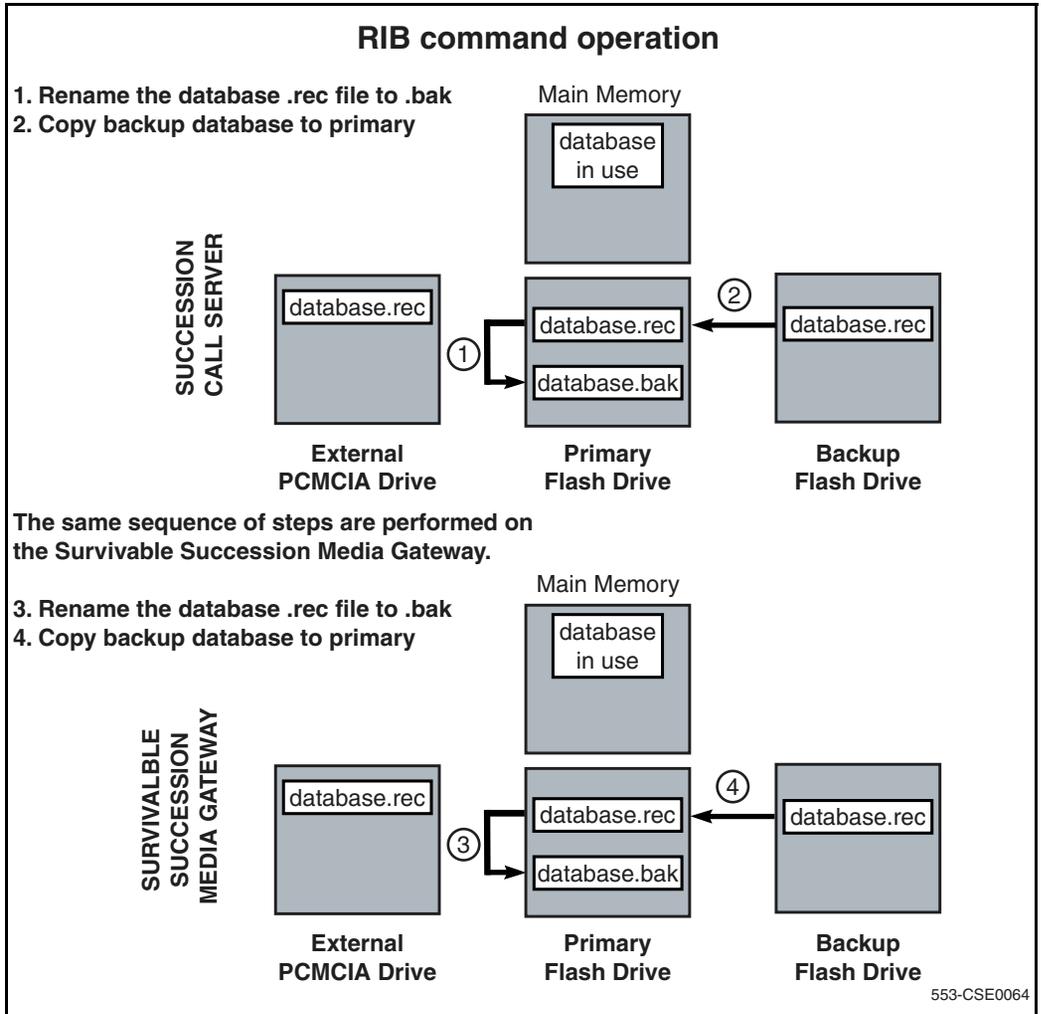


Figure 148
RIB command



Configuring survivable Succession Media Gateways

Follow the steps in Procedure 100 to configure survivability on a new Succession 1000 system.

Procedure 100 **Configuring for survivability**

The default ISM parameter for survivability enables one Succession Media Gateway to be configured as survivable.

- 1 Ensure the link is up between the Succession Call Server and the Succession Media Gateway.
- 2 Ensure that the Survivability ISM is set on the system for each Succession Media Gateway that is to be configured as survivable.
- 3 Configure the Survivability (SURV) capability.

Each Succession Media Gateway must be separately configured to be survivable.

The **SURV** command is configured in LD 117:

```
CHG SURV <cab#> <Survival setting>
```

- cab# = **1-4**, Succession Media Gateway
- Survival setting = (**NO**) **YES**

- 4 Configure the Automatic Switch Back parameter.

The Automatic Switch Back (AUTOSB) option enables a Survivable Succession Media Gateway to switch back from Survival Mode to Normal Mode automatically as soon as the IP link with the Succession Call Server is restored and the SWOTO expires.

The **AUTOSB** command is configured in LD 117:

CHG AUTOSB <cab#> <Switchback setting>

- cab# = 1-4, Succession Media Gateway
- Switchback setting = (YES) NO

5 Configure the SWOTO.

Configure the SWOTO separately for each Succession Media Gateway.

The **SWOTO** command is configured in LD 117:

CHG SWOTO <cab#> <value>

- cab# = 1-4, Succession Media Gateway
- value = 2 - (120) - 600 seconds

For point-to-point connection (Succession Media Gateways that are not connected over a LAN), Nortel Networks recommends that you set the timer to a low value to minimize service interruption.

End of Procedure

Printing Survivable Succession Media Gateway parameters

The following Print commands, available in LD 117, print the Succession 1000 parameters and Survivability for all, or specified, Succession Media Gateways.

PRT SURV cab

Where:

cab = 1 to 4, Succession Media Gateway

PRT CAB cab

Where:

cab = 1 to 4, Succession Media Gateway

Configuring Alternate Succession Call Server

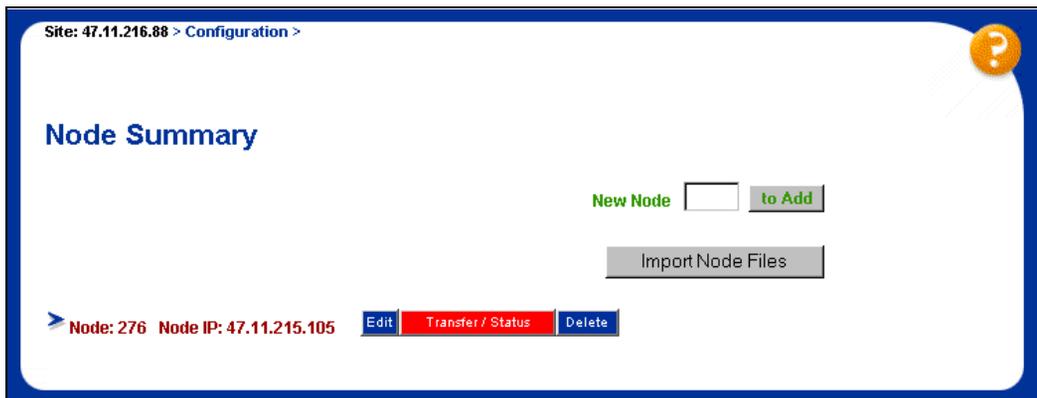
Procedure 101

Configuring the IP telephony node for Alternate Succession Call Server

- 1 Log in to Element Manager, if you are not already logged in.
- 2 Select **Configuration | IP Telephony** from the Navigation Tree.

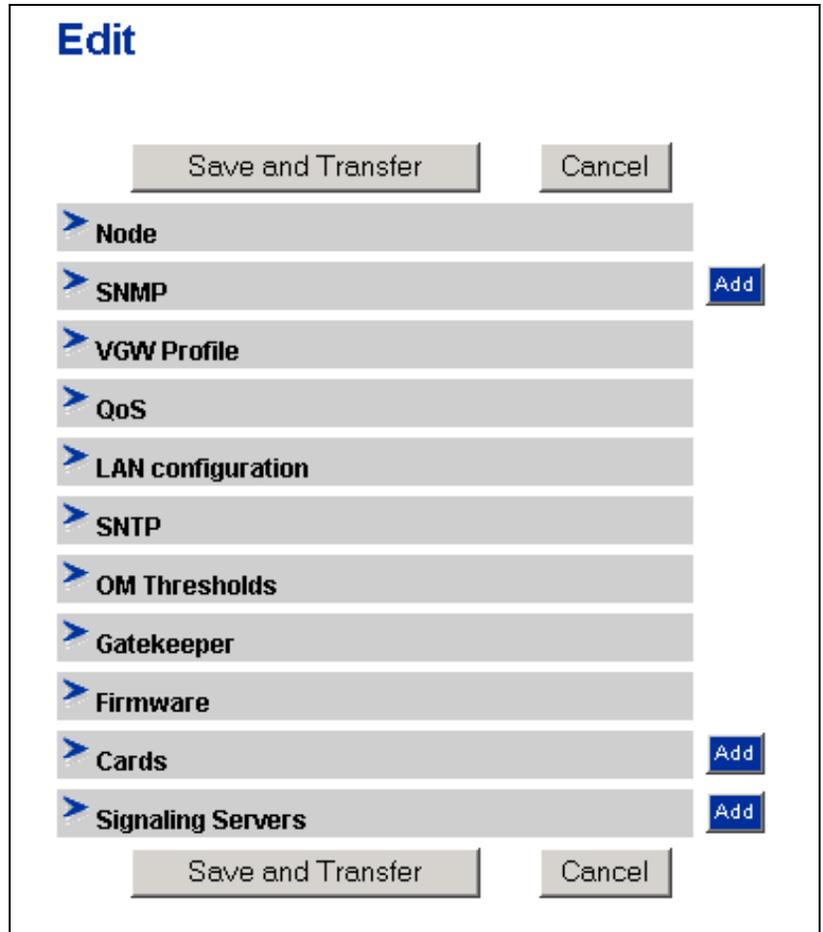
The Node Summary page is displayed (see Figure 149).

Figure 149
Node Summary



- 3 Click the **Edit** button for the desired node.
The Edit page is displayed (see Figure 150 on [page 387](#)).

Figure 150
Edit page



4 Click **LAN configuration**.

The LAN configuration menu expands (see Figure 151 on [page 388](#)).

Figure 151
LAN configuration

▼ LAN configuration		
Management LAN (ELAN) configuration		
Call server IP address	<input type="text" value="200.20.200.10"/>	
Survivable Succession Media Gateway IP address	<input type="text" value="200.20.200.11"/>	
Signaling port	<input type="text" value="15000"/>	Range: 1024 to 65535
Broadcast port	<input type="text" value="15001"/>	Range: 1024 to 65535
Voice LAN (TLAN) configuration		
Signaling port	<input type="text" value="5000"/>	Range: 1024 to 65535
Voice port	<input type="text" value="5200"/>	Range: 1024 to 65535
Routes	<input type="button" value="Add"/>	

- 5 Enter the **Survivable Succession Media Gateway IP address**.
The IP address is the ELAN IP address of the survivable Succession Media Gateway's SSC, that this IP telephony node registers to if it loses the connection to the Succession Call Server.
- 6 Click **Save and Transfer** button at the bottom of the Edit page, then click **OK** to save and transfer the changes.

————— End of Procedure —————

Verifying IP telephony node operation in Survival Mode

To verify the operation of a Voice Gateway Media Card in a Succession Media Gateway in Survival Mode, complete Procedure 102 on [page 389](#).

Procedure 102

Verifying the operation of an Voice Gateway Media Card in a Succession Media Gateway in Survivable Mode

- 1 Load Overlay 135 and use the **SOTS** command to force the Succession Media Gateway into Survival Mode.
- 2 Check the Internet Telephones and TTY:
 - Local Mode is visible on the telephone display.
 - If configured, check to see if the dial tone is apparent.
 - Special text is also displayed on the Succession Media Gateway TTYs connected to the Succession Media Gateway as shown below.

```
TTY 00 SCH MTC BUG CTY      14:10
SURVIVAL MODE
OVL111 IDLE
```

- 3 Return to Normal Mode using the **SBFS** command in LD 135.

The Succession Media Gateway and Voice Gateway Media Card reboots again.

Note: Due to the reboot of the Voice Gateway Media Card after the Succession Media Gateway has gone into Survival Mode, there is a slight incremental delay before the Internet Telephones become operational.

End of Procedure

Retrieving CDR records from a survivable Succession Media Gateway

The XCDR command, file retrieval for small systems in LD 143, transfers the CDR file from the survivable Succession Media Gateway directly to the PC connected to the Succession Call Server.

Use the following procedure to retrieve the CDR files stored on the survivable Succession Media Gateway (one file in each Succession Media Gateway).

Procedure 103 Retrieving CDR files using XModem

- 1 Connect a PC to the Succession Call Server either remotely using a modem or directly using an SDI cable and a modem eliminator. Using a terminal emulation program such as Hyperterminal, establish a TTY session with the Succession 1000 system through the modem or SDI cable.
- 2 Login and access LD 143 on the Succession Call Server.
- 3 Enter the following command: **XCDR**

The system prompts for the Succession Media Gateway number.
- 4 Enter the Succession Media Gateway number on which the <dba.cdr> file is stored.

The system prints the following.


```
Getting CDR file for EXP_CAB <num>
Ready to transmit
```
- 5 Select the XModem protocol on the PC to receive the CDR file.

Use the Hyperterminal transfer function to receive the file using XModem protocol. Rename the file to indicate which Succession Media Gateway the CDR data is from.

Note: Use a filename that does not overwrite any DBA-specific files if DBA is used to retrieve CDR/Traffic files from the Succession Call Server.
- 6 Parse the CDR file into the Succession Call Server's database on the PC. Refer to the OTM NTPs for how to process CDR records for billing applications.

End of Procedure

IP Peer Networking and Gatekeeper management

Contents

This section contains information on the following topics:

Introduction	391
Implementation summary	391

Introduction

This chapter provides an outline for configuring IP Peer Networking and managing the Gatekeeper database.

Use the *IP Peer Networking* (553-3001-213) NTP to configure IP Peer Networking and for instructions about managing the Gatekeeper database.

Implementation summary

Note: This section is intended as a summary of how to implement IP Peer Networking and how to manage the Gatekeeper database. Many of these steps can be performed out-of-the-sequence.

You must configure the following data when setting up a Succession 1000 IP network:

- 1** Configure the Virtual Trunk routes using Element Manager or the Command Line Interface (LD 16). Configure the Route Data Blocks and associate the Virtual Trunk routes with the IP network by configuring the following parameters:
 - a** route information
 - b** network management information
(for example, Access Restrictions)
 - c** bandwidth zone
 - d** Succession Signaling Server host name for the route
 - e** protocol identifier
 - f** associated Node ID
- 2** Configure the Virtual Trunks using Element Manager or the Command Line Interface (LD 14).
- 3** Configure the network routing within the Succession Call Server.
 - a** Use existing tools to configure networking features, such as routing calls based on digits dialed.
 - b** Configure dialing plan information for calls that must be routed to circuit-switched trunks (for example, PSTN interfaces). You can route these calls using a feature such as Network Alternate Route Selection (NARS). Configure Virtual Trunk routes in NARS the same way as traditional trunks.
- 4** Configure the Primary, Alternate, and Failsafe Gatekeepers at installation and initial setup.

- 5** Configure the Gatekeeper database to provide a central database of addresses that are required to route calls across the network, using the Gatekeeper webpages in Element Manager.
 - a** Log in to the Gatekeeper webpages in Element Manager.
 - b** Verify that the Gatekeeper is the Primary Gatekeeper and is active.
 - c** Configure the System Wide Settings.
 - d** Create the CDP domains.
 - e** Add the RAS and non-RAS endpoints.
 - f** Add the endpoint prefixes.
 - g** Add the Numbering Plan entries for each endpoint, including the Cost Factor for each entry.
 - h** Add the default routes.
 - i** Add the Gatekeeper zones (if required).
 - j** Test the Numbering Plans.
 - k** Perform database cutover.
 - l** Perform the following operations, as necessary:
 - i.** Take the Gatekeeper out-of-service.
 - ii.** Perform database cutover.
 - iii.** Perform database rollback.
 - iv.** View traffic reports.
 - m** Log out of the Gatekeeper webpages in Element Manager.

Appendix A: Preprogrammed data

Contents

This section contains information on the following topics:

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Flexible Feature Codes	399
SDI ports	400
Trunk routes	402
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Customer data	404
Trunk models	404
Telephone models	408

Introduction

When first installing a Succession 1000 system, customer data must be entered into the overlay programs. For example, assign features to the telephone keys for the telephones to work correctly.

For software installation, the Succession System Controller (SSC) card does not have to have data programmed in advance. The SSC card can be programmed with the minimum number of files to enable the Succession 1000 system to operate.

This chapter contains the following procedures:

- Passwords and codes
- Default numbering plan
- Flexible Feature Codes
- SDI ports
- Trunk routes

Passwords and codes

Table 48 lists each function in the left column with its password or code on the right.

Table 48
Passwords and codes (Part 1 of 2)

Function	Code or extension(s)
TTY password (For access to TTY Succession 1000 overlays)	0000
Level 1 login name access	ADMIN1
Level 1 password access	0000
Level 2 login name access	ADMIN2
Level 2 password access	0000

Table 48
Passwords and codes (Part 2 of 2)

Function	Code or extension(s)
Administration telephone password	1234
Administration telephone FFC	*41
SPRE code	1
Telephone relocation Flexible Feature Code	*40
Telephone Removal Flexible Feature Code	*42
Telephone relocation password (SRCD)	1234

Note: That login name access is required when LNAME_OPTION is set to YES.

Default numbering plan

The default numbering plan for Succession 1000 system is based on the following guidelines:

- The default numbering plan uses four digits and starts at 2200.
- The prime extension number (DN) for each telephone is in the range 2200-2XXX. The value of “XXX” varies depending on the number of telephones that you have in the system. Any secondary extension numbers use numbers outside this range. This arrangement enables the Succession 1000 system to automatically configure telephones.

First digits

Table 49 shows the default numbering plan for Succession 1000 system.

Table 49
Default numbering plan—First digit

First digit	Preprogrammed use for digit
1	SPRE code
2	Not used
3	Not used
4	Not used
5	Not used
6	Not used
7	COT/TIE/DID/WATS/FEX/RAN/MUS/AWR/Paging Trunk access codes and attendant DN, Call park DNs
8	Not used
9	Not used
0	Attendant extension

Note: The first number of the default numbering plan is preprogrammed as 2200. The remaining numbers in the default numbering plan are assigned in software. These numbers do not become active, however, until you select the numbers during the telephone activation procedure.

The digit “7” in the default numbering plan is programmed with many system features to help you in configuring the Succession 1000 system.

Important extension numbers

Table 50
Default numbering plan—important extension numbers

Extension	Use
Attendant extension	0
Call park extensions	7900-7919

Flexible Feature Codes

Many administrative procedures use Flexible Feature Code (FFC) data. Table 51 lists the FFCs for the Succession 1000 system.

Table 51
Flexible Feature Codes (Part 1 of 2)

FFC Prompt	FFC	Definition
ASRC	*40	Automatic Set Relocation
AREM	*42	Automatic Set Removal Code
ADMN	*41	Administration Set Access Code
CFWA	#1	Call Forward All Calls Activate
CFWD	#1	Call Forward All Calls Deactivate
C6DS	*70	6 Party Conference Code
HOLD	#4	Permanent Call Hold
MNTC	*43	Maintenance Access Code
PUGR	*71	Pick-up Group Code
RDLN	*72	Last Number Redial
RDST	*73	Store Last Number Redial
RGAA	*74	Ring Again Activate

Table 51
Flexible Feature Codes (Part 2 of 2)

FFC Prompt	FFC	Definition
RGAD	*75	Ring Again Deactivate
RGAV	*77	Ring Again Verify
SPCC	#2/*80	Speed Call Controller Code
SPCU	#3/*81	Speed Call User Code
SSPU	*89	System Speed Call User Code

SDI ports

The minimum system port configuration for Succession 1000 system is three SDI ports, all of which are on the NTDK20FA SSC card.

Table 52 shows the default SDI port configuration. The value for “XX” is set on the faceplate of the SSC circuit card.

Table 52
Pre-configured SDI ports

TTY Number	Card	Port	Use	Configuration
0	0	0	MTC/SCH/BUG	XX/8/1/NONE
1	0	0	MTC/SCH/BUG	1200/8/1/NONE
2	0	1	CTY	1200/8/1/NONE

Table 53
Pre-configured PTY ports

TTY Number	Card	Port	Use
14	0	0	MTC/SCH/BUG
15	0	1	MTC/SCH/BUG

Modem port

The pre-configured modem port enables the remote maintenance modem to be connected without additional system programming. This port is pre-configured as TTY 0 (port 0 on the SSC card) and is programmed for Maintenance (MTC), Service Change (SCH), and BUG messages.

ESDI settings

Table 54
ESDI settings

Setting	Code
BPS	4800
CLOK	EXT
IADR	003
RADR	001
T1	10
T2	002
T3	040
N1	128
N2	08
K	7
RXMT	05
CRC	10
ORUR	005
ABOR	005
USER	CMS
ENL	NO

Telephone tones

The telephone tones in North America are as follows:

- **Dial tone:** A continuous tone.
- **Special dial tone:** Three beeps followed by continuous dial tone.
- **Overflow tone:** Like a busy tone, except faster and higher.
- **Relocation tone:** A short high-pitched beep that continues for 4 seconds, followed by silence.

Trunk routes

Table 55 shows preprogrammed trunk route information that you must have on hand to activate and modify trunks.

Table 55
Preprogrammed trunk route information (Part 1 of 2)

Route	Type	Access Code	Mode	Interface
00 *	COT	7100	IAO	-
01 *	COT	7101	ICT	-
02 *	COT	7102	OGT	-
03	TIE	7103	IAO	-
04	TIE	7104	ICT	-
05	TIE	7105	OGT	-
06	DID	7106	ICT	-
07	WAT	7107	IAO	-
08	WAT	7108	ICT	-
09	WAT	7109	OGT	-
40	MUS	7140	OGT	-

Table 55
Preprogrammed trunk route information (Part 2 of 2)

41	AWR	7141	-	AUD
42	RAN	7142	-	DGT
43	RAN	7143	-	AUD
44	PAG	7144	OGT	-
50	FEX	7150	IAO	-
51	FEX	7151	ICT	-
52	FEX	7152	OGT	-

Note: Trunk routes marked with an asterisk (*) are configured to support Call Detail Recording (CDR) output. CDR is pre-configured as follows:

CDR YES

INC YES

OAL YES

AIA YES

System parameters

The default system parameter values for Succession 1000 system.

Table 56
System parameters

Parameter	Value
Low Priority Input Buffers (LPIB)	450
High Priority Input Buffers (HPIB)	450
Number of Call Registers (NCR)	300
Multiple Appearance Redirection Prime (MARP) feature enabled	YES

Refer to the Capacity Engineering section of the NTP for further information on buffer sizes.

The preprogrammed data also include virtual superloops 96, 100, 104, 108, and 112.

Customer data

The default customer number used in the preprogrammed data is zero (0).

Trunk models

Do not use the DIP Class of Service for Model 19 of TIE trunk mode. The correct class of service for model 19 of TIE trunk mode is DTN.

Note: All trunks are programmed as immediate start/supervision = YES, with the exception of trunks with an asterisk(*). Trunks marked with an asterisk (*) are set for wink start / supervision = YES.

Table 57
Preprogrammed trunk route information (Part 1 of 4)

Mode	Card	Model	Signaling	DIP or DTN	BIMP and TIMP
COT	XUT	1	GRD	DIP	3COM/600
		2	LOP	DIP	3COM/600
		3	GRD	DTN	3COM/600
		4	LOP	DTN	3COM/600
		5	GRD	DIP	3COM/900
		6	LOP	DIP	3COM/900
		7	GRD	DTN	3COM/900
		8	LOP	DTN	3COM/900
TIE	XUT	1	OAD	DIP	3COM/600
		2	LDR	DIP	3COM/600
		3	OAD	DTN	3COM/600
		4	LDR	DTN	3COM/600
		5	OAD	DIP	3COM/900
		6	LDR	DIP	3COM/900
		7	OAD	DTN	3COM/900
		8	LDR	DIP	3COM/900

Table 57
Preprogrammed trunk route information (Part 2 of 4)

Mode	Card	Model	Signaling	DIP or DTN	BIMP and TIMP
	XEM	16	EAM	DIP	-/600
		17	EM4	DIP	-
		18	EAM	DTN	-/600
		19	EM4	DTN	-
DID	XUT	1	LDR (Wink Start Supv = Yes)	DIP	3COM/600
		2	LDR (Wink Start Supv = Yes)	DTN	3COM/600
		3	LDR (Wink Start Supv = Yes)	DIP	3COM/900
		4	LDR (Wink Start Supv = Yes)	DTN	3COM/900
		5*	LDR (Wink Start Supv = Yes)	DIP	3COM/600
		6*	LDR (Wink Start Supv = Yes)	DTN	3COM/600
		7*	LDR (Wink Start Supv = Yes)	DIP	3COM/900

Table 57
Preprogrammed trunk route information (Part 3 of 4)

Mode	Card	Model	Signaling	DIP or DTN	BIMP and TIMP
		8*	LDR (Wink Start Supv = Yes)	DTN	3COM/900
WAT	XUT	1	GRD	DIP	3COM/600
		2	LOP	DIP	3COM/600
		3	GRD	DTN	3COM/600
		4	LOP	DTN	3COM/600
		5	GRD	DIP	3COM/900
		6	LOP	DIP	3COM/900
		7	GRD	DTN	3COM/900
		8	LOP	DTN	3COM/900
MUS	XUT	1			3COM/600
AWR	XUT	1			600/1200
RAN	XUT	1			600/1200
PAG	XUT	1	LDR	DIP	3COM/600
		2	OAD	DIP	3COM/600
		3	LDR	DTN	3COM/600
		4	OAD	DTN	3COM/600
		5	LDR	DIP	3COM/900
		6	OAD	DIP	3COM/900
		7	LDR	DTN	3COM/900
		8	OAD	DTN	3COM/900

Table 57
Preprogrammed trunk route information (Part 4 of 4)

Mode	Card	Model	Signaling	DIP or DTN	BIMP and TIMP
	XEM	16	EAM	DIP	-/600
		17	EM4	DIP	-
		18	EAM	DTN	-/600
		19	EM4	DTN	-
FEX	XUT	1	GRD	DIP	3COM/600
		2	LOP	DIP	3COM/600
		3	GRD	DTN	3COM/600
		4	LOP	DTN	3COM/600
		5	GRD	DIP	3COM/900
		6	LOP	DIP	3COM/900
		7	GRD	DTN	3COM/900
		8	LOP	DTN	3COM/900

Telephone models

Define 3 models (model# 20) for i2002, i2004, i2050 with KEY 0 SCR, CLS VOLA, CLS VOUA.

Define model# 20 for analog set (500 and fax).

Appendix B: Quick Config

Contents

This section contains information on the following topics:

Introduction	409
Quick Config installation	412
Suggested IP addressing	414

Introduction

The option to install the pre-defined Quick Config database is for demonstration purposes only. The Quick Config database pre-configures the Succession 1000 system with minimal data for Internet Telephones and analog (500/2500-type) telephone ports. It is part of the Succession 3.0 Software and is available during initial software installation.

IMPORTANT

Knowledge of Element Manager, Voice Gateway Media Cards, and Internet Telephones is required to successfully implement the Quick Config database.

Objective

The Quick Config database enables a Succession 1000 system and associated equipment to be set up in a relatively short period of time. After setup, calls can be established between Internet Telephones. Access to the Succession Meridian Electronic Reference Library (SMERL) is necessary for this procedure.

Equipment and documentation required

The items listed to support the Quick Config must be ordered separately.

System components

The following components are required for Quick Config:

- Succession Call Server, Succession Signaling Server, and Succession Media Gateway package.
- A Layer 2 or Layer 3 switch to create the CLAN/TLAN for connecting the Internet Telephones.
- A PC with a communications program to establish initial communication to the Succession 1000 system and Voice Gateway Media Card.

Note: A dumb terminal, such as VT220 can be used.

- A PC with web browser, Internet Explorer 6.0.2600 or later, to access Element Manager.
- Cables with RJ11 (regular phone jack) connections for the modem, analog (500/2500-type) sets or fax connectivity (8 analog lines have been pre-configured in Quick Config).
- NTEX00 Internet Telephones (8 have been pre-configured in Quick Config).
- Miscellaneous Ethernet cables, serial cables, and power cables.
- A 25 pair cable with Amphenol type connector for extending the PE interface between the card slot on the chassis and RJ11 jacks used to connect to the analog stations.

- NT9D09 Analog Message-waiting line card.
- NTDU41 VGMC package.

Note: When using the Quick Config database ensure the required ISM parameters are available. Customers must have ordered a minimum of one IP extension ISM (increment of 8) and one analog extension ISM (increment of 8). If the minimum requirement is met you do not need to purchase additional ISM for Quick Config.

IP addresses

If the Succession 1000 system is connected to a working customer network, Quick Config should not be used.

For Quick Config purposes, the IP addressing in the instruction set is fictitious and is intended for a stand-alone demo only, and must not be enabled on an operating network. Refer to “Suggested IP addressing” on [page 414](#) for IP addressing.

Quick Config Database

After completion of the Quick Config installation on [page 412](#), the database provides the following:

- Customer number 0
- Voice Gateway Media Card in slot 3 of the Succession Media Gateway 1

Note: The Voice Gateway Media Card is configured with Element Manager.

- 8 DNs (2100 to 2107) for Internet Telephones
- ELAN connectivity to use Element Manager
- Analog message waiting card in slot 1 of the Succession Media Gateway
- 8 DNs (2000 to 2007) for analog (500/2500-type) telephone, fax, or modem
- IP addresses for the Succession Call Server to Succession Media Gateway link

Quick Config installation

The steps required for the installation of the Quick Config database software are in Procedure 104.

Procedure 104

Installing Quick Config

- 1 Prepare the Succession Call Server and Succession Media Gateway for circuit card installation.
- 2 Configure Succession Call Server components.
- 3 Configure the Succession Media Gateway components.
- 4 Install the Succession Signaling Server hardware (see *Signaling Server: Installation and Configuration* (553-3001-212)).
- 5 Install an analog line card in Succession Media Gateway slot 1 and the Voice Gateway Media Card in slot 3.
- 6 Connect the Succession Call Server to the Succession Media Gateway.
- 7 Power on the Succession Call Server and Succession Media Gateway.
- 8 Connect a PC or VT220 terminal to the Succession Call Server SDI port and prepare to install the Succession 3.0 Software.

Install software on the Succession Call Server. Select the feature set you ordered, then select "Quick Config for Demo Only" from the Install Menu.

Install software on the Succession Media Gateway.

- 9 Login to the Succession 1000 system using the following:
login: admin2
password: 0000
- 10 Enter LD 117 and configure the Succession 1000 ethernet port to enable Element Manager connectivity.
- 11 Configure the Succession 1000 system for administration with Element Manager.
- 12 Connect a PC or VT220 terminal to the Succession Signaling Server.
- 13 Install Succession Signaling Server software and perform basic configuration.

- 14** Configure the IP telephony node using Element Manager. Refer to “Suggested IP addressing” on [page 414](#) for IP addressing.
 - a.** Import pre-configured IP telephony node from the Succession Signaling Server.
 - b.** Add Voice Gateway Media Cards to the node.
 - c.** Save and transfer the node information.
- 15** Connect the Internet Telephones to a Layer 2 or Layer 3 switch, and connect the switch to the Succession 1000 system. The telephones have DN's from 2100 to 2107 and are on TN's 61 0-7. Each i2004 Internet Telephone needs an IP address. Refer to “Suggested IP addressing” on [page 414](#) for IP addressing and to the Internet Telephone User Guide for the for complete details.
- 16** Connect a modem, analog (500/2500-type) telephones or fax to the analog ports. The pre-configured analog DN's are 2000 to 2007 and have TN's 110 to 117.

End of Procedure

This concludes the steps required to set up Quick Config for the Succession 1000 system for demonstration purposes. You are now ready to explore, modify, and demonstrate the many features of your Succession 1000 IP-PBX. For complete details on individual components, consult the NTPs.

Suggested IP addressing

The following table provides a quick reference for the suggested Quick Config IP addressing for demonstration purposes only.

Table 58
Suggested IP addressing (Part 1 of 3)

Area Found	Window	Field	Entry
PC	Network Properties	IP address	192.168.1.109
		Subnet mask	255.255.255.0
		Gateway	192.168.1.1
Element Manager	Login webpage	login name	admin2
		password	0000
		Succession Call Server IP	192.168.1.112
Element Manager	Configuration/IP Telephony/ New node	Voice LAN Node IP	192.178.1.111
		Management LAN Gateway	192.168.1.1
		Management LAN subnet mask	255.255.255.0
		Voice LAN subnet mask	255.255.255.0
		Survivable Succession Media Gateway IP	192.168.1.113
Element Manager	Configuration/IP Telephony/ Edit node/Add card	Management IP	192.168.1.115
		MAC address	see top address on label on VGMC card

Table 58
Suggested IP addressing (Part 2 of 3)

Area Found	Window	Field	Entry
		Voice IP	192.178.1.114
		Voice LAN Gateway	192.178.1.1
		Card TN	13
Internet Telephones	Internet Telephone display	Node IP	192.178.1.114
		Set IP's	192.178.1.100 - 107
		Node IP	192.178.1.111
		Node ID	1
Succession Signaling Server	Basic Configuration	Node ID	1
		Host Name	Demo_SS
		ELAN IP	192.168.1.114

Table 58
Suggested IP addressing (Part 3 of 3)

Area Found	Window	Field	Entry
		ELAN Subnet Mask	255.255.255.0
		ELAN Gateway	192.168.1.1
		TLAN IP	192.178.1.113
		TLAN Subnet Mask	255.255.240.0
		TLAN Gateway	192.178.1.1
		Node IP	192.178.1.111
		Succession Call Server IP	192.168.1.112
		Gatekeeper Role	No
		Primary Gatekeeper	0.0.0.0
		Alternate Gatekeeper	0.0.0.0

Succession 1000
Succession 1000 System
Installation and Configuration

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