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Nortel Networks Symposium Express Call Center

Planning, Installation, and Administration Guide

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NORTEL NETWORKS™

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April 2003

Standard 1.0 of the *Nortel Networks Symposium Express Call Center Planning, Installation, and Administration Guide* is released.

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Getting started

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Overview

Introduction

Nortel Networks Symposium Express Call Center provides a simplified call center solution for call centers with up to 150 agents and up to 5000 calls per hour.

Some of the Symposium Express Call Center advantages are

- cradle-to-grave call control
- state-of-the-art user interface
- industry standard client/server architecture
- open interfaces: database, real-time, and Symposium Link
- client/server processing power and leveraging of PBX switching reliability

What's new in this release

This guide covers information related to the following Symposium Express Call Center Release 4.2 features:

- **New operating system**

  Symposium Express Call Center 4.2 runs on the Windows 2000 Server and Windows 2000 Advanced Server operating systems. Windows 2000 provides much greater reliability than the Windows NT operating system used in previous releases.
- **Simplified installation for the server**

  Symposium Express Call Center 4.2 provides a new installation procedure. It separates the installation process into three phases:
  - software installation
  - database installation
  - software and database configuration

An advantage of the three-phase installation is that if you encounter problems in a particular installation phase, you can restart that phase; you do not have to restart the installation from the beginning. An additional advantage is that you can do the first two phases in advance of the server arriving at the client site.

- **Conversion from Release 2.0 and Release 3.0 to Release 4.2**

  You can perform a direct conversion from Release 2.0 and Release 3.0 to Release 4.2 of Symposium Express Call Center.

- **Upgrade from Symposium Express Call Center Release 4.2 to Symposium Call Center Server Release 4.2**

  If you want to take advantage of features designed for larger call centers, you can perform a direct upgrade to Release 4.2 of Symposium Call Center Server from your Release 4.2 Symposium Express Call Center server.

- **Improved Product Enhancement Package/Service Update pack management**

  Symposium Express Call Center Release 4.2 provides a consolidated Product Enhancement Package (PEP)/Service Update utility. This enhanced utility offers improved installation and management. Additionally, you can now remove all PEPs and Service Update packs in a single process.

- **Install-time PEPs**

  Symposium Express Call Center Release 4.2 introduces Install-time PEPs, which provide more timely resolution to installation issues. These PEPs allow Nortel Networks to resolve installation issues without reissuing the server CD. Install-time PEPs must be installed after the product software is installed but before the product database is installed.

- **Internationalization framework**

  Symposium Express Call Center Release 4.2 provides a base internationalization structure that supports installation on non-English operating systems. Additionally, in Release 4.2, Sybase ASE 12.0 adds database support for Asian character sets, such as Japanese and Traditional Chinese. As a result, you can now enter and display call center data in Asian character sets. You achieve this by installing a language PEP during the server installation steps.

- **Remote database backup capability**

  Symposium Express Call Center Release 4.2 provides a new database backup capability. In Release 4.2, you have the option of backing up the database to a remote directory on a network computer, in addition to the existing tape backup capability. This feature provides the local system administrator the freedom to fully centralize and schedule all backup files onto one remote backup computer. This computer can be directly connected to a high-capacity backup tape system to perform a system-wide backup.

- **New Database Expansion utility**

  Symposium Express Call Center Release 4.2 provides a new Database Expansion utility. You can use this utility to selectively add database space on new disk partitions, or to expand databases after migrating to a server with larger disk partitions.

- **Upgraded Sybase ASE compatibility**

  Symposium Express Call Center Release 4.2 uses Sybase ASE 12.0.

- **Upgraded Crystal Reports compatibility**

  Symposium Express Call Center Release 4.2 uses Crystal Reports 9.0.

- **Upgraded pcAnywhere compatibility**

  Symposium Express Call Center Release 4.2 is now shipped with the host version of pcAnywhere Release 10.5. (Previously, it was shipped with pcAnywhere 9.2.)

- **CallPilot support**

  Release 4.2 of Symposium Express Call Center allows you to use CallPilot 2.0 as a voice processing system. Symposium Voice Services on CallPilot supports the Give IVR script command.

In this guide

The *Symposium Express Call Center Planning, Installation, and Administration Guide* provides information on how to prepare and install the call center server and client software, and configure call center resources.

Who should read this guide

This guide is for Nortel Networks installers and distributors responsible for installing, upgrading, and configuring Symposium Express Call Center.

Assumptions

This guide assumes that you are preparing to install a new Symposium Express Call Center, or that you are planning to upgrade or make changes to an existing installation.

This guide also assumes the following:

- The M1, M1 IE, or Succession CSE 1000 switch is correctly installed and operational, and is configured for use with Symposium Express Call Center.
- Meridian Mail or Call Pilot, if used, are correctly installed and operational, and configured for use with Symposium Express Call Center.
- All customer-supplied PCs are operational and running the required operating system for this release of Symposium Express Call Center.
- All customer-supplied PCs are using Microsoft TCP/IP.
- The client network is installed and operational.

Access rights

This guide assumes that you have the required privileges and access rights to perform the procedures in this guide. For more information, refer to “User types in Symposium Express Call Center” on page 512.

Optional features

Some of the features described in this guide are optional. To determine which features you have access to, Nortel Networks supplies a keycode that you use when you install the Symposium Express Call Center software. Fields and commands for features that you did not purchase are not available.

Related documents

The following documents provide additional information related to Symposium Express Call Center:

- *Nortel Networks Symposium Call Center Server Release 4.2 Symposium, M1, and Voice Processing Guide*

- *Nortel Networks Symposium Express Call Center Management Guide*
- *Nortel Networks Symposium Express Voice Services Card Installation Guide*
- *Nortel Networks Symposium Express Voice Services Card Maintenance and Troubleshooting Guide*

Skills you need

Introduction

This section describes the skills and knowledge you need to use this guide effectively.

Nortel Networks product knowledge

Knowledge of, or experience with, the following Nortel Networks products is helpful when installing and configuring Symposium Express Call Center:

- M1, M1 IE, or Succession CSE 1000 switches
- X11 Release 24.24 and higher
- Meridian Mail or CallPilot

PC experience or knowledge

You require knowledge of, or experience with, the following PC products before installing Symposium Express Call Center:

- Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Professional, or Windows XP Professional
- client/server architecture
- Microsoft TCP/IP

Other experience or knowledge

The following types of experience or knowledge may also be useful:

- Microsoft networking
- troubleshooting

Symposium Express Call Center components

Introduction

Symposium Express Call Center is a client/server call center application that provides sophisticated call routing and management information. Symposium Express Call Center consists of the following components, some of which are optional:

- a server that is a customer-supplied PC on which the Symposium Express Call Center server software is installed. It must run either the Windows 2000 Server or Windows 2000 Advanced Server operating system with Service Pack 2 or higher. The Symposium Express Call Center server software processes calls and stores statistics.

  Nortel Networks recommends using DELL, Compaq, IBM, and the HP Netserver E60 platforms to ensure compatibility with Symposium Express Call Center software.
- a client that is a customer-supplied PC on which the Symposium Express Call Center client software is installed. A copy of the client software is always installed on the same PC as the server. In addition, you can install separate copies of the client on additional PCs for your supervisors. These additional PCs must run either the Windows 2000 Professional (with Service Pack 3) or Windows XP Professional (with Service Pack 1) operating system.
- Symposium Express Call Center software that runs on the server and is accessed and controlled by the client PCs. In this guide, the term “server” refers to the server software.
- Symposium Express Call Center client software that allows you to administer and monitor the server. In this guide, the term “client” refers to the client software.
- a Sybase database that is installed as part of the server installation
- an M1, M1 IE, or Succession CSE 1000 switch that receives and directs calls to the call center application, and software for administering the switch
- a Voice Services card installed in the M1, M1 IE, or Succession CSE 1000 switch that provides front-end voice processing capability to Symposium

Express Call Center. You can also use the Voice Services card to play announcements, play voice menus, and collect multiple digits from the customer. The Voice Services card is an optional feature.

Note: To collect multiple digits, you require Nortel Networks Symposium Agent and the TAPI Service Provider.

- an embedded or private LAN (ELAN) that connects the M1, M1 IE, or Succession CSE 1000 switch, the server, and the Meridian Administration Terminal (MAT) or Optivity Telephony Manager (OTM) software
- pcAnywhere 10.5 support software that is installed on the server
- a separate customer LAN (CLAN), if you have more than one client PC, to support communication between the client and server, and to support database backups to a remote directory on a network computer
- CallPilot, Meridian Mail, MIRAN, RAN, or a third-party IVR system, to play announcements if you are not using Voice Services
- a music source, if you want to play music

Configurations

There are two possible configurations for Symposium Express Call Center:

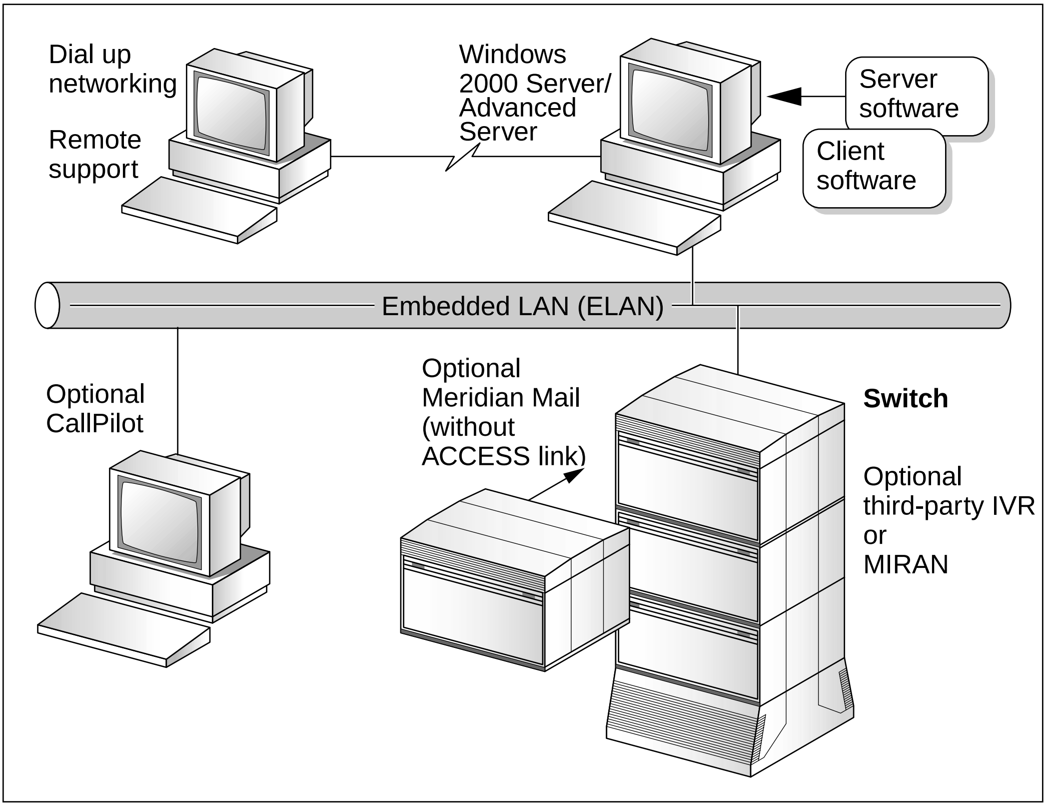
1. The server and client are both running on a single PC (under Windows 2000 Server or Windows 2000 Advanced Server). There are no additional clients. This is referred to as a coresident installation.
2. The server and client are running on one PC (under Windows 2000 Server or Windows 2000 Advanced Server). Additional PCs run the client application only, under Windows 2000 Professional or Windows XP Professional. For the clients running on additional PCs, this is referred to as a stand-alone installation.

Description

As shown in the diagrams that follow, Symposium Express Call Center operates in a client/server environment, although the server shares a PC with the client.

The client software provides operational, administrative, and management (OA&M) control for the server. Optional additional client PCs connect to an existing CLAN. The CLAN operates with either Ethernet architecture or Token Ring architecture using the TCP/IP protocol.

The following diagram shows a single-PC coresident installation:



G101184

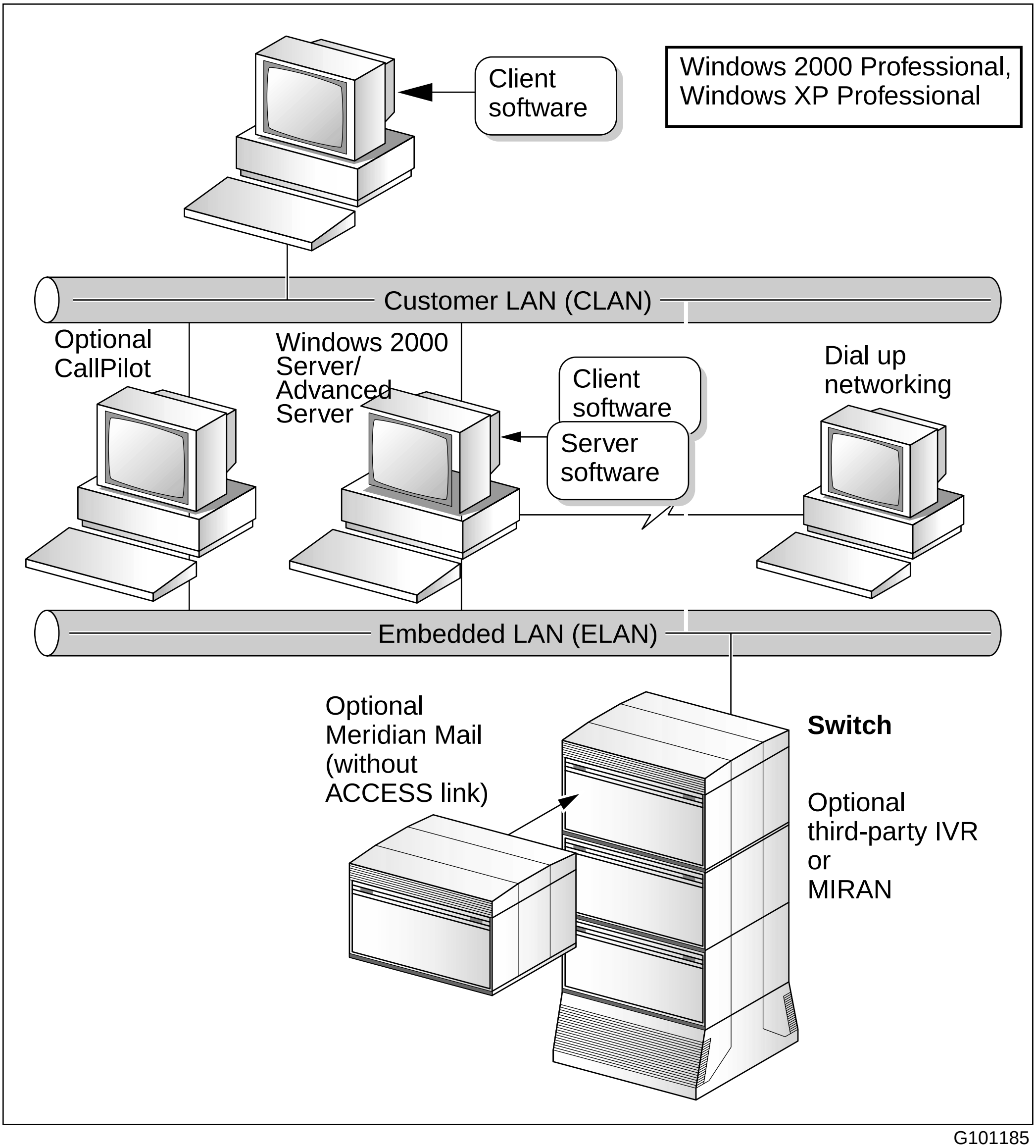
The server connects to both the ELAN and the CLAN (if used). It sends control signals for the M1, M1 IE, or Succession CSE 1000 switch over the ELAN by way of the Application Module Link (AML).

MAT and OTM provide a VT220 terminal emulation that can be connected to Meridian Mail and the M1, M1 IE, or Succession CSE 1000 switch. MAT and OTM can be used to control Meridian Mail and the M1, M1 IE, or Succession CSE 1000 switch.

The ELAN can connect to a customer-supplied router to allow access to a wide area network (WAN).

The server connects to a modem to allow remote access by a support PC for maintenance and diagnostics.

The following diagram shows the architecture if additional stand-alone clients are running on separate PCs:



How Symposium Express Call Center works

The server provides

- call processing and data collection
- network server functions providing
    - network and communications services to client PCs (in a multiple-client PC configuration)
    - communication and control to the M1, M1 IE, or Succession CSE 1000 switch
    - external access to a remote support PC for remote maintenance and diagnostics

The client PC application provides

- the administrative interface to the server
- real-time displays
- report interface

You can use MAT or OTM to communicate with and control Meridian Mail and the M1, M1 IE, or Succession CSE 1000 switch. Instead of using MAT or OTM, you can use a customer-supplied VT220 terminal to set up and configure the switch and Meridian Mail.

Customer-supplied equipment and data requirements

Introduction

Use this section to understand the minimum hardware and software requirements for the server PC. If you are also installing stand-alone client PCs, requirements are provided at the end of this section (see page 43).

Hardware platforms and Platform Vendor Independence

Symposium Express Call Center Release 4.2 as a Platform Vendor Independence (PVI) solution supports hardware that meets the minimum requirements described in this chapter, regardless of the manufacturer.

All hardware must be capable of operating under Windows 2000 Server or Windows 2000 Advanced Server. All hardware devices must be on Microsoft’s hardware compatibility list for the applicable Windows 2000 operating system. See the Microsoft web site for details.

It is Nortel Networks’ position that the support contract for the PVI server hardware is with the server vendor and not Nortel Networks. It is the responsibility of the distributor to ensure the hardware platform is operational and properly prepared prior to installing the Symposium Express Call Center software. The distributor (or end user) should test the PVI server before putting the server into live operation at a customer site. The distributor (or end user) should make an effort to rule out hardware faults before escalating issues to Nortel Networks. During the course of problem diagnosis, Nortel Networks may ask for test reports carried out on PVI hardware, or may request the removal of certain software utilities when necessary as part of the fault investigation process

Note: Check the Partner Information Center web site (www.mynortelnetworks.com) for any Platform Vendor Independence Product Bulletin for this release of Symposium Express Call Center. It may contain more up-to-date details regarding hardware requirements.

Platform Compliance Check

To check whether a particular server meets these basic requirements for Platform Vendor Independence, run the Platform Compliance Check utility on that server after the operating system is installed and the drives are partitioned according to the specifications in this chapter (for detailed instructions, see "Performing a platform compliance check on your server" on page 144). This utility is included on the Server Application CD. It generates warnings and suggestions when the server under test does not satisfy the minimum or suggested requirement.

Note: The Platform Compliance Check utility does not check all requirements for Platform Vendor Independence. You must ensure that the server meets all requirements listed in this chapter.

Tested third-party platforms

Nortel Networks has performed tests on the following servers from major platform vendors:

- Dell PowerEdge 500SC
- Dell PowerEdge 1600SC
- Dell PowerEdge 4600
- Compaq ProLiant ML370
- HP Netserver LC 2000
- HP Netserver LH4

Although the specifications and components of the servers tested may change throughout their life cycle, Nortel Networks will not be performing ongoing testing of these platforms. Nortel Networks' testing did not include any vendor-specific utilities or diagnostic tools that may be delivered with these platforms.

Backup and disaster recovery

To maximize Symposium Express Call Center uptime, ensure that your hardware platform supports your disaster recovery program. Regular system backups are critical to a disaster recovery program. (For more information about system backups, see Chapter 15, "Backing up data.") By provisioning your platform with fault-tolerant hardware (that is, RAID), you can provide additional security to your system (see "Redundant Array of Independent Disks" on page 35.

Minimum hardware specifications for the server PC

For the Release 4.2 Platform Vendor Independence solution to run properly, the customer-supplied server must meet the minimum requirements listed in the following section.

Note: The following specifications are minimum requirements. You can achieve enhanced performance by adding RAM or using faster dual processors. You can achieve higher fault tolerance with RAID-1 hot swap drives, and redundant and hot swap power supplies and fans.

✔	Description
	▪ minimum processor type 500 MHz Pentium III **Notes on processors:** ▪ Supported processors include Pentium III, Pentium IV, Intel Xeon, and Intel Xeon DP. Nortel Networks does not support Intel Celeron, Intel Itanium (IA 64), and Intel Xeon XP. ▪ Symposium Express Call Center Release 4.2 can operate on single or dual processors at this time. Quad processors are not supported. ▪ minimum memory 256 Mbytes ▪ minimum 9 Gbyte hard drive (12 Gbytes recommended) ▪ SVGA monitor with the following specifications: ▪ can be 14" (a 15" or 17" monitor is optional) ▪ recommended minimum display setting of 1024 x 768 ▪ keyboard ▪ mouse ▪ CD-ROM drive (4x speed minimum) ▪ 3.5" floppy drive (drive letter must be A) ▪ serial or USB modem that is V32, or V32bis compliant, with minimum 28 800 baud rate

✔	Description
	■ backup system for database backup (either tape drive or remote directory) If you are using a tape drive, see "Tape drive requirements and guidelines" on page 33 for more details. ■ 10 BaseT network interface card for connection to the ELAN ■ (optional) network interface card for connection to the CLAN (can be Ethernet or Token Ring) **Note:** CLAN is required if you are installing one or more additional client PCs, or if you are performing scheduled online database backups to a network PC rather than to a tape. ■ one serial port, if a serial modem is used for remote access support. It is not required for a USB modem. ■ IDE or SCSI hard drive ■ (Recommended) RAID 1 hardware to be used for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures. For more information on RAID hardware, see "Redundant Array of Independent Disks" on page 35. ■ hard drive speed of 7200 rpm (minimum) from manufacturer's specification **Note:** If you configure additional hardware on your server, ensure that it is configured correctly (for instance, make sure that IRQs do not conflict with existing IRQs). Any further troubleshooting and hardware diagnostics are the responsibility of the hardware vendor.

Drive partitioning for the server PC

You must create the server partitions in the following order and to the following specifications. Drive C must be configured as a Primary Partition, and any subsequent partitions must be configured as Logical drives within Extended partitions.

Note: Release 4.2 supports Windows basic disk partitioning, not dynamic disk volumes. When partitioning your drives, do not use the Windows option to upgrade to dynamic disks.

First partition (for the operating system—Windows 2000 Server or Windows 2000 Advanced Server, for the Symposium Express Call Center coresident client software, and for pcAnywhere)

- disk partition letter must be C
- minimum size of 3 Gbytes (3072 Mbytes)
- recommended size of 4 Gbytes (4096 Mbytes)
- system type of NTFS
- must be located on disk 0
- must be configured as a Primary Partition
- minimum paging file of RAM times 1.5 (Microsoft recommendation). For example, if you have 256 Mbytes of RAM, then you need 384 Mbytes for the paging file (256 Mbytes x 1.5).

Second partition (for the Symposium Express Call Center Release 4.2 server software)

- disk partition letter must be D
- minimum size of 2 Gbytes (2048 Mbytes)
- recommended size of 4 Gbytes (4096 Mbytes)
- system type of NTFS
- must be configured as a Logical drive within an Extended partition

CD-ROM

- drive letter must be E
- minimum speed of 4x

First database partition

Note: Nortel Networks recommends that this partition and all subsequent database partitions be located on a separate physical disk from partitions C and D. Additional database disk drive partitions can be located on separate physical disks, or on the same disk, based on your hardware configuration.

- disk partition letter must be F
- minimum partition size is 4 Gbytes (4096 Mbytes)
- maximum partition size is 16 Gbytes (16 384 Mbytes)
- increases to the partition size must be in 1 Gbyte (1024 Mbyte) increments
- system type is NTFS

Additional database partitions

- disk partition letters are G to U
- minimum partition size is 4 Gbytes (4096 Mbytes)
- maximum partition size is 16 Gbytes (16 384 Mbytes)
- increases to the partition size must be in 1 Gbyte (1024 Mbyte) increments
- maximum combined size of hard disk space for database partitions is 64 Gbytes (65 536 Mbytes)
- maximum number of 16 Gbyte database partitions is 4
- system type is NTFS

Note: All database partitions must be of equal size (for example, all partitions must be X Gbytes in size, where X can be from 4 Gybtes to 16 Gbytes in 1 Gbyte increments).

Tape drive requirements and guidelines

If you are using a tape drive for database backups, the tape drive must meet the following requirements:

- Use a SCSI tape drive listed on the hardware compatibility list for Windows 2000 on the Microsoft web site. Ensure that the SCSI ID for the tape drive does not conflict with existing SCSI IDs configured for other server devices.

You can use 1/4-inch cartridge and 4 mm and 8 mm digital audio (DAT) format drives.

The drive can be internal or external to the server.

- The drive must be large enough to hold all the backup data for the complete database on a single backup tape. (Hardware compression techniques can be used if necessary.) For information on determining the size of your database, see “Calculating the capacity requirements for database backups” on page 667.
- The tape driver must be Sybase-compatible.

Tape drive models tested by Nortel Networks

The following tape drive models have been tested by Nortel Networks:

- HP SureStore DLT8000
- IBM DDS 4mm
- Tandberg SLR7 20–40 Gbyte
- Dell PowerVault 110T

Using tape drive models not tested by Nortel Networks

If you want to use a tape drive that is not in the list above, Nortel Networks will support its use provided you perform the test cases and meet the conditions described below. You must ensure these test cases run successfully before putting the server into full service at a customer site.

Perform the following test cases locally. To confirm the proper operation of the tape drive, these tests should return no errors.

1. Scheduled database (partial) backup of Symposium Express Call Center Release 4.2 database, initiated from the System Administration function on the client
2. Unscheduled database (partial) backup of Symposium Express Call Center Release 4.2 database, initiated from the System Administration function on the client
3. Restore of the Symposium Express Call Center Release 4.2 database, initiated from the System Administration function on the client

Before creating the backups for these tests, you should make some minor changes to the data (for example, by creating or deleting a number of test users). Then, once the database is restored, make sure the restored database reflects these changes.

Requirements for tape drive support for untested tape drives

If you require support from Nortel Networks for a tape drive not listed in this section, you must provide the following:

- confirmation of the tape drive testing described in the previous section
- access to log files to determine the status of the backup procedure. For each of the test cases, these logs include
  - the Application event log from the client and server, saved in text format
  - the System event log from the server, saved in text format
  - the relevant backup or restore log file

    Backup log files are at d:\Nortel\data\backup\BackupLogs (for more details, see “Using log files to verify the success of a backup” on page 704).

    Restore log files are at D:\Nortel\data\backup\RestoreLogs.

Before escalating issues to Nortel Networks, make an effort to rule out hardware faults. Refer to the manufacturers instructions and recommendations.

If Nortel Networks determines that the problem is not connected to Nortel Networks software or procedures, you must consult with the vendor of the tape drive for resolution of the problem.

Redundant Array of Independent Disks

For maximum security and mission-critical systems, Nortel Networks recommends that the server contain a RAID 1 (type 1) controller. The Redundant Array of Independent Disks (RAID) technology provides disk data redundancy as well as error detection and correction. With the RAID controller, you can configure your linked drives into a RAID subsystem.

Note: Microsoft Software-RAID is not supported.

RAID 1, also known as disk mirroring, involves at least two drives duplicating the storage of data. There is no striping. Read performance is improved since either disk can be read at the same time. Write performance is the same as for single-disk storage. RAID 1 provides the best performance and the best fault-tolerance in a multi-user system, but at a higher cost.

Note: RAID 5, on the other hand, involves a rotating parity array, addressing the write limitation in RAID 4. All read and write operations can be overlapped. RAID 5 stores parity information but not redundant data. However, parity information can be used to reconstruct data. RAID 5 requires a minimum of three and usually five disks for the array. It is best for multi-user systems in which performance is not critical or which involve few write operations.

You can implement RAID levels other than RAID 1 (for example, RAID 5), provided the distributor has tested the configuration prior to placing the server into live operation. The RAID vendor must address any RAID implementation issues.

Third-party software on the server

Due to the mission-critical, real-time processing performed by Symposium Express Call Center, you must not install any other application class software on the server. You can install certain utility class software on the server, providing it conforms to the guidelines listed in the following section:

- Application class software generally requires a certain amount of system resources and, therefore, must not be installed on any server running Symposium Express Call Center. The installation of application class third-party applications may cause a real-time system, such as Symposium Express Call Center, to operate outside of the known engineering limits and, therefore, create potential unknown system problems (for example, CPU contentions, increased network traffic loading, disk access degradations, and so on).
- Certain third-party utility class software applications, such as hardware diagnostics, generally require fewer system resources during the normal operation of Symposium Express Call Center and, therefore, are permitted. Exceptions are utilities such as screen savers, which may cause system problems and degrade performance. Antivirus software is classified as a utility and is subject to the generic guidelines listed below, as well as a

specific series of recommendations detailed in “Additional guidelines for use of antivirus software” on page 38.

Note: Nortel Networks does not support connection to Symposium Express Call Center through a Citrix environment.

Guidelines for utility-class software applications

- The utility must not reduce the hard disk space available to Symposium Express Call Center and the Windows 2000 operating system below the minimum required.
- The installation or uninstallation of the third-party software should not impact or conflict with the Symposium Express Call Center software (for example, it must not cause .DLL conflicts). If such conflicts are discovered, it may be necessary to rebuild the server.
- If the utility has its own database, it must not impact the Symposium Express Call Center Sybase database.
- The utility must not interfere with Symposium Express Call Center services in any way. (For example, do not use third-party server management and monitoring utilities to shut down or restart Symposium Express Call Center services).
- The utility must not administer the Symposium Express Call Center software.
- During run-time, the utility must not degrade the Symposium Express Call Center system beyond an average 50 percent CPU utilization. Furthermore, the utility must not lower the minimum amount of free hard disk space required by the server, coresident client software, and the Windows operating system (at least 500 Mbytes).
- The utility must not cause any improper software shutdowns or out-of-sequence shutdowns.
- Do not use disk compression utilities.
- Do not use memory tweaking utilities (for example, WinRAM Turbo, Memory Zipper, and so on), which are used to reclaim memory that is unused by Microsoft.

Before putting the server into production, implementation personnel must test to ensure these conditions and recommendations are met. Nortel Networks support personnel may ask for the results of the testing during fault diagnosis. As part of the fault diagnosis process, the distributor or end user may be asked to remove third-party software.

Note: If performance or functionality issues are raised to Nortel Networks support personnel, as part of the fault diagnosis process, the customer/distributor may be asked to remove third-party software.

Additional guidelines for use of third-party backup software

Symposium Express Call Center does not provide a full backup facility. You can use third-party backup software to create a full backup of your server. If you do, additional guidelines apply. For more information, see “Guidelines for third-party backup software” on page 725.

Note: Even if you create a full backup, you must continue to perform regular Symposium Express Call Center database backups. Due to the proprietary functions called during backup of the database, you must use the backup utility provided with Symposium Express Call Center to perform database backups. For more information, see Chapter 15, “Backing up data.”

Additional guidelines for use of antivirus software

The risk of virus infection on the server in Symposium Express Call Center is minimal due to the limited access required for support of the server. Typically, only maintenance personnel have local access to the servers or remote access through pcAnywhere connections. However, Nortel Networks acknowledges that some customers’ security policies may require the installation of antivirus software on the server in Symposium Express Call Center.

Nortel Networks has tested a representative sample of antivirus software packages (The Norton Antivirus, McAfee Netshield, and eTrust Antivirus) to determine the following generic guidelines for the use of antivirus software:

- The Symposium Express Call Center software must be installed before installing the antivirus software. When the antivirus software is installed, it is the implementation personnel’s responsibility to perform testing with the antivirus software, in accordance with the guidelines for utility-class implementations outlined above.

- During PEP installations on both the client and server, all antivirus functionality should be disabled (for example, firewalls, [passive] scanning, auto updates, and so on), and should not start up automatically until the entire Symposium Express Call Center installation procedure is complete. Reenable antivirus functionality afterwards, as required.
- If personal firewalls are enabled on the Symposium Express Call Center client PC, then the Report Listener may be flagged as trying to access the Internet. The properties must be configured to allow the Report Listener to have access to Symposium Express Call Center through the firewall.
- Virus scans must be set to run on the server during off-peak hours, and not to start on the hour.

  Note: Several maintenance tasks are automatically activated on Symposium Express Call Center at midnight, so an off-midnight time must be ensured. Similarly, active virus scans must be disabled when running diagnostic traces or logs on the server.
- The antivirus software must not be configured to deal automatically with suspected infected files. In the event of infected files being located, do not attempt to replace or remove them. Contact your local Nortel Networks support representative for assistance in determining if the files are part of the Symposium Express Call Center application or a critical system file.
- Nortel Networks recommends that you exclude from scanning the files located in the following folders:
  - F:\Nortel\Database\
  - <*additional database drive*>:\Nortel\Database\

  In addition, the following file must be excluded:
  - D:\Nortel\ICCM\BIN\Tools2.exe

  Note: You will encounter file access errors in the Scan Activity log if you do not exclude this latter file from scanning.
- You must not connect Symposium Express Call Center directly to the Internet to download virus definitions or updated files. Furthermore, Nortel Networks recommends that you do not use the Symposium Express Call Center client to connect to the Internet. Instead, you must download virus definitions and updated files to another location on the customer network, and manually load them on the server in Symposium Express Call Center. This is the same recommended procedure for downloading PEPs or Service Update packs for Symposium Express Call Center. This method limits

access to the Internet, and thus reduces the risk of downloading infected files.

- Nortel Networks recommends that you scan all PEP or Service Update pack files, CD-ROMs, and floppy disks prior to installation or uploading to the server. This practice minimizes any exposure to infected files from outside sources.
- Nortel Networks has not tested SNMP alerting on virus confirmation, and is unable to ascertain any potential impact on Symposium Express Call Center. Nortel Networks does not recommend, therefore, that you activate this feature.
- Virus scan software can place an additional load on Symposium Express Call Center. It is the implementation personnel's responsibility to run the performance monitor tool on the server to gauge CPU utilization. If the antivirus software scan causes Symposium Express Call Center average CPU utilization to exceed 50 percent for longer than 20 minutes, then the antivirus software must not be loaded onto the server in Symposium Express Call Center.

Notes:

- Nortel Networks does not provide support on the configuration of antivirus software, but it tries to offer guidance where possible. Questions or problems on antivirus software should be directed to the appropriate vendor.
- The above recommendations are intended as guidelines only, and do not constitute a guarantee of compatibility. Nortel Networks does not plan to perform ongoing compatibility testing, or testing on other antivirus packages.

Uninterruptible Power Supply

Nortel Networks recommends the use of an Uninterruptible Power Supply (UPS) with Symposium Express Call Center. A UPS provides the following benefits:

- reduction in data loss—A UPS shuts down the server gracefully if an interruption in AC power occurs. A graceful shutdown prevents data corruption and reduces the risk of data loss.

- reduction in power dips and spikes—The UPS regulates AC power supplied to the server.

Note: Data backups that are running at the time of shutdown are unusable.

A UPS used with Symposium Express Call Center must meet the following requirements:

Requirement	✔
Provides at least 10 minutes of power to stop all services and shut down the server.	
Physically fits within the workplace.	
Has minimal environmental impact.	
Applies power to the server when line voltage reaches a stable state.	
If the server has been down for a long time, recharges before powering up the server.	
Is compatible with Windows 2000.	
Meets all local regulatory requirements. **Note:** For the European market, the UPS must generate a pure sine wave AC waveform.	
Has hot-swappable batteries. **Note:** Replacement or capacity upgrades of the batteries must not interrupt service.	
Connects to the server through a serial port on the server platform or through a network card, depending on the implementation.	
Does not affect the Symposium Express Call Center software. UPS software must not replace software or drivers installed on the server with different versions. **Note:** Install only the basic software functions necessary for UPS operation. Do not install advanced features, as they can impact the Symposium Express Call Center software.	

Note: If you install Smart UPS software on the server, it must conform to the guidelines listed in this guide for third-party utilities. For more information, see “Third-party software on the server” on page 36. Nortel Networks only supports the manual shutdown and startup of the server. The documentation, testing, and support of Symposium Express Call Center shutdown and startup with UPS software must be carried out by the provider of the UPS solution.

Minimum hardware specifications for the stand-alone client PCs (Windows 2000 Professional/Windows XP Professional)

The following checklist provides a list of requirements for Symposium Express Call Center clients installed on stand-alone PCs with Windows 2000 Professional or Windows XP Professional.

Note: You require local Administrator access to install the client on Windows 2000/Windows XP.

✔	Description

	Each client PC should have
	■ minimum processor type 166 MHz Pentium II or higher compatible CPU
	■ 64 Mbytes RAM recommended minimum; more memory generally improves responsiveness
	■ 2 Gbyte hard drive with a minimum of 350 Mbytes of free space
	■ actual space required depends on options installed
	■ SVGA monitor with the following specifications:
	  ■ can be 14" (a 15" or 17" monitor is optional)
	  ■ minimum display setting of 1024 x 768
	  ■ displayed colors greater than 256
	■ keyboard
	■ CD-ROM drive (4x speed minimum)
	■ 3.5" floppy drive
	■ network interface card for connection to the CLAN

Note: Citrix is not supported on client PCs.

Installation and configuration checklists

Introduction

Use the information you record in this section in the initial operating system configuration, and during the Symposium Express Call Center server and client software installation. Make as many extra copies of the checklists as required for this installation.

Keycode and serial number

A keycode is a Nortel Networks-supplied code that determines the features and functionality that are installed. When you receive your software, you also receive a keycode. Make sure that you have the correct keycode for the functionality that you require.

If you have purchased the Voice Services option, you must have a second keycode for Voice Services.

Site-specific information

This section gives a brief description of each of the items you must enter during installation.

IP addresses for ELAN and CLAN

If there are two network interface cards in the server PC (that is, one for the ELAN connection and one for the CLAN connection), the system prompts you to enter two IP addresses during installation. You do not require a CLAN if you use only the coresident client software, and if you perform scheduled online backups to a tape, rather than to a remote directory.

IP address for the Voice Services Card

If you are using a Voice Services Card, the system prompts you to enter an IP address for it during installation. You must enter the IP address on the ELAN.

Switch name

This is the name defined in the system for the M1, M1 IE, or Succession CSE 1000 switch. It must begin with an alphabetic character, cannot contain spaces or underscores, and must not exceed 80 characters in length.

Notes:

- Do not use the default switch name; it contains an underscore and is, therefore, not accepted by the Symposium Express Call Center installation.
- You must ensure that the switch name does not match the server name.

Site name

This name identifies the call center on reports and defines the channels in which tasks communicate with each other. There are rules for defining host names:

- The name must be a minimum of 6 characters and a maximum of 15 characters. It must begin with a letter and cannot include spaces.
- The site name must be unique and should be supplied by the customer.

If you are converting from Release 2.0 or Release 3.0 to Release 4.2, you must ensure that the site name conforms to these rules.

Host name

The host name must be exactly the same as the computer name. You must enter both names in uppercase. The name must be a minimum of 6 characters and a maximum of 15 characters. It must begin with a letter and cannot include spaces, dashes, or hyphens. The host name must be unique and should be supplied by the customer. Procedures for checking these names are included in the section on configuring the operating system (see “Making sure the computer name and DNS host name match” on page 128.)

General information

Record the following information for use during the installation:

Required setup data	Information for this installation
Switch name	
Switch serial number	

Required setup data	Information for this installation
Switch type	
Modem phone number for the M1, M1 IE, or Succession CSE 1000 switch	
Keycodes for ■ Symposium Express Call Center ■ Voice Services, if purchased	
Modem phone number for the server	
Site name (all uppercase, 6 to 15 characters, first character must be a letter, hyphen allowed, no spaces allowed)	
Host name/Computer name (all uppercase, 6 to 15 characters, first character must be a letter, no spaces, hyphens, or dashes allowed)	
Workgroup name (the computer cannot belong to a domain)	
Customer company name (cannot be blank)	
Customer representative’s name (cannot be blank)	
Customer number	
Administrator password	
NGenDesign password (default: Nortel)	(new password)
NGenDist password (default: ntdist)	(new password)

Required setup data	Information for this installation
Type of modem for server	
User name (for CLAN access)	
Password (for CLAN access)	

IP addresses and names

Record the IP addresses and names supplied for the client PCs, the MAT PC, the server, the M1, M1 IE, or Succession CSE 1000 switch, Meridian Mail, Voice Services card, and other equipment accessible through the CLAN and the ELAN. Include the name and serial number for the relevant switch.

To determine the serial number

1 Load Overlay 22.

2 At the REQ prompt, type **TID.**

3 Press Enter.

See your LAN administrator for information about addresses, subnet masks, and gateways. Use the following table to record the information:

Name	IP address	Subnet mask	Information for this installation
Switch (M1, M1 IE, or Succession CSE 1000) Primary IP address on ELAN			
Switch (M1, M1 IE, or Succession CSE 1000) Secondary IP address on ELAN **Note:** The Option 11C switch uses only the Primary IP address (AUX ID).			
ELAN server			
ELAN router/ gateway IP address (optional WAN connection)			
CLAN server			
CLAN router/ gateway IP address (if used)			
RAS address			

Name	IP address	Subnet mask	Information for this installation
CLAN client (if required)			
Voice Services card installed on the switch, and the IP address must be entered on the ELAN			

Checklist for preparing the server hardware and software

✔	Description
	■ server PC operational and ready for installation or configuration of Windows 2000 Server or Windows 2000 Advanced Server on the C partition. (Detailed instructions for installing and configuring the operating system on the server PC are provided in Section A: "Configuring the operating system" on page 99.)
	■ the Meridian Release is X11R24.24 or higher, and all the appropriate M1 patches have been applied
	■ Ethernet connections ready at the M1, M1 IE, or Succession CSE 1000 switch (cable and transceiver/MAU)
	■ customer- or Nortel Networks-supplied hub for the ELAN
	■ one PC equipped with VT220 emulation software and serial cable for Meridian Mail connection
	■ network connection and cable ready to connect the server to the CLAN, if a CLAN is used
	■ list of unique names and IP addresses for all equipment on both the CLAN and ELAN (see the following checklists)
	■ (optional) cable ready to connect the ELAN to the customer WAN
	■ (optional) customer-supplied UPS for the server

Checklist for preparing stand-alone client hardware and software

✔	Description
	■ PC up and running with Windows 2000 Professional (with Service Pack 3) or Windows XP Professional (with Service Pack 1) ■ Internet Explorer 5.5 or later installed (note that Windows XP is installed with Internet Explorer 6.0) ■ Microsoft TCP/IP protocol installed and configured

Required installation software checklist

Installation items

The following table lists the CD-ROMs you need to complete the Symposium Express Call Center installation:

✔	Qty	Description
	1	Symposium Express Call Center Release 4.2 Server Application CD-ROM. Contains the Symposium Express Call Center server installation software and the Platform Compliance Check utility.
	1	Symposium Express Call Center Release 4.2 Client Application CD-ROM
	1	Symposium Express Call Center Release 4.2 Supplementary CD-ROM. Contains any additional software components required for Symposium Express Call Center to operate, such as Performance Enhancement Packages (PEPs) or Service Update packs.
	1	Symposium Express Call Center Release 4.2 Documentation CD-ROM
	1	pcAnywhere Release 10.5 Host-Only CD-ROM (NTJK08AA)
	1	GRTD Release 3.05.05 CD-ROM

Chapter 2

Configuring the switch

In this chapter

Overview

Introduction

This chapter provides information on how to configure the Meridian 1 or Succession Communication Server for Enterprise (CSE) 1000 switch to work with Symposium Express Call Center.

Note: Unless otherwise specified, references in this guide to the Meridian 1 switch are also applicable to the Meridian 1 Internet Enabled switch.

For switch-related material, refer to the appropriate documentation.

Resources configured on the switch

Symposium Express Call Center requires a special configuration on the Meridian 1 or CSE 1000 switch for the following resources:

- Ethernet Application Module Link (AML)
- Voice Services card (optional keycoded feature)
- CDNs and agent phonesets
- IVR ACD-DNs
- voice ports
- tones

Minimum switch software release

The following table indicates the switch software version required. Ensure that you have all the latest software packages installed on your switch. For more information, refer to the appropriate documentation.

Switch	Minimum software release
Option 11C Options 51C to 81C	Meridian 1 (X11) Release 24.24

Switch	Minimum software release
Option 11C Mini	Release 2.00A (based on Meridian 1 [X11] Release 24.24)
CSE 1000	CSE 1000 Release 1.1

Information about Meridian 1 patches is available on the MPL web site at

- https://www21.nortelnetworks.com/MPL (for Europe)
- https://www43.nortelnetworks.com/MPL (for North America)

For more information, contact your Nortel Networks customer support representative.

Voice services

You can use CallPilot, Meridian Mail, MIRAN, the Voice Services card, third-party IVR systems, and music/RAN systems with Symposium Express Call Center to supply voice services to callers.

Note: Since Symposium Express Call Center does not use advanced scripting commands, there is no support for ACCESS integration.

Voice processing requirements

To support voice processing, you must dedicate the voice ports used by CallPilot, Meridian Mail, Voice Services, or the third-party IVR voice processing system. Symposium Express Call Center cannot share ports with other applications. For example, if you use a voice port for IVR, you cannot use the same port for voice mail.

Calls directed to CallPilot or Meridian Mail by Symposium Link must also use a dedicated set of ports.

Connecting the server to the switch

Introduction

This section lists the correct LAN package for each switch type. It also contains illustrations that show how to connect the Symposium Express Call Center server to the appropriate switch.

Switch LAN packages

Refer to the following table to ensure that you have the correct LAN package for your Meridian 1 switch:

IF your switch is an	THEN you need the LAN package	Contents	Quantity
Option 11C or CSE 1000	NTHF35AA	10BaseT hub	1
		Transceiver	1
		10-foot Ethernet cable	1
		25-foot Ethernet cable	1
		LAN cable	1
Option 51C	NTHF69AA	10BaseT hub	1
		Ether Twist Transceiver	1
		10-foot Ethernet cable	1
		25-foot Ethernet cable	1
		LAN cable	1
Option 61C or 81C	NTHF36AA	10BaseT hub	1
		Transceiver	2
		10-foot Ethernet cable	2

IF your switch is an	THEN you need the LAN package	Contents	Quantity
Option 61C or 81C	NTHF36AA	25-foot Ethernet cable	1
		LAN cable	2

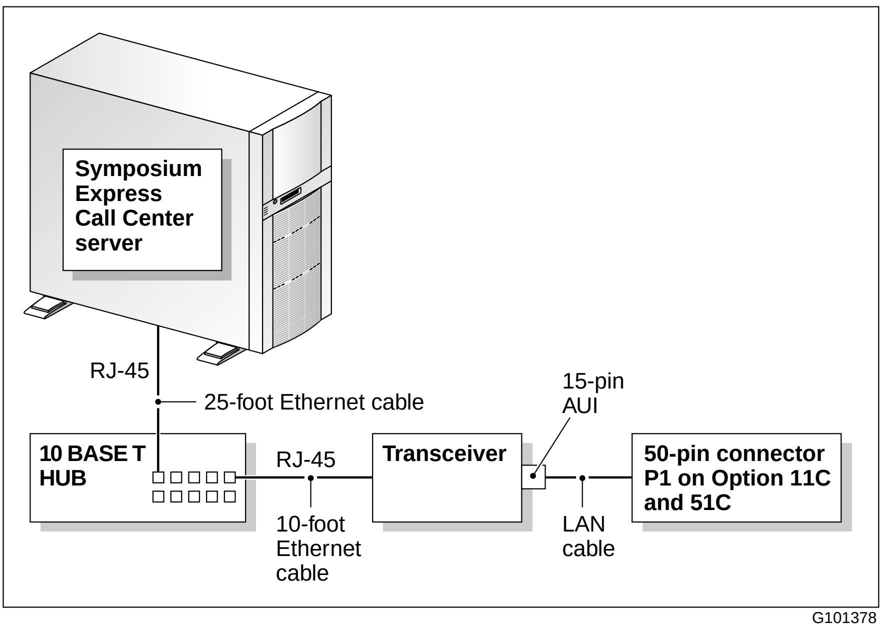
To configure TCP/IP on the switch

Use Overlay 117 to configure TCP/IP on the switch. For detailed instructions, refer to your switch documentation.

To connect to Options 11C and 51C

The following illustration shows how to connect your Symposium Express Call Center server to an Option 11C or 51C switch using the LAN packages listed in “Switch LAN packages” on page 56.

For more detailed information, refer to the appropriate documentation.



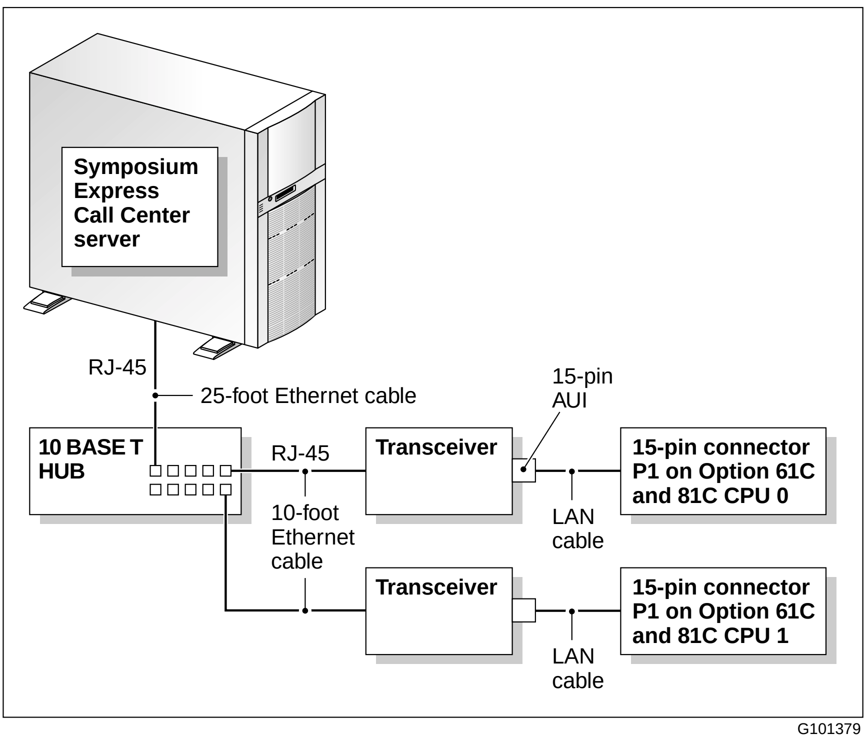
Notes:

- For the Option 11C Mini, the transceiver plugs directly into the mini chassis. The LAN cable is not required.
- For the CSE 1000, the LAN cable and transceiver are not required. The RJ-45 Ethernet cable plugs directly into the Media Gateway.

To connect to Options 61C and 81C

The following illustration shows how to connect your Symposium Express Call Center server to an Option 61C or 81C switch using the LAN packages listed in “Switch LAN packages” on page 56.

For more detailed information, refer to the documentation for the relevant switch.



Configuring the Ethernet Application Module Link

Introduction

To configure the Ethernet AML, you must perform the following tasks:

1. Define the Ethernet LAN (ELAN).
2. Define one Value Added Server (VAS) for each ELAN configured.

These tasks associate the link (ELAN) with a VAS ID to allow message transmission.

To define the ELAN with LD 17

To define the ELAN with Overlay 17, use these prompts and responses:

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW ELAN 16, CHG ELAN 16, OUT ELAN 16	Add/change/remove I/O device type ELAN 16 (AML over Ethernet).
CTYP	ELAN	Card type
DES	NAME	Enter a name for the ELAN port number. Use a generic name because the ELAN port is not dedicated to a specific application.
VAS	NEW	Add a value added server.
VSID	16	VAS identifier

Prompt	Response	Description
ELAN	16–31	Associate VAS ID with the ELAN.
SECU	Yes	Turn on security for Meridian Link Services applications.
CSQO	255 maximum	Number of call registers linked to output queue
CSQI	255 maximum	Number of call registers linked to input queue
REQ	END	Exit from overlay.

To enable the ELAN link

1 At the switch administration terminal, load LD 48.

2 Type the command **enl elan 16.**

Checking the ELAN with LD 48

Once you configure the VSID and power up Symposium Express Call Center, the ELAN link comes into service.

To check the ELAN link

1 At the switch administration terminal, load LD 48.

2 Type the command **stat elan.**

3 Ensure that, under your Symposium Express Call Center ELAN IP address, LYR7 and APPL are active. Note the ELAN ID.

Example:

ELAN #: 16 DES: the application (for example, elan16)
APPL_IP_ID: 47.152.163.68 LYR7: ACTIVE EMPTY APPL
ACTIVE

4 If the ELAN is not active, check the ELAN connection by pinging the switch IP address from the application. To do so, open a DOS prompt. Type **ping *nnn.nnn.nnn.nnn*** where *nnn.nnn.nnn.nnn* is the switch IP address, and then press Enter.

Checking the AML link

If you are using Meridian Mail for your voice services, you can check the AML link.

To check the AML link

1 At the switch administration terminal, load LD 48.

2 Type the command **stat aml.**

Result: Ensure that LYR2 is connected and LYR7 is active.

Example:

```
>ld 48
.stat aml
AML: 09 ESDI: 09 DES: mail\
LYR2: CONNECTED LYR7: ACTIVE EMPTY
```

Defining CDNs and agent phonesets

Introduction

To allow the Symposium Express Call Center to receive calls, you must add and configure CDNs using Overlay 23. Agent phonesets require no special configuration for Symposium Express Call Center.

Note: To add or print TNs, use Overlay 11.

CDNs: Definition

CDNs are specialized ACD-DNs or queues on the switch. A CDN is the entry point of a call into Symposium Express Call Center call processing. You must configure CDNs on the switch and on Symposium Express Call Center.

Prompts for CDNs

You should define CDNs with CNTL= NO, RPRT=NO, and AACQ=NO.

VAS ID definitions

Do not enter a VAS ID definition on agent phonesets or CDNs.

Acquiring CDNs and agent phonesets

When you acquire a CDN on Symposium Express Call Center, the parameter ASID appears next to the TNB or CDN block. CNTL, AACQ (for CDNs), and AACD (for agent phonesets) are automatically changed to YES.

Note: For an agent to log on to his or her phoneset, the agent ID must be added to Symposium Express Call Center.

LD23

This display shows an acquired CDN:

Prompt	Response	Description
REQ	PRT	Print
TYPE	ACD, CDN	ACD or control DN data blocks
CUST	0–99	Customer number
CDN	XXXX	
AACQ	Yes, (No)	Application acquired queue
ASID	16–31 or (00)	Application Service Identification where the acquired message originated
SFNB	1 2 ...	Message set feature notification bitmap for messages such as SFN (log on), SFN (log off) ...
USFB	1 2 ...	Message filter bitmap for USM messages such as Onhook, Offhook, Ringing, Active, Disconnect, Unringing, Hold, Restore, Ready, Not Ready, Walkaway, Walkaway Return, Reserved, Unreserved
CALB	1 2 ...	Message filter bitmap for Call Filter messages such as PCI, DN Update
RPRT	NO	
....	....	

Configuring IVR ACD-DNs

Introduction

This section describes how to configure IVR ACD-DNs if you are using Symposium Voice Services on CallPilot or Meridian Mail. If you are using a third-party IVR system, refer to the documentation provided with the system. If you are using a Voice Services card, refer to the *Nortel Networks Symposium Express Call Center Voice Services Card Installation Guide*.

An IVR ACD-DN is a DN that applies a specific IVR application to an incoming call. Symposium Express Call Center must acquire IVR ACD-DNs.

You configure IVR ACD-DNs if you use CallPilot, Meridian Mail, the Voice Services card, or another third-party IVR system to play messages to callers. These messages are stored on CallPilot, Meridian Mail, the Voice Services card, or the third-party IVR system, and can be announcements or voice menus. If your system uses a MIRAN card only to provide messages, you do not need to configure IVR ACD-DNs. If your system uses a Voice Services card, you should refer to Chapter 13, “Configuring a Voice Services card,” to configure IVR ACD-DNs.

To create a CallPilot ACD-DN in LD 23

Use the following prompts and responses in Overlay 23. For prompts not listed in the table, press Enter to accept the default.

Prompt	Response	Description
REQ	NEW	Create a new queue.
TYPE	ACD	ACD data blocks
CUST	0–99	Customer number
ACDN	xxxx	The DN of the ACD queue. This is the IVR ACD-DN acquired from Symposium Call Center Server.

Prompt	Response	Description
MWC	NO	Indicates that this is not a message center.
MAXP	xx	Indicates the maximum number of ACD agents for this queue.
IVR	YES	Indicates that the queue can be used with the GIVE IVR command defined in scripts.
TRDN	xxxx	Default treatment DN if not specified in the Call Routing wizard.
ALOG	YES	ACD agents are automatically logged on.
REQ	END	Exit from overlay.

To create a Meridian Mail IVR ACD-DN with LD 23

To configure IVR ACD-DNs with Overlay 23, use these prompts and responses:

Prompt	Response	Description
REQ	NEW	Create new queue.
TYPE	ACD	ACD data blocks
CUST	0–99	Customer number
ACDN	XXXX	The DN of the ACD queue. This is the number you enter in the VSDN table.
MWC	YES	Indicates that this is a message center and that the queue has agents.
CMS	YES	Command and Status Link Application Protocol used.
IMA	YES	Enables IMA attendant.

Prompt	Response	Description
IVMS	YES	Integrated voice messaging. Creates a message center from which messages can be retrieved.
VSID	XX	VAS ID
MAXP	XX	Indicates the maximum number of ACD agents for this queue.
ALOG	YES	ACD agents are automatically logged on when Meridian Mail is powered on.
NCFW	0	The DN to which calls are forwarded. Set to 0 for agent queues.
IVR	YES	Indicates that the queue can be used with the Give IVR command defined in scripts.
TRDN	XXXX	Default treatment DN if not specified in the Call Routing wizard.
....	....	

After you finish

You must configure the voice ports as virtual agents. See “Configuring voice ports” on page 67.

Configuring voice ports

Introduction

Voice ports carry speech to CallPilot, Meridian Mail, the Voice Services card, or a third-party IVR system. In Symposium Express Call Center, you must configure voice ports when the ports are CallPilot, Meridian Mail, Voice Services, or third-party IVR system ports used to play announcements or voice menus.

This section describes how to configure IVR ACD-DNs if you are using CallPilot or Meridian Mail. If you are using Voice Services, see the *Symposium Express Call Center Voice Services Card Installation Guide*. If you are using a third-party IVR system, refer to the documentation provided with the system.

You configure voice ports as virtual agent TNs. For Meridian Mail, the class of service must be IMA and VMA to ensure they are virtual agents.

To create a CallPilot voice port with LD 11

Use the following prompts and responses in Overlay 11. For prompts not listed in the table, press Enter to accept the default.

Prompt	Response	Description
REQ	NEW, CHG	Add or change a voice port.
TYPE	2008	
TN	l s c u	Terminal Number of the voice port, where **l** is the loop, **s** is the shelf, **c** is the card, and **u** is the unit. (For the Option 11C, TN is **cu** only.)
AST	00 01	Associated set assignment on key 0 and key 1 (required for MLSM messages)

Prompt	Response	Description
CLS	MMA	Multimedia agent
	VCE	Voice terminal
	WTA	Warning time allowed. (When changing from CLS DAT to CLS VCE, CLS WTA should be added to avoid conflict with CLS CPTA. CLS CPTA is the default for VCE TNs.)
	FLXA (units 16–31)	Flexible voice/data allowed.
KEY	0 ACD xxxx zzz nnnn	Define 0 as an ACD key. xxxx is the ACD DN of agents to voice mail. zzz is the CLID entry number. nnnn is the position ID. In CallPilot, the position ID must match the CallPilot key 0 value.
KEY	1 SCN xxxx	Define key 1 as a single-call non-ringing DN. xxxx is the SCN DN of the SCN. The DN must match the key 1 value on the CallPilot Meridian 1 Switch Information screen.
KEY	2 MSB	Define key 2 as a Make Set Busy key.
KEY	3 NRD	Define key 3 as a Not Ready key.
KEY	4 TRN	Define key 4 as a Transfer key.
KEY	5 AO3 (letter ‘O’)	Define key 5 as a Conference key.
REQ	END	Exit from overlay.

To configure Meridian Mail or third-party IVR voice ports with LD 11

To configure voice ports with Overlay 11, use these prompts and responses:

Prompt	Response	Description
REQ	NEW, CHG	Add or change a voice port.
TYPE	2008 or SL1	Use 2008 for Meridian 1 Option 11, and SL1 for all other switch types.
TN	10 (0–15)	Enter the TN of the agent.
CLS	IMA	Integrated messaging service attendant allowed.
	VMA	Server voice messaging allowed.
KEY	0 ACD xxxx zzz nnnn	Define 0 as an ACD agent key. xxxx is the ACD DN of voice agents in voice mail. zzz is the CLID entry number. nnnn is the position ID.
KEY	1 SCN xxx	Define key 1 as a single-call non-ringing DN. xxx is the SCN DN of the SCN. The DN must match the DN on the Channel Allocation Table.
KEY	2 MSB	Define key 2 as a Make Set Busy key.
KEY	3 NRD	Define key 3 as a Not Ready key.
KEY	6 TRN	Define key 6 as a Transfer key.
KEY	7 AO3 (letter ‘O’)	Define key 7 as a Conference key.
KEY	9 RLS	(For SL1 sets) define key 9 as a Release key.
REQ	END	Exit from overlay.

Note: For Meridian Mail voice ports, do the following:

1 Ensure that the key layout matches the configuration of keys in Meridian Mail. This matching enables Meridian Mail to answer, disconnect, originate, transfer, and conference calls.

2 If your Meridian Mail passwords are configured to expire, you must change the passwords regularly, or voice processing will stop.

Initializing or updating the switch

Introduction

Symposium Express Call Center cannot process calls if the switch is not operational. If you need to initialize the switch for any reason, you should always shut down Symposium Express Call Center first.

To initialize the switch

1. Shut down the Symposium Express Call Center server and clients.
2. Perform the upgrade on the switch or reinitialize the switch.
3. Restart the switch.
4. Restart the Symposium Express Call Center server.

For more information, refer to the appropriate switch documentation.

Changing CDNs on the switch

Introduction

If you need to make changes to CDNs on the switch, you must follow specific steps to avoid causing service breaks in Symposium Express Call Center. For example, if you inadvertently out a CDN that is currently acquired by Symposium Express Call Center, you can cause some services in Symposium Express Call Center to go down. This prevents calls from being handled by Symposium Express Call Center.

To change CDNs on the switch

To make changes to CDNs on the switch, ensure that you follow this sequence:

1. Deacquire the CDN from Symposium Express Call Center.
2. Delete, move, add, or make changes to the CDN as necessary on the switch.
3. Reacquire the CDN on Symposium Express Call Center.

You can acquire and deacquire CDNs on Symposium Express Call Center either from Advanced Functions or with the Import wizard. For information on acquiring and de-acquiring CDNs, refer to the *Nortel Networks Symposium Express Call Center Management Guide*.

Chapter 3

Configuring the voice processing subsystem

In this chapter

Overview

Introduction

You can use a voice processing system, such as CallPilot, Meridian Mail, or a third-party IVR system, to play recorded announcements, or provide menus for callers. You must define the announcements and menus in the voice processing system.

Note: The Voice Services card also allows you to collect customer-entered data. This feature (Prompt/Collect Digits) is not available when you use CallPilot, Meridian Mail, or a third-party IVR system with Symposium Express Call Center.

This chapter provides information on how to set up and configure a voice processing system for use with Symposium Express Call Center. To set up and configure a Voice Services card, see Chapter 13, “Configuring a Voice Services card.”

Resource acquisition

Voice processing resource acquisition summary

The following table summarizes the resources that Symposium Express Call Center must acquire for the different voice processing commands:

Command	IVR ACD-DN	Voice Port TN	Voice Port channel
Give IVR	Yes	Yes	No
Front-end IVR	No	No	No
Prompt/ Collect Digits	Yes	Yes	No

Note: Prompt/Collect Digits is available only if you are using a Voice Services card.

Voice port partitioning rules

Introduction

Your voice processing system can provide a variety of services, including

- auto-attendant
- voice menus
- fax
- voice mail
- application services to Meridian Link, Symposium Link, Meridian (Integrated) IVR, CCR, and Symposium Express Call Center

While some of these services and applications can share ports, the Symposium Express Call Center requires a dedicated set of ports behind a dedicated ACD-DN to operate correctly. If you require other voice processing services, such as Call Answering or Voice Menus, set up a separate queue for them.

Voice port partitioning

Symposium Express Call Center uses IVR ports. Make sure that only Symposium Express Call Center Give IVR calls arrive at an ACD-DN containing IVR ports.

The TNs for IVR ports must be acquired by Symposium Express Call Center.

Section A: CallPilot

In this section

Overview

Introduction

To use CallPilot as your voice processing system, you must update the CallPilot server configuration:

- Define the ELAN address of Symposium Express Call Center in the Symposium Express Call Center server ELAN IP Address field.
- Identify channels that are used to provide IVR services to the server in Symposium Express Call Center.

Note: Dedicate IVR ACD queue and ACD agents for GIVE IVR functionality. These cannot be shared with voice messaging ACD queues.

- Define SDNs for use by Symposium Voice Services.

IVR ports

CallPilot controls these ports. The treatment that the caller receives is determined by the treatment DN or IVR ACD-DN.

To use IVR ports, you must configure some or all of the following entities in CallPilot:

- voice ports (virtual agent TNs)

  For information on configuring IVR voice ports in CallPilot, see “Updating the CallPilot configuration” on page 79.
- Service Directory Numbers (SDNs)

  For information on creating SDNs, see “Updating the SDN table” on page 80.
- voice segments

  For information on creating voice segments (voice items), see the *CallPilot Application Builder Guide* (NTP 555-7171-325).

Updating the CallPilot configuration

Introduction

In the CallPilot Configuration Wizard, you must do the following:

- Define the CLAN address of Symposium Express Call Center in the Symposium Express Call Center server CLAN IP Address field.
- Identify channels that are used to provide IVR services to Symposium Express Call Center.

To update the Configuration Wizard

1 On the CallPilot server, start the Configuration Wizard and advance to the Switch Information page. (For detailed instructions, see “Part 3: Switch and CallPilot Server Configuration,” in the *CallPilot Installation and Configuration Guide* for your switch type.)

2 In the Symposium Express Call Center CLAN IP Address box, enter the CLAN address of the server.

3 Select the check box for Symposium Call Center Server integration.

4 On the left side of the page, click the link for the set of channels you want to configure. The Channel Name column displays the channels on the selected link.

5 Click the first channel that you want to configure in the Channel Name column. The Channel Detail Information page appears.

6 For each TN, make a selection from the Channel allocation drop-down list.

7 Choose the number of IVR agents to be added, and then click Fill.

8 Click OK.

Updating the SDN table

Introduction

You must define Service DNs for use by Symposium Voice Services.

To update the SDN table

1. Start CallPilot Manager (for detailed instructions, see the *CallPilot Administrator's Guide* [NTP 555-7101-391]).
2. Choose System → Service Directory Number.
3. Click New.
4. In the Service DN box, enter the Symposium Express Call Center IVR ACD-DN numbers, as defined on the switch.
5. In the Application Name box, select Symposium Voice Services.
6. Click Save.
7. For each application created, add a new SDN. The applications are listed in the Application Name box.

Creating voice segments

Introduction

You can use voice segments as building blocks to create powerful, flexible voice applications.

Creating voice segments

Use the Application Builder to create, record, and manage voice segments. For detailed instructions, refer to the *CallPilot Application Builder Guide*.

Section B: Meridian Mail

In this section

Overview

Introduction

Meridian Mail uses IVR ports to provide voice processing services for the Symposium Express Call Center.

IVR ports

Meridian Mail controls these ports. The treatment that the caller receives is determined by the treatment DN or IVR ACD-DN. You use these ports for Give IVR.

To use IVR ports, you must configure some or all of the following entities in Meridian Mail:

- voice ports (virtual agent TNs)

  For information on configuring voice ports, see “Channel Allocation Table” on page 86.
- treatment DNs (VSDNs)

  For information on configuring treatment DNs, see “Configuring VSDN entries (treatment DNs)” on page 90.
- Voice Menu service or Announcement Service

  For information on configuring announcements and voice menus, see “Creating announcements and voice menus” on page 88.

This section provides procedures for configuring each of these entities. It also describes the Channel Allocation Table and the Voice Services DN table where you configure these entities.

General Meridian Mail Services

If you front-end a Symposium Express Call Center CDN with a voice menu, the voice menu should be accessed via this ACD-DN. Symposium Express Call Center does not acquire these ports.

These services include Call Answering, Express Messaging, Voice Menus, Fax on Demand, and voice ports used by CCR for Give IVR. The voice ports for all of these services can belong to the same ACD-DN.

Channel Allocation Table

Introduction

The Channel Allocation Table (CAT) allows you to

- view how channels (voice ports) are currently allocated across different queues and services
- see the distribution of port types (that is, the number of basic, full-voice, and multimedia ports)
- move agents from one queue to another, to dedicate a port (Voice ports are relocated on the switch. The Channel Allocation Table is used to notify Symposium Express Call Center of the new location.)

Agents and DSP ports

The CAT determines how agents on the switch are associated with DSP ports on Meridian Mail. Each DSP port must be associated with an ACD agent defined on the switch. Agents are identified by a terminal number (TN), an ACD directory number (DN), and a single call non-ringing (SCN) DN. This association enables both the queuing of calls coming in to Meridian Mail, and dial-out features such as Remote Notification, Delivery to Non-Users, and the Voice Prompt Editor.

When Meridian Mail is installed, the CAT is populated automatically by the installation technician. This is also true when you perform a channel expansion (to add new voice ports).

When to modify the CAT table

You modify the Channel Allocation Table when you need to

- move voice ports from one queue to another (to dedicate them to a particular service)

Note: Use the default datafill settings for voice ports in the Channel Allocation Table.

Voice Services DN table

Introduction

Voice service directory numbers (VSDNs) are defined for every Meridian Mail service that you want to make accessible to callers. These directory numbers (DNs) are entered in the Voice Services DN (VSDN) table, which maps DNs to services.

You define a VSDN for

- Meridian Mail services that are accessed through a Treatment DN (for example, Express Messaging)
- Voice Menus and Announcement Services that are used by Symposium Express Call Center

The VSDN entries used by Symposium Express Call Center are referred to as Treatment DNs.

Meridian Mail uses Treatment DNs that are accessed from the VSDN table. Treatment DNs accessed from the VSDN table have a default value associated with an ACD. However, Symposium Express Call Center can override the default value by placing a call to the ACD. The value used by Meridian Mail (either the default value or the Symposium Express Call Center value) determines which Meridian Mail service to start (for example, a recorded announcement).

Nightly audits

Meridian Mail performs an audit every morning at 3:30 a.m. This audit can take anywhere from 10 minutes (if the system has not been modified since the last audit) to 2 hours (if many changes have been made, such as adding or modifying users or services).

Note: If you are using Meridian Mail Call Path Diagnostics (CPD), you may receive error events indicating that calls arriving on voice ports are not under the control of Symposium Express Call Center.

Do not add, modify, or delete VSDNs during the nightly audit.

Configuring Meridian Mail

Introduction

If you are using Meridian Mail as your voice-processing system, use non-ACCESS voice ports. Configure the following elements on Meridian Mail:

- voice menus or announcement services, or both
- VSDN entries (treatment DNs) for overflow and emergency treatments
- voice ports in Channel Allocation Table

You can use announcement services to give in-queue announcements ("Your call is in queue and will be answered shortly"). Prior to Meridian Mail 11, the announcement service did not have the Silent Disconnect option and the announcement was repeated twice. If your Meridian Mail is earlier than Release 11, use voice menus instead.

You can use voice menus to give the caller a choice ("Press 1 for Sales or press 2 for Support"). You can also use voice menus without any options as an alternative to an announcement service.

Creating announcements and voice menus

Announcement services

Follow the instructions in the *Meridian Mail Voice Services Application Guide* to create your announcement service.

Nortel Networks recommends that you select the following options when creating your announcement service:

- Silent Disconnect (so that the caller does not hear "Good-bye" at the end of an announcement)
- Number of times to play announcement should be 1
- Do not set an ACCESS password

Voice menu service

Follow the instructions in the *Meridian Mail Voice Services Application Guide* to create your voice menu service.

Voice menu as an announcement

If you are using a voice menu to provide an announcement service, Nortel Networks recommends that you select the following options:

- Silent Disconnect (so that the caller does not hear “Good-bye” at the end of an announcement)
- Do not set an ACCESS password
- Record the announcement you want the callers to hear as the Greeting
- Do not record the Menu Choices
- Do not assign any action to each key
- Initial No Response DS (disconnect)
- Delayed Response DS (disconnect)

Note: Disconnect (DS) means that Meridian Mail drops out of the call and control returns to the Symposium Express Call Center script. It does not mean that the caller is disconnected.

Voice menu to offer choices to a caller

If you are using a voice menu to offer choices to a caller, Nortel Networks recommends that you select the following options:

- Silent Disconnect (so that the caller does not hear “Good-bye” at the end of an announcement)
- Do not set an ACCESS password
- Record the announcement you want the callers to hear as the Greeting
- Record the Menu Choices
- Assign an appropriate action to each key

  Typically, this is a call (CL) with an ACD-DN.
- Initial No Response DS (disconnect) or RP (Repeat Menu Choices) as appropriate
- Delayed Response DS (disconnect) or RP (Repeat Menu Choices) as appropriate

Notes:

1. The DNs in the actions for each key can be a CDN controlled by Symposium Express Call Center or a Phantom DN that forwards the call to a Symposium Express Call Center CDN. In either case, the call returns to the Master_Script as a new call and must be treated appropriately.
2. If you use Meridian Mail voice menus to transfer a call to a CDN, the call is pegged as a new call.

Configuring VSDN entries (treatment DNs)

You must configure the treatment DNs to be used for overflow and emergency treatments. Create an entry for each treatment DN in the VSDN table. Each treatment DN is associated with a specific announcement.

The treatment DN is passed by the application to the switch, which, in turn, relays it to Meridian Mail. The switch does not interpret a treatment DN, and it does not need to appear anywhere in its configuration.

To create a VSDN entry

1 From the Meridian Mail Main menu, go to the Voice Services-DN table.

- **a.** Select Voice Administration.
- **b.** Select Voice Services Administration.
- **c.** Select Voice Services-DN table.

2 Click ADD to add a new entry.

- **a.** Enter the treatment DN used by Symposium Express Call Center in the script command.
- **b.** Select AS for Announcement Service or MS for the Voice Menu Service.
- **c.** Enter the Voice Menu or Announcement Service ID that was assigned when you created it.
- **d.** For a Voice Menu, select Basic as the session profile.

Note: If you have Basic ports defined in the CAT table and you select anything other than Basic in the session profile, the Give IVR command fails on these ports and the caller receives an announcement similar to "Your session cannot be completed at this time."

  e. Add an optional comment (for example, Symposium Announcement).
  f. Click Save.

3 Repeat for each Announcement or Voice Menu Service.

Configuring IVR voice ports

You must configure voice ports in the Channel Allocation Table. You must also configure voice ports as virtual agent TNs on the switch, and you must configure voice ports on Symposium Express Call Center.

The voice ports must belong to a dedicated IVR ACD-DN, and the Channel Allocation Table must match the switch configuration. The dedicated IVR ACD-DN is the DN that you use in your scripts (for example, GIVE IVR 7002, where 7002 is the dedicated IVR ACD-DN).

Prerequisites

Before you configure a voice port in Meridian Mail, you must configure the voice port on the switch using Overlay 11. The voice port must belong to the IVR ACD-DN.

Note: An IVR ACD-DN cannot contain both Basic and Full Service ports. If you use both types of ports, you must have at least two IVR ACD-DNs.

To configure voice ports in the Channel Allocation Table

Note: These steps can vary slightly on different releases of Meridian Mail. Refer to your Meridian Mail documentation.

1 From the System Status and Maintenance menu, disable the DSP port or ports that you want to configure.

  Tip: If you must disable multiple ports, it is quicker to change to range mode.

2 Select Channel Allocation Table from the System Status and Maintenance menu.

  a. If you have a single-site system, the Channel Allocation Table appears. Go to step 4.
  b. If you have a multisite system, go to step 3.

3 Type the number of the site on which the port resides, and then press Enter.

4 Modify the port. For each disabled port, you can change the values in the following boxes:

ACD DN: The IVR ACD-DN.

SCN DN: This must match the switch configuration.

Capability: Full. The Meridian Mail keycode determines the types of ports that are available. Basic ports are less expensive to purchase and provide the capability required for ACCESS ports. If the keycode allows it, you can set the capability to Full.

Note: You can only modify ports that have been disabled. For disabled ports, the port capability (Full or Basic) is highlighted, and the ACD-DN, SCN, and Outbound boxes are underlined.

5 Click Save.

Result: On a single-site system, you return to the System Status and Maintenance menu. On a multisite system, you are prompted for another site. If you have to reallocate ports on another site, return to step 3. Otherwise, click Cancel to return to the System Status and Maintenance menu.

6 Reenable any DSP ports that you put out of service before configuring the voice ports.

Section C: Third-party voice processing systems

In this section

Overview of third-party voice processing systems

Introduction

External IVR systems can connect their voice channels to the switch in a variety of ways, including as 2500 (analog) set TNs, 2500 (analog) set ACD TNs, and T1, DPNSS, or ISDN channels.

Note: In this section, an external IVR system refers to any device not already discussed that can provide voice services. This includes third-party IVR systems, Peri IVR, and Nortel Networks' integrated IVR CTI application, and third-party voice mail systems.

External IVR systems not accessed from Symposium Express Call Center scripts

Usually, if an external IVR provides a voice menu or other caller interaction, the calls terminate on it directly and are transferred to the Symposium Express Call Center CDN at the end of the IVR session (front-end IVR).

If the call is already under the control of a Symposium Express Call Center script, it can be handed off to the IVR system. IVR systems used in this manner do not require any special configuration on Symposium Express Call Center. The voice ports and ACD-DN do not need to be acquired.

Treatment DNs

Most external IVR systems can only offer one type of treatment per IVR ACD-DN.

Some IVR systems support an APL link or Meridian Link that can be used to deliver the treatment DN to the IVR system to determine the message played. Nortel Networks' IVR CTI application uses Meridian Link to deliver the treatment DN to Peri IVR.

Switch and Symposium Express Call Center configuration

To use an external IVR system with the Symposium Express Call Center, the required configuration is similar to using Meridian Mail for Give IVR:

- The voice ports must belong to an IVR ACD-DN (with IVR = YES).

  As with Meridian Mail, configure the switch so that only Symposium Express Call Center IVR calls terminate on this ACD-DN.
- Symposium Express Call Center must acquire the IVR ACD-DN.
- Symposium Express Call Center must acquire the voice port TNs.

Configuration of the external IVR

This varies from one IVR system to another and is beyond the scope of this document.

Chapter 4

Server software

In this chapter

Overview

Introduction

This chapter describes the installation procedures for Nortel Networks Symposium Express Call Center server and related software. The following list gives a summary of the procedures:

- configuring the operating system
- installing and configuring the Nortel Networks Symposium Express Call Center server application software
- installing and configuring pcAnywhere
- reinstalling (recovering) the server software and database
- uninstalling the database and server software

Section A: Configuring the operating system

In this section

Pre-installation checklist

Introduction

Before you begin installation, ensure the following:

- Your system is set up according to the requirements listed in “Customer-supplied equipment and data requirements” on page 28.
- The M1, M1 IE, or Succession CSE 1000 switch is configured properly for use with Nortel Networks Symposium Express Call Center.

Pre-installation checks

Before you start the installation, you should verify the following:

- No other application software is resident on the PC on which the software is being installed.
- Any power-saving features are turned off. This eliminates the possibility of the automated installation being interrupted when a power-saving feature is turned on.
- There are no screen savers enabled. Screen savers use valuable CPU processing power.

Overview of operating system configuration

Introduction

This chapter describes how to configure the operating system on your PVI server in preparation for the installation of the Release 4.2 Nortel Networks Symposium Express Call Center software. It identifies any features of Windows 2000 Server or Windows 2000 Advanced Server that are required or recommended for Nortel Networks Symposium Express Call Center. This guide does not provide detailed steps for installing and configuring the Windows 2000 operating system. For detailed procedures, see the documentation provided by Microsoft for installation and maintenance of the operating system.

You may have a server on which the operating system is already installed. Alternatively, you may need to do a fresh installation of the operating system on your server. For both cases, this section provides guidelines for setting up the operating system for Nortel Networks Symposium Express Call Center.

Windows 2000 versions supported

The server for Nortel Networks Symposium Express Call Center Release 4.2 requires the Microsoft Windows 2000 Server or Windows 2000 Advanced Server operating system.

ATTENTION

Other versions of the Windows 2000 operating system software, such as Windows 2000 Datacenter Server and Windows 2000 Professional, are not supported for the server.

Overview of configuration requirements

Disk partitioning requirements for the operating system

The operating system must reside on drive C of your server on an NTFS partition with a minimum size of 3 Gbytes. The recommended size is 4 Gbytes. For details on disk partitioning requirements for additional drives, see “Drive partitioning for the server PC” on page 32.

Services required for Nortel Networks Symposium Express Call Center

Nortel Networks Symposium Express Call Center runs on the Windows Components installed by default when you install Windows 2000 Server or Windows 2000 Advanced Server as a stand-alone server, with the following exceptions:

- The Simple Network Management Protocol (SNMP) service must be installed on your server. This allows you to use an SNMP management system for remote monitoring. This service is not installed by default, so you must select it while installing or configuring the operating system.
- The Internet Information Service (IIS) must not be installed. If it is installed, it will degrade the server's performance. This service is installed by default, so you must remove it while installing or configuring the operating system.

Do not install any additional services on your server that are not installed by default or listed above.

Service Packs

At a minimum, Nortel Networks requires installation of the Windows 2000 Service Pack 2 (SP2). This service pack contains important security fixes and performance improvements for the operating system.

Nortel Networks' policy is to test Nortel Networks Symposium Express Call Center for compatibility with Service Packs when Microsoft releases them. Nortel Networks issues a product bulletin once the Service Pack has passed the compatibility tests.

To upgrade your service pack

1. Ensure that Nortel Networks has approved the use of the new service pack.
2. Determine a time when the upgrade can take place.
3. Back up the Nortel Networks Symposium Express Call Center server. See Chapter 15, "Backing up data."
4. Shut down Nortel Networks Symposium Express Call Center.
5. Upgrade the service pack following the instructions released with the service pack.

6 Restart the server.

Windows repair disk

Create a repair disk for your operating system installation. The disk contains the files you need to repair the operating system in case of corruption. For more information on creating and using this disk, refer to the instructions provided with the operating system.

Nortel Networks recommends that you create this disk

- after all software has been installed and configured, and the server is running in a stable condition
- on a regular basis after any maintenance activities are performed on the server, or any time the server configuration changes

Configuring Windows 2000

Introduction

This section provides two options for configuring Windows 2000 Server or Windows 2000 Advanced Server for use with Release 4.2 of Nortel Networks Symposium Express Call Center.

- If you are installing a fresh copy of the operating system, follow the procedures in “Installing a fresh copy of Windows 2000” below.
- If you are configuring the operating system after it is installed, follow the procedures in “Configuring Windows 2000 if it is already installed” on page 117.

CAUTION

Risk of conversion failure

If your server has Windows NT installed, Nortel Networks does not recommend that you upgrade from Windows NT to the Windows 2000 operating system. Instead, you must install a new copy of Windows 2000 Server or Windows 2000 Advanced Server. This eliminates the possibility of carrying over incorrect settings from the previous installation.

On the Meridian 1/CSE 1000 switch, ensure that the switch host name, IP name, and net mask are the same as those displayed by the STAT ELNK command in LD 137. Ensure that the switch serial number matches the one delivered with the Nortel Networks Symposium Express Call Center keycode by using the TID command in LD 22. The serial number must match exactly, including uppercase and lowercase letters.

Installing a fresh copy of Windows 2000

If you are installing a fresh copy of Windows 2000, use the checklists in this section to configure the operating system correctly. The first checklist lists each window in the Setup wizard for the Windows 2000 operating system and provides guidelines for completing any windows that have required or recommended settings for Release 4.2 of Nortel Networks Symposium Express Call Center. The second checklist lists some additional configuration steps you must carry out. When you finish the checklists, the configuration of the operating system is complete.

Before you start the checklists

1 Complete the worksheet titled “Installation and configuration checklists” on page 44.

2 Verify all of the IP addresses and host names. The IP addresses and host names must be unique within the network.

3 If your server uses RAID, make sure that the RAID configuration is set up according to the manufacturer’s instructions.

4 Obtain a CD-ROM containing Windows 2000 Server or Windows 2000 Advanced Server. You may also require boot disks.

ATTENTION Other versions of the Windows 2000 operating system software, such as Windows 2000 Datacenter Server and Windows 2000 Professional, are not supported for the server.

5 Start the installation of Windows 2000 Server or Windows 2000 Advanced Server according to the instructions supplied with the operating system. Follow the on-screen instructions to create a partition for the operating system. This partition must reside on drive C of your server on an NTFS partition with a minimum size of 3 Gbytes (3072 Mbytes). The recommended size is 4 Gbytes (4096 Mbytes).

Result: Setup copies the operating system files to the installation folders on the new partition. When the copy process is complete, the system restarts. The Windows 2000 Setup wizard appears.

6 Use the following checklist to complete the windows in the wizard.

Checklist for completing the Windows 2000 Setup wizard

Use the following checklist as you move through each window of the Windows 2000 Setup wizard:

Window in the Windows 2000 Setup wizard	Guidelines for completing this window	✔
Installing Devices window	Setup detects and installs devices automatically.	
Regional Settings window	Complete this window as required for your site.	
Personalize Your Software window	Complete this window as required for your site.	
Your Product Key window	Complete this window as required for your site.	
Licensing Modes window	Nortel Networks recommends that you use the “Per server” licensing mode and that you have a minimum of five concurrent connections. This is the default.	
Computer Name and Administrator Password window	Type the host/computer name and administrator password, as recorded in the worksheet titled “Installation and configuration checklists” on page 44. **Note:** Pay close attention to the naming rules for the computer name as described in the worksheet (no spaces, hyphens, or dashes are allowed).	

<table>
<tr><th>Window in the Windows 2000 Setup wizard</th><th>Guidelines for completing this window</th><th>✔</th></tr>
<tr><td>Windows 2000 Components window</td><td>Make the following changes to the default Windows components:
Uncheck Internet Information Services (IIS). Do not install this component or it will degrade the performance of the server.
Double-click Management and Monitoring Tools, and then check Simple Network Management Protocol to install it. Click OK.
Do not make changes to additional components.</td><td></td></tr>
<tr><td>Modem Dialing Information window</td><td>Complete this window as required for your site.

Note: This window appears if you have a modem attached to the server. If this window does not appear, proceed to the Date and Time Settings window.</td><td></td></tr>
<tr><td>Date and Time Settings window</td><td>Complete this window as required for your site. Make sure the correct time zone is set for the server.

For the check box Automatically adjust clock for daylight saving changes, ensure that this is unchecked.</td><td></td></tr>
<tr><td>Networking Settings window</td><td>After the system has installed the networking components and the status bar has finished scrolling, select Custom settings.</td><td></td></tr>
</table>

Window in the Windows 2000 Setup wizard	**Guidelines for completing this window**	✔
Networking Components window	Use this window to select networking components and set up the TCP/IP parameters for the ELAN network interface card. If your server also has a CLAN network interface card, you must complete these steps for the CLAN card as well. Refer to your entries in the IP address table in the worksheet titled “Installation and configuration checklists” on page 44. **Note:** The CLAN network interface card is required only if you are installing a stand-alone client in addition to the coresident client, or if you want to perform scheduled backups to a remote directory on a network computer instead of a tape. **Networking components** The Windows 2000 Setup wizard detects the network interface card and displays a list of networking components for that card. The following three components are selected by default. Do not deselect any of these default networking components: ■ Client for Microsoft Networks ■ File and Printer Sharing for Microsoft Networks ■ Internet Protocol (TCP/IP)	

Window in the Windows 2000 Setup wizard	**Guidelines for completing this window**	✔
Networking Components window (continued)	**TCP/IP parameters** Set up the TCP/IP parameters for the card as follows: **1** Click Internet Protocol (TCP/IP), and then click Properties. **2** In the General tab, type the IP information required for the card (for example, IP address, subnet mask, and default gateway). Consult with the network administrator for the site. **Note:** To complete the installation successfully, you must type an IP address for each network interface card. If you do not yet have the correct IP addresses for the cards, then type "dummy" IP addresses now. Remember to reconfigure the cards with the correct addresses later. **3** From the General tab, click Advanced. Use the DNS and WINS tabs to type information about DNS and WINS servers. Consult with the network administrator for the site.	

<table>
<tr><th>Window in the Windows 2000 Setup wizard</th><th>Guidelines for completing this window</th><th>✔</th></tr>
<tr><td>Workgroup or Computer Domain window</td><td>Select “No, this computer is not on a network, or is on a network without a domain.” Nortel Networks recommends that your server be part of a workgroup rather than a domain. It should be a stand-alone server with static IP addresses.

In the “Workgroup or computer domain” box, type the workgroup name, as per your entry in the worksheet titled “Installation and configuration checklists” on page 44.

Note: Installation of Nortel Networks Symposium Express Call Center in its own workgroup rather than in a Microsoft domain reduces the following:
■ potential performance impacts on Nortel Networks Symposium Express Call Center
■ unnecessary network traffic caused by the use of the Microsoft domain
■ potential security openings into Nortel Networks Symposium Express Call Center through the Microsoft domain

Nortel Networks Symposium Express Call Center does not need to be within a Microsoft domain for the following reasons:
■ The only network O/S dependency for Nortel Networks Symposium Express Call Center is TCP/IP.
■ Nortel Networks Symposium Express Call Center does not use any of the Microsoft networking resources offered by the Microsoft domain.
■ Nortel Networks Symposium Express Call Center does not share any of its resources with domain members.</td><td></td></tr>
</table>

Once the Windows 2000 Setup wizard completes the installation of the operating system, you must perform some additional configuration steps to prepare for the installation of Nortel Networks Symposium Express Call Center. Remove the boot disk or CD-ROM and complete the next checklist. Before you continue with the following configuration steps, you must log on to Windows 2000 for the first time. This causes the Windows 2000 Configure Your Server wizard to appear. This wizard is not necessary for Nortel Networks Symposium Express Call Center functionality. Perform the following steps:

1 In the first window, select I will configure this server later.

2 Click Next.

Result: The Configure Your Server window appears.

3 Uncheck Show this screen on startup.

4 Close the window to save your changes.

Note: Each time you log on to Windows 2000 as a new user for the first time, the Windows 2000 Configure Your Server wizard appears. Perform the above steps each time you see this wizard.

Checklist for configuring Windows 2000 following a fresh installation

Step	Details	✔
1 Verify that the SNMP service is installed.	Ensure that the Simple Network Management Protocol (SNMP) service is installed. If not, install it. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Add/Remove Programs. **3** Click Add/Remove Windows Components to view a list of the installed components. **4** Select Management and Monitoring Tools, and then click Details. **5** Make sure the check box beside SNMP is checked. If it is checked, then SNMP is installed. **6** Click OK to return to the Add/Remove Windows Components property page. **Note:** Once the server software is installed, you may also choose to configure the SNMP service to forward traps to your Network Management System. This step is included in the post-installation instructions (see “Configuring SNMP on the server” on page 313).	

Step	Details	✔
2 Verify that the IIS service is not installed.	Ensure that Internet Information Services (IIS) is not installed. If it is installed, remove it. **TIP:** On the Add/Remove Windows Components property page, make sure that the check box beside Internet Information Services is not checked.	
3 Check the virtual memory settings.	Verify that the virtual memory on the server is RAM size times 1.5. Set both the initial and maximum size to this value. If the virtual memory is smaller, increase it to this amount. The paging file should be on drive C. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click System. **3** On the General tab, take note of the server’s RAM size. **4** Click the Advanced tab, and then click Performance Options. **5** Click Change to view and make changes to the virtual memory settings. **6** Restart the server if prompted. **Note:** The maximum paging file size per volume is 4095 Mbytes. If you require more space, you can distribute your paging files across several volumes. Alternatively, you can create paging files in separate folders on the same volume. For more information, see Article number Q237740 in the Microsoft Knowledge Base.	
4 Check that the computer name and DNS host name match.	You must ensure that the Windows computer name and TCP/IP DNS host name are identical, including uppercase and lowercase letters. For instructions, see “Making sure the computer name and DNS host name match” on page 128.	

Step	Details	✔
5 Configure the modem connection for remote access.	Configure a direct serial connection for the modem hardware connected to your server. The modem uses COM 1. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Phone and Modem Options. **3** Click the Modems tab, and then click Add. **4** Follow the instructions in the Add/Remove Hardware Wizard to detect the modem and install the driver.	
6 Configure the operating system for remote access.	Configure an incoming connection on the server to allow for remote support through the dial-up modem. For instructions, see "Configuring the operating system for remote access" on page 132.	
7 Check the bindings order for the CLAN and ELAN cards.	You must configure the bindings order of the network interface cards so that the CLAN card comes first, then the ELAN card, and then the virtual adapters for remote access. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Network and Dial-up Connections. **3** Click either the CLAN or ELAN connection, and then from the Advanced menu, click Advanced Settings. **4** In the Connections box, make sure that the CLAN connection is listed first. If it is not first, adjust the order.	

<table>
<tr><th>Step</th><th>Details</th><th>✔</th></tr>
<tr><td>8 Check the serial port configuration.</td><td>If you are using a serial port for remote access support, use the Windows Device Manager to check that a serial port exists.

TIP:
1 From the Start menu, choose Settings → Control Panel.
2 Double-click System, and then click the Hardware tab.
3 Click Device Manager, and then double-click Ports (COM & LPT) to view the communications ports.
If a serial port does not exist:
1 Ensure that the port is installed.
2 Go to the BIOS and correct the address of the missing port.</td><td></td></tr>
</table>

Step	Details	✔
9 Format all disk drives.	Ensure that the disk drives on the server are formatted as per the requirements for a PVI server. For details, see “Drive partitioning for the server PC” on page 32. **Notes:** ■ If the Welcome to the Write Signature and Upgrade Disk wizard appears, click Cancel. This wizard is only for configuring dynamic disk partitioning. Release 4.2 supports Windows basic disk partitioning, not dynamic disk volumes. When partitioning your drives, do not use the Windows option to upgrade to dynamic disks. ■ When you partition a server with a 4 Gbyte hard drive for Platform Vendor Independence, less than 4096 Mbytes of drive space are available because of the header size used for the extended partition. In this case, the PVI Compliance Check utility that you run just before installing the Symposium Express Call Center software may indicate a non-compliant condition as it looks for a minimum drive space of 4096 Mbytes. If there are 4080 Mbytes or more of space available, you can safely ignore this warning. You may encounter the same problem if you partition a larger hard drive (for example, if you split a 9 Gbyte hard drive using two 4 Gbyte partitions). **TIP:** **1** From the Start menu, choose Programs → Administrative Tools → Computer Management. **2** Under Storage, click Disk Management to view and change disk partitioning. **3** The operating system resides on the C partition. This must be the only Primary partition. You must configure all other partitions (D, F, G, and so on) as Logical drives within Extended partitions on basic disks. The following steps offer some guidelines on creating extended partitions and logical drives:	

Step	Details	✔
Format all disk drives (continued).	a. Right-click each disk that you want to configure. b. In the resulting menu, choose Create Partition. c. Follow the prompts in the Create Partition Wizard to create an extended partition for each disk. d. When you have created the extended partitions, you must create the logical drives by specifying their size and drive letters. Right-click each disk. e. In the resulting pop-up menu, choose Create Logical Drive. f. Follow the prompts in the Create Partition Wizard to create logical drives for each disk. **Note:** When you right-click a disk, if you see Write Signature in the pop-up menu, then you must choose this option to write a disk signature before you proceed with creating partitions and logical drives.	
10 Install any additional drivers required for your hardware configuration.	If your server requires any additional drivers for your hardware configuration, install them.	
11 Test the network connection.	Use the ping command to test the ELAN and, if required, the CLAN network connections. For instructions, see “Testing the network connection” on page 137. **Note**: If you are in the process of converting a Release 2.0 or 3.0 server to a Release 4.2 server, Nortel Networks recommends that you test your network connection before you remotely restore the database from the original server, or when you prepare your server for full service. To avoid network conflict, ensure that the new server is disconnected from the original server’s network (both CLAN and ELAN). Then, test the network drivers and TCP/IP stack.	
12 Install the Windows 2000 service pack.	Nortel Networks requires installation of the Windows 2000 Service Pack 2 (SP2) as the minimum service pack level for the Nortel Networks Symposium Express Call Center server.	

Step	Details	✔
13 Update the emergency repair disk.	Nortel Networks recommends that you restart the computer and update the emergency repair disk to record the latest configuration data for the server. Do this every time you change the server configuration (for example, if you change the computer name or IP address). **TIP:** **1** From the Start menu, choose Programs → Accessories → System Tools → Backup. **2** On the Welcome tab, click Emergency Repair Disk. **3** Follow the on-screen instructions.	

The operating system configuration is now complete.

Configuring Windows 2000 if it is already installed

If you have purchased a server on which the Windows 2000 Server or Windows 2000 Advanced Server operating system is already installed, this section provides a checklist of items you must configure before installing Release 4.2 of Nortel Networks Symposium Express Call Center. Refer to the documentation supplied with the operating system for step-by-step instructions.

Checklist for configuring Windows 2000 if it is already installed

Step	Details	✔
1 Complete the worksheet titled “Installation and configuration checklists” on page 44.	Make sure you have gathered the required information on this worksheet, such as the computer name and network card IP addresses, before you start the operating system configuration. This way, you have the data on hand during configuration.	
2 Change the Administrator password.	To ensure server security, change the default Administrator password for Windows as soon as possible. **TIP:** ■ Press Ctrl+Alt+Delete, and then click Change Password.	
3 Check the licensing mode.	Nortel Networks recommends that you use the Per server licensing mode, and that you have a minimum of five concurrent connections. This is the default setting. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Licensing to view and change the licensing mode.	

Step	Details	✔
4 Verify that the SNMP service is installed.	Ensure that the Simple Network Management Protocol (SNMP) service is installed. If not, install it. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Add/Remove Programs. **3** Click Add/Remove Windows Components to view a list of the installed components. **4** Select Management and Monitoring Tools, and then click Details. **5** Make sure the check box beside SNMP is checked. **6** Click OK to return to the Add/Remove Windows Components property page. **Note:** Once the server software is installed, you may also choose to configure the SNMP service to forward traps to your Network Management System. This step is included in the post-installation instructions (see “Configuring SNMP on the server” on page 313).	
5 Verify that the IIS service is not installed.	Ensure that Internet Information Services (IIS) is not installed. If it is installed, remove it. **TIP:** On the Add/Remove Windows Components property page, make sure that the check box beside Internet Information Services is not checked.	

<table>
<tr><th>Step</th><th>Details</th><th>✔</th></tr>
<tr><td>6 Check the virtual memory settings.</td><td>Verify that the virtual memory on the server is RAM size times 1.5. Set both the initial and maximum size to this value. If the virtual memory is smaller, increase it to this amount. The paging file should be on drive C.

TIP:
1 From the Start menu, choose Settings → Control Panel.
2 Double-click System.
3 On the General tab, take note of the server’s RAM size.
4 Click the Advanced tab, and then click Performance Options.
5 Click Change to view and make changes to the virtual memory settings.
6 Reboot the server if prompted.

Note: The maximum paging file size per volume is 4095 Mbytes. If you require more space, you can distribute your paging files across several volumes. Alternatively, you can create paging files in separate folders on the same volume. For more information, see Article number Q237740 in the Microsoft Knowledge Base.</td><td></td></tr>
<tr><td>7 Set the date and time.</td><td>Set the server date and time to help with analysis of system events that occur in the event logs during installation.

Note: For the Meridian 1/CSE 1000 switch, after the server is fully operational and connected to the switch, the switch controls the date and time.

TIP:
1 From the Start menu, choose Settings → Control Panel.
2 Double-click Date/Time to view and change these settings.</td><td></td></tr>
</table>

<table>
<tr><th>Step</th><th>Details</th><th>✔</th></tr>
<tr><td>8 Set the Time Zone for the server.</td><td>Make sure the correct time zone is set for the server.
For the Meridian 1/CSE 1000 switch, ensure that Automatically adjust clock for daylight saving changes is unchecked.
TIP:
1 From the Start menu, choose Settings → Control Panel.
2 Double-click Date/Time, and then click the Time Zone tab to view and change these settings.</td><td></td></tr>
<tr><td>9 Check the computer name.</td><td>Ensure that the computer name for your server is entered correctly according to the worksheet you filled out in step 1. Be sure to adhere to the naming rules described in the worksheet (no spaces, hyphens, or dashes are allowed).
TIP:
1 From the Start menu, choose Settings → Control Panel.
2 Double-click System, and then click the Network Identification tab.
3 To make changes, click Properties.
Note: You must ensure that the Windows computer name and TCP/IP DNS host name are identical, including uppercase and lowercase letters. For instructions, see “Making sure the computer name and DNS host name match” on page 128.</td><td></td></tr>
<tr><td>10 Check the workgroup name.</td><td>Ensure that the workgroup name for your server is entered correctly according to the worksheets that you filled out in step 1. Nortel Networks recommends that your server be part of a workgroup rather than a domain. It should be a stand-alone server with static IP addresses.
TIP:
(Same as tip as step above.)</td><td></td></tr>
</table>

Step	Details	✔
11 Configure TCP/IP for the ELAN and CLAN.	Use the worksheets that you filled out in step 1 to configure TCP/IP for the ELAN network interface card. If your server also has a CLAN network interface card, you must complete these steps for the CLAN card as well. For each card, enter the TCP/IP parameters (that is, IP address, subnet mask, default gateway). Consult with the network administrator at the customer's site. Refer to your entries in the IP address table in the worksheet titled "Installation and configuration checklists" on page 44. **Note:** The CLAN network interface card is required only if you are installing a stand-alone client in addition to the coresident client, or if you want to perform scheduled backups to a remote directory on a network computer instead of a tape. If your client PCs use Dynamic Host Control Protocol (DHCP) to communicate with the server, you must also configure the DNS and WINS options. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Network and Dial-up Connections. **3** Right-click the connection icon for the ELAN, and then click Properties. **4** Click Internet Protocol (TCP/IP), and then click Properties. **5** Use the General tab to enter TCP/IP parameters. **6** Click Advanced and use the DNS and WINS tabs for additional entries. **7** If required, repeat the steps above for the CLAN connection.	

Step	Details	✔
12 Configure the modem connection for remote access.	Configure a direct serial connection for the modem hardware connected to your server. The modem uses COM 1. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Phone and Modem Options. **3** Click the Modems tab, and then click Add. **4** Follow the instructions in the Add/Remove Hardware Wizard to detect the modem and install the driver.	
13 Configure the operating system for remote access.	Configure an incoming connection on the server to allow for remote support through the dial-up modem. For instructions, see “Configuring the operating system for remote access” on page 132.	
14 Check the bindings order for the CLAN and ELAN cards.	You must configure the bindings order of the network interface cards so that the CLAN card comes first, then the ELAN card, and then the virtual adapters for remote access. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Network and Dial-up Connections. **3** Click either the CLAN or ELAN connection, and then from the Advanced menu, click Advanced Settings. **4** In the Connections box, make sure that the CLAN connection is listed first. If it is not first, adjust the order.	

Step	Details	✔
15 Check the serial port configuration.	If you are using a serial port for remote access support, use the Windows Device Manager to check that a serial port exists. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click System, and then click the Hardware tab. **3** Click Device Manager, and then double-click Ports (COM & LPT) to view the communications ports. If a serial port does not exist: **1** Ensure that the port is installed. **2** Go to the BIOS and correct the address of the missing port.	

Step	Details	✔
16 Format all disk drives.	Ensure that the disk drives on the server are formatted as per the requirements for a PVI server. For details, see “Drive partitioning for the server PC” on page 32. **Notes:** ■ If the Welcome to the Write Signature and Upgrade Disk wizard appears, click Cancel. This wizard is only for configuring dynamic disk partitioning. Release 4.2 supports Windows basic disk partitioning, not dynamic disk volumes. When partitioning your drives, do not use the Windows option to upgrade to dynamic disks. ■ When you partition a server with a 4 Gbyte hard drive for Platform Vendor Independence, less than 4096 Mbytes of drive space are available because of the header size used for the extended partition. In this case, the PVI Compliance Check utility that you run just before installing the Symposium Express Call Center software may indicate a non-compliant condition as it looks for a minimum drive space of 4096 Mbytes. If there are 4080 Mbytes or more of space available, you can safely ignore this warning. You may encounter the same problem if you partition a larger hard drive (for example, if you split a 9 Gbyte hard drive using two 4 Gbyte partitions). **TIP:** **1** From the Start menu, choose Programs → Administrative Tools → Computer Management. **2** Under Storage, click Disk Management to view and change disk partitioning. **3** The operating system resides on the C partition. This must be the only Primary partition. You must configure all other partitions (D, F, G, and so on) as Logical drives within Extended partitions on basic disks.	

Step	Details	✔
Format all disk drives (continued).	a. Right-click each disk that you want to configure. b. In the resulting pop-up menu, choose Create Partition. c. Follow the prompts in the Create Partition Wizard to create an extended partition for each disk. d. When you have created the extended partitions, you must create the logical drives by specifying their size and drive letters. Right-click each disk. e. In the resulting menu, choose Create Logical Drive. f. Follow the prompts in the Create Partition Wizard to create logical drives for each disk. **Note:** When you right-click a disk, if you see Write Signature in the pop-up menu, then you must choose this option to write a disk signature before you proceed with creating partitions and logical drives.	
17 Install any additional drivers required for your hardware configuration.	If your server requires any additional drivers for your hardware configuration, install them.	
18 Test the network connection.	Use the ping command to test the ELAN and, if required, the CLAN network connections. For instructions, see “Testing the network connection” on page 137. **Note**: If you are in the process of converting a Release 2.0 or 3.0 server to a Release 4.2 server, Nortel Networks recommends that you test your network connection before you remotely restore the database from the original server, or when you prepare your server for full service. To avoid network conflict, ensure that the new server is disconnected from the original server’s network (both CLAN and ELAN). Then, test the network drivers and TCP/IP stack.	
19 Install the Windows 2000 service pack.	Nortel Networks requires installation of the Windows 2000 Service Pack 2 (SP2) as the minimum service pack level for Nortel Networks Symposium Express Call Center. If you have added SNMP or removed IIS, then you must reapply Windows 2000 Service Pack 2 (SP2) or higher.	

Step	Details	✔
20 Update the emergency repair disk.	Nortel Networks recommends that you restart the computer and update the emergency repair disk to record the latest configuration data for the server. Do this every time you change the server configuration (for example, if you change the computer name or IP address). **TIP:** **1** From the Start menu, choose Programs → Accessories → System Tools → Backup. **2** On the Welcome tab, click Emergency Repair Disk.	

The operating system configuration is now complete.

Making sure the computer name and DNS host name match

Introduction

You must make sure that your server's computer name and DNS host name match exactly, including uppercase and lowercase letters. If these names do not match, you cannot install the Nortel Networks Symposium Express Call Center database software.

A mismatch in these names can occur, for example, if you do a fresh installation of the operating system and enter the computer name in uppercase letters. Windows uses your entry to set both the computer name and the DNS host name. However, once the operating system installation is complete, you may find that Windows has set the DNS host name in uppercase letters as you entered it, but that the computer name is set in all lowercase letters. Use the procedures below to check the names and, if necessary, change them.

To make sure the names match

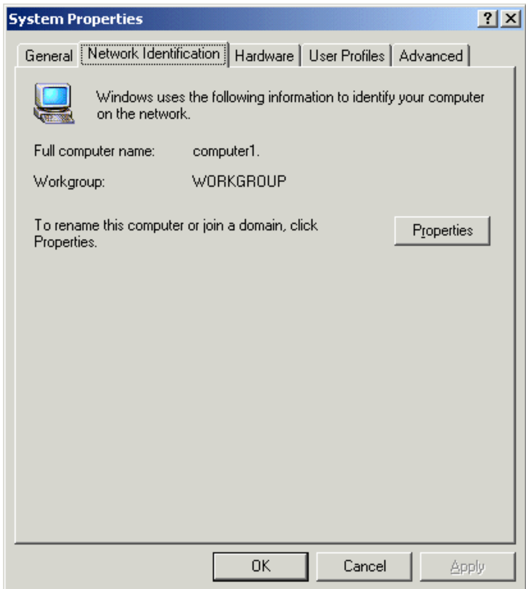
1 Once you have installed the operating system, log on to the server as **Administrator**.

2 From the Start menu, choose Settings → Control Panel, and then double-click the System icon.

Result: The System Properties window appears.

3 Click the Network Identification tab.

Result: The Network Identification information appears.



4 Write down the Full computer name exactly as it appears, including case.

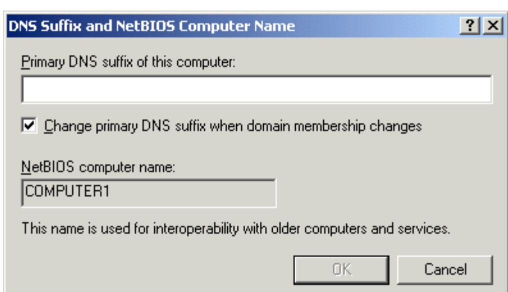
Note: Ignore the period at the end of the Full computer name.

5 Click Properties.

Result: The Identification Changes window appears.

6 Click More.

Result: The DNS Suffix and NetBIOS Computer Name window appears.



7 Compare the NetBIOS computer name on this window with the Full computer name that you wrote down to determine whether the names match exactly, including case.

8 Do one of the following:

- If the names match, close the windows you opened and continue with the configuration of your server.
- If the names do not match, follow the procedure below.

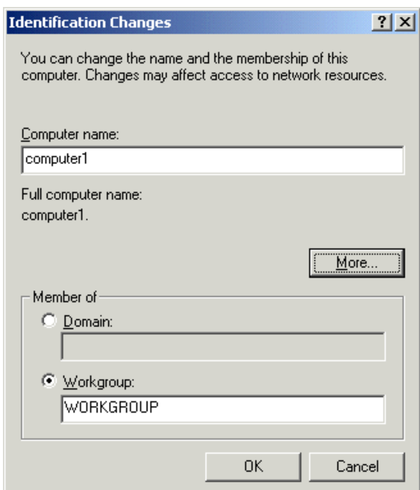
To update the computer name to match the DNS Host Name

Note: This procedure is a continuation of the previous procedure.

1 Write down the NetBIOS computer name exactly as it appears.

2 From the DNS Suffix and NetBIOS Computer Name window, click Cancel.

Result: The Identification Changes window appears.



3 In the Computer name box, type the NetBIOS computer name exactly as you wrote it down in step 1. Then click OK.

Note: If the only difference between the two names is the case (uppercase or lowercase letters), you cannot click OK to register the change because Windows does not recognize changes to case. In this situation, perform the following workaround:

a. Type any character at the end of the Computer name to enable the OK button.

b. Click OK.

c. When the system prompts you to restart, click OK, but do not restart the server.

Result: The System Properties window appears.

d. Click Properties.

e. Go back to step 3 above.

Result: The system prompts you to restart.

4 Click OK.

5 Click OK to close the System Properties window.

Result: The system prompts you to restart the server.

6 Click Yes.

7 When the system has restarted, log on to the server as **Administrator**.

8 To make sure the names match now, repeat the procedure “To make sure the names match” on page 128.

If you have skipped to this procedure from the Windows 2000 configuration checklist, then you must return to the checklist and finish the remaining steps.

Configuring the operating system for remote access

Introduction

To enable support personnel to connect to the server remotely, you must configure remote access on the server.

To configure remote access

1. From the Start menu, click Settings → Control Panel.

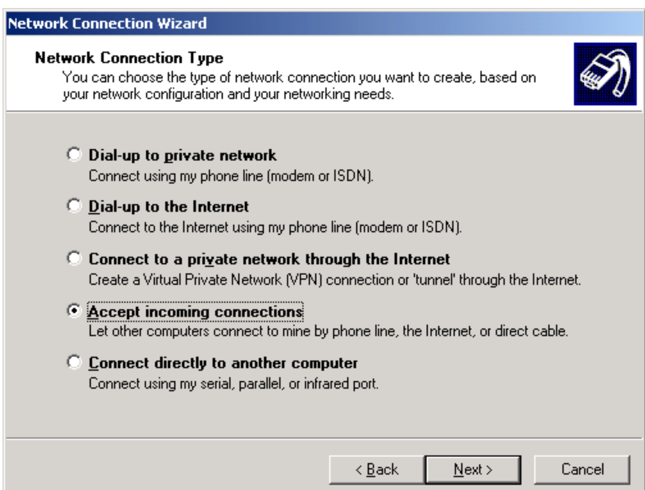
   Result: The Control Panel window appears.

2. Double-click Network and Dial-up Connections.
3. Double-click Make New Connection.

   Result: The Welcome to the Network Connection Wizard appears.

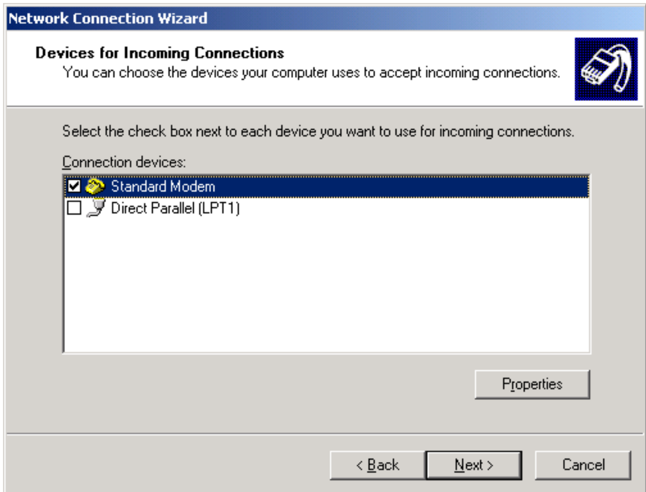
4. Click Next.

   Result: The Network Connection Type window appears.



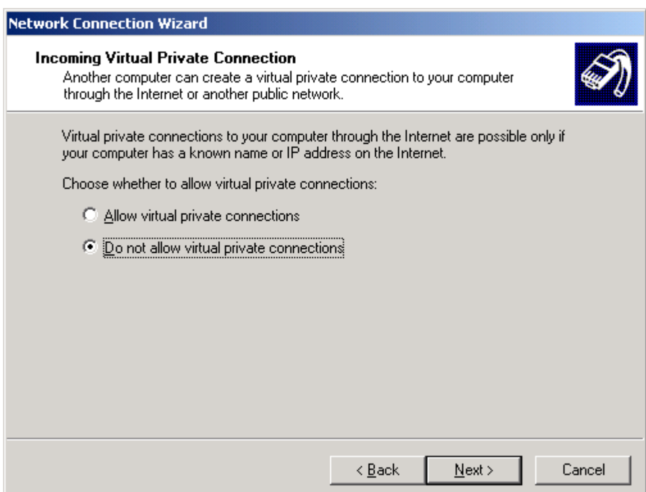
5 Click Accept incoming connections, and then click Next.

Result: The Devices for Incoming Connections window appears.



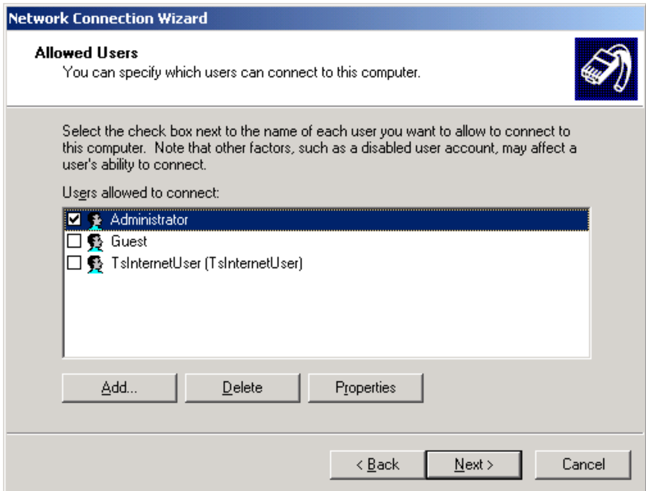
6 Ensure that the server's modem appears in the Connection devices box with a check mark beside it, and then click Next.

Result: The Incoming Virtual Private Connection window appears.



7 Click Do not allow virtual private connections, and then click Next.

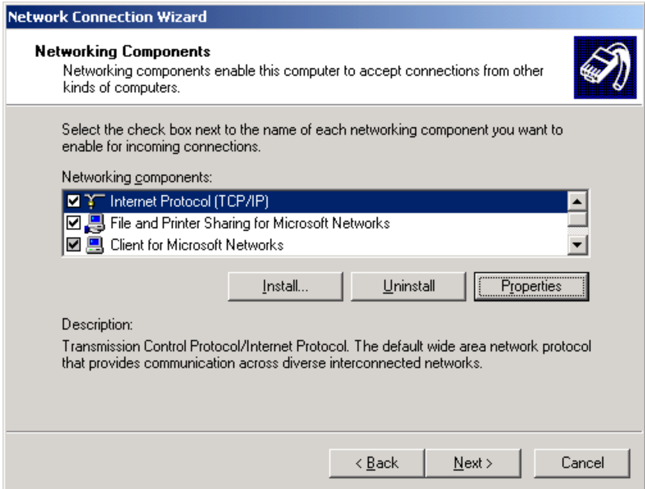
Result: The Allowed Users window appears.



8 Click the box to place a check mark beside the user Administrator, and then click Next.

Note: After you install the Nortel Networks Symposium Express Call Center software, three additional users appear in this box: NGenSys, NGenDesign, and NGenDist. You must ensure that there are check marks beside these names as well to enable these users to connect to the server remotely. This step is covered in the post-installation instructions (see “Configuring the NGenSys, NGenDesign, and NGenDist user accounts for remote access” on page 304).

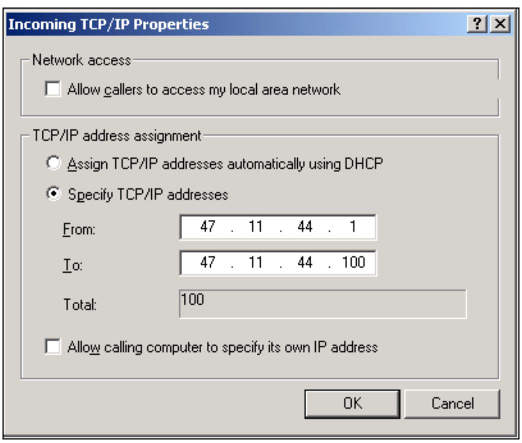
Result: The Networking Components window appears.



9 Ensure that there are default check marks beside the three components, as shown in the preceding illustration.

10 In the Networking components box, highlight Internet Protocol (TCP/IP), and then click Properties.

Result: The Incoming TCP/IP Properties window appears.



11 Ensure that the check box beside Allow callers to access my local area network is *not* checked.

12 Click Specify TCP/IP addresses.

13 In the From and To boxes, you must specify a range of IP addresses in the same subnet as the CLAN IP address. This range must include at least two available IP addresses.

Note: Obtain the range of addresses from your network administrator. Remote access uses the first IP address. The remaining IP addresses are loaned to each dial-in client. Your administrator must select the range carefully.

14 Ensure that the check box beside Allow calling computer to specify its own IP address is *not* checked.

15 Click OK.

16 In the Networking Components window, click Next.

Result: The Completing the Network Connection Wizard window appears.

17 Type the name of the incoming connection as you want it to appear in the Network and Dial-up Connections folder.

18 Click Finish.

Result: The new connection appears in the Network and Dial-up Connections folder.

Testing the network connection

Follow the procedures below to test the network connection.

1 From the Windows Start menu, choose Programs → Command Prompt.

Result: An MS-DOS window appears.

2 At the prompt, type **ipconfig,** and then press Enter.

3 Verify the IP address, subnet masks, and default gateways.

4 Determine if you can ping your own server by typing **ping *aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the server.

5 Determine if you can ping the M1, M1 IE, or Succession CSE 1000 switch by typing **ping *aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the switch.

6 Determine if you can ping the client PC by typing **ping *aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the client PC.

7 From the client PC, determine if you can ping the server by typing **ping *aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the server.

8 Type **exit,** and then press Enter to exit from the MS-DOS window.

Note: If you are unable to communicate successfully over the network, see “Problems connecting to the server” on page 633.

Section B: Installing server software

In this section

Overview

Introduction

This section explains how to install the server software for Nortel Networks Symposium Express Call Center. Before you start the server software installation, you must have completed Section A: “Configuring the operating system” on page 99.

You should also perform the checks listed below.

Check for additional documentation

Before performing an installation, check for the Distributor’s Technical Reference (DTR), any Installation Addendums, or updated customer documentation on your regional Nortel Networks Symposium Express Call Center technical web site. Refer to the web site at http://www.nortelnetworks.com (for end customers), or http://www.nortelnetworks.com/prd/picinfo/ (for distributors).

Check the location of the mapped CD-ROM drive

If you are installing the software from a mapped CD-ROM drive, ensure that the drive is on a local network, not across a WAN or dial-up connection. After some restarts, you must remap the drive.

Note: This method is not recommended, as network traffic can interfere with proper installation.

Make sure no third-party software is installed

Nortel Networks recommends that you do not install any third-party software on your Nortel Networks Symposium Express Call Center server. This can compromise system performance. Exceptions are

- pcAnywhere software, which is required for remote support
- antivirus software, which is required for security purposes

- Smartstart utilities

Checklist for installing the server software

The following table summarizes the steps involved in installing the server software and at least one copy of the client software. You must complete all of these steps:

Step	✔
Obtain the current and default administrator passwords.	
Perform a Platform Compliance Check (see page 144).	
Install the product software (see page 147).	
Install the latest Install-time PEP (see page 150).	
Install the product database (see page 150). **Note:** If you are installing an Asian version of Nortel Networks Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.	
Configure the server and database (see page 156).	
Install the latest Service Update pack and any required PEPs on the server (see page 273).	
Install the client software. See Section A: “Installing a coresident client” on page 209 or Section A: “Installing a stand-alone client” on page 237.	
Complete the required post-installation activities (see page 299).	
Create a database backup (see page 657).	
Install pcAnywhere (see page 171).	

Timing for installing the server and coresident client

It takes approximately 7 hours to install one Nortel Networks Symposium Express Call Center server and the coresident client software. This includes the following activities:

- completing the required checklists
- installing and configuring the operating system
- installing and configuring the server software
- installing Service Update packs and any required PEPs
- installing pcAnywhere
- installing the coresident client software
- creating a database backup of the new server

Installing the server software

Introduction

The installation procedure has three phases:

- Installing the product software (phase 1)
- Installing the product database (phase 2)
- Configuring the server and database (phase 3)

Before you start the installation, Nortel Networks highly recommends that you run the Platform Compliance Check utility, included with the Server Application CD, to ensure that your server meets the minimum requirements for this release of the Nortel Networks Symposium Express Call Center software.

Procedures for the platform compliance check and each of the three phases listed above are included in the following sections.

Note: Before you install the server software, ensure that you have applied the latest applicable Product Enhancement Packages (PEPs) to your switch.

Starting the Setup.exe program to begin installation

To use the Server Application CD and its installation programs, you must run the Setup.exe program. Once it is running, you can do any of the following tasks:

- Perform a platform compliance check.
- Install the Nortel Networks Symposium Express Call Center product software.
- Install and initialize the Nortel Networks Symposium Express Call Center product database.

To start the Setup.exe program

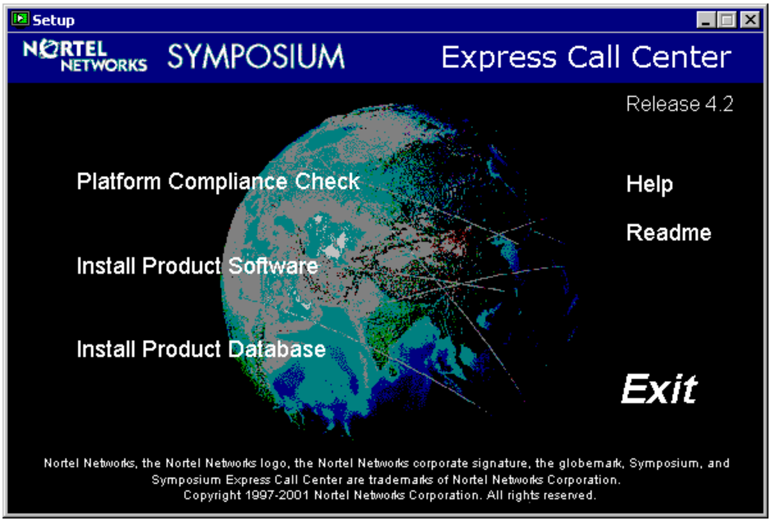
1 Log on to the server as **Administrator**.

2 Exit all applications and close all windows.

3 Insert the Server Application CD.

Note: If you are installing from a remote CD or a network share drive, map the CD to a drive letter on the server. Then navigate to the Setup.exe program and double-click it.

Result: The Setup main menu appears.



Performing a platform compliance check on your server

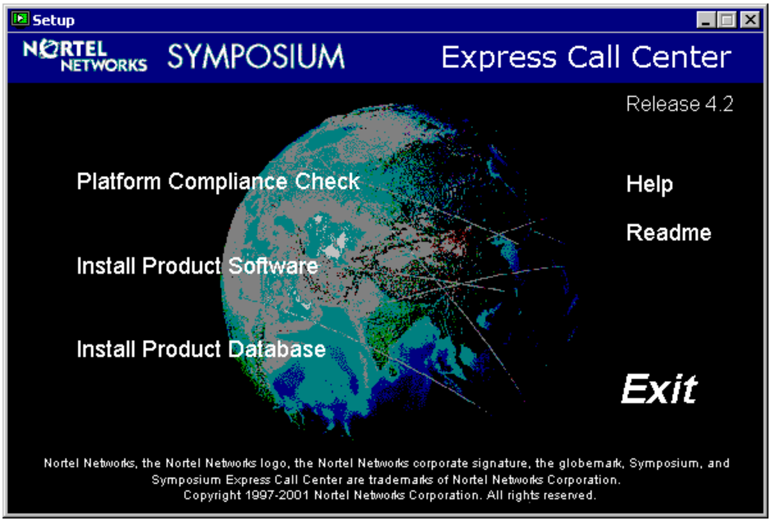
Before installing the Nortel Networks Symposium Express Call Center software, you must ensure that your server meets the requirements for a Platform Vendor Independence (PVI) server. The Server Application CD includes a program that you can run to check your server's basic compliance and identify any problems, such as the wrong operating system or incorrect disk partitioning. *Not all requirements for Platform Vendor Independence are checked.*

To perform a platform compliance check

1 Log on to the server as **Administrator**.

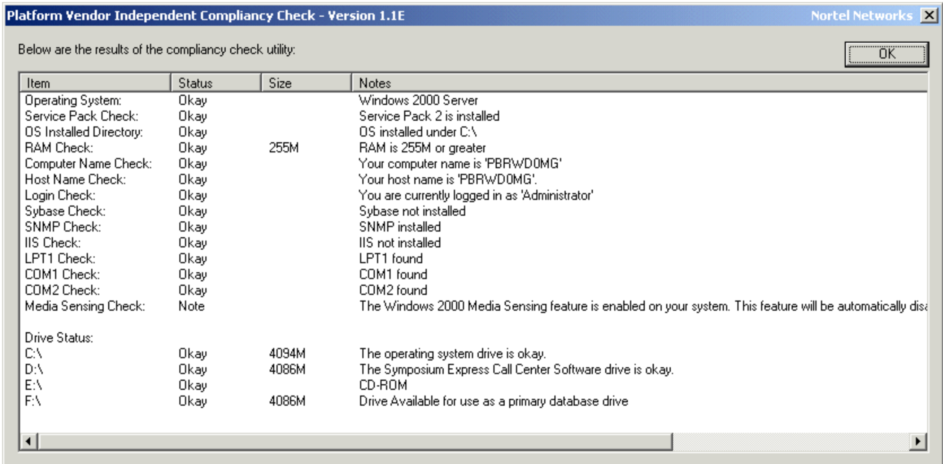
2 Insert the Server Application CD and wait for it to autorun.

Result: The Setup main menu appears.



3 Click Platform Compliance Check.

Result: The system checks your server to ensure it meets certain requirements for a PVI server. The results appear in a window similar to the one shown below. If your server is compliant, the Status column shows Okay beside all items listed. For any non-compliant items, the Status column shows Error, and the Notes column provides information about the PVI requirement.



4 Do one of the following:

- If all items show the Okay status, your system has passed the compliance check. Click OK to exit from the Platform Vendor Independent Compliancy Check dialog box.

  Result: The platform compliance check has completed successfully.

- If any items show the Error status:

  a. Take note of the non-compliant items and the related information in the Notes column.

  b. Click OK to exit from the Platform Vendor Independence Compliancy Check dialog box.

  c. Correct the problems so that the server is compliant. For more information on PVI requirements, see "Minimum hardware specifications for the server PC" on page 30.

  d. Rerun the platform compliance check. If you had to restart the server to correct a non-compliance, go back to step 1. If you did not have to restart, go back to step 3.

Note: If your server does not have a COM2 port configured, the utility shows the following text in the Notes column for COM2 Check:

```
COM2 not found. When your server is fully installed
and configured, please manually stop and disable the
MAS LinkHandler Port #2 service from the Services
applet.
```

In this case, once you have completed the installation, you must follow the procedure “To disable the MAS LinkHandler service” on page 651.

Installing the product software (phase 1)

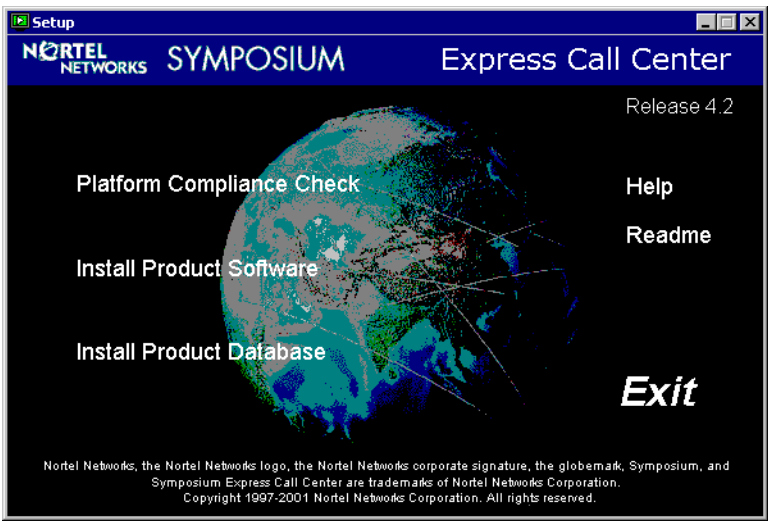
This procedure installs all Nortel Networks Symposium Express Call Center server features and components on the server.

To install the product software

1 Log on to the server as **Administrator**.

2 If the Server Application CD is not already running, insert the CD and wait for it to autorun.

Result: The Setup main menu appears.

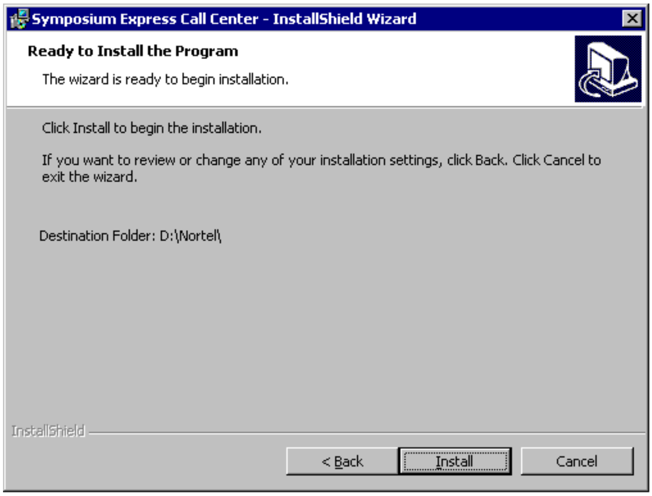


3 Click Install Product Software.

Result: The welcome window for Nortel Networks Symposium Express Call Center - InstallShield Wizard appears.

4 Click Next.

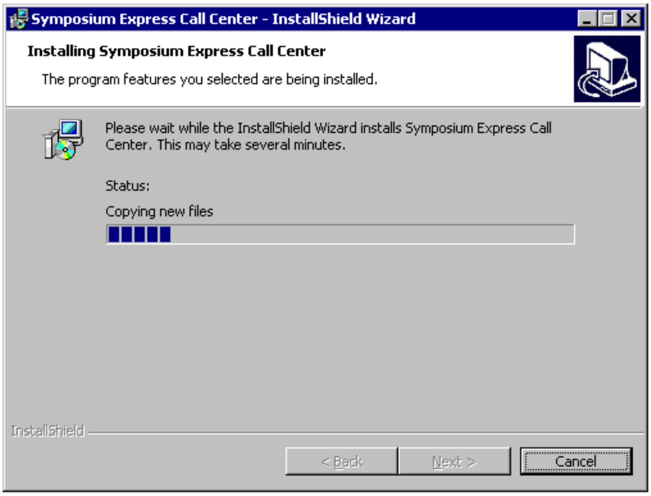
Result: The Ready to Install the Program window appears.



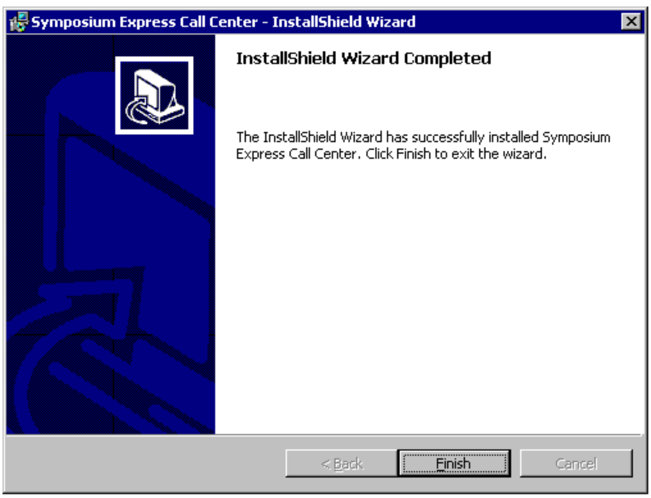
Note: If you click Cancel at any time during the product software installation, the InstallShield Wizard Completed window appears. The text on this window warns you that the software was not successfully installed.

5 Click Install.

Result: The system installs the Nortel Networks Symposium Express Call Center software on the server's drive D. This takes several minutes.



6 Wait until the following window appears:



7 Click Finish.

Result: The product software is installed.

Note: If you completed this procedure as part of a server recovery scenario or a platform migration, return now to the chapter that referenced this procedure. That chapter tells you what procedure to perform next.

Applying the latest Install-time PEP

Apply the latest Install-time PEP. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue through the next steps.

Note: The latest Install-time PEP is critical for installation and conversion.

The latest Install-time PEP is available on the Supplementary CD-ROM and from the Meridian PEP Library web site.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

For instructions on installing PEPs, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Installing the product database (phase 2)

This procedure installs the Sybase ASE 12.0 software, and then creates and initializes the database for the Nortel Networks Symposium Express Call Center server.

During the database installation, do not close any windows that appear unless the on-screen instructions tell you to do so.

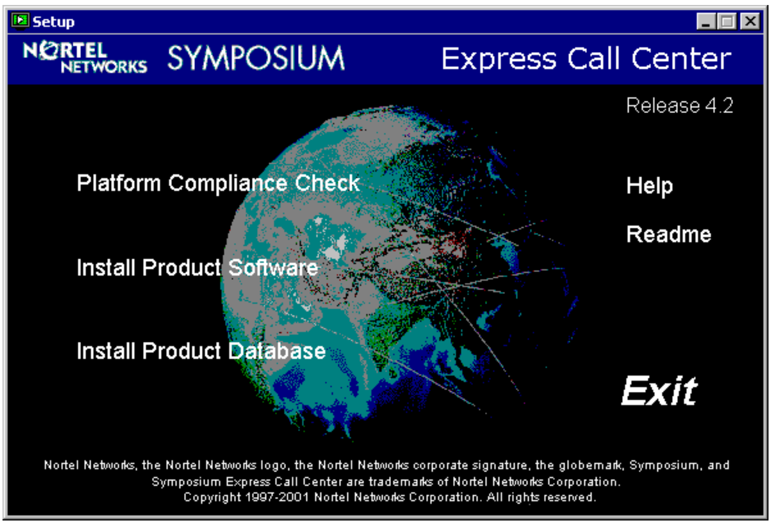
Note: The server restarts automatically several times during this procedure, and you must log back on to the server as **Administrator**. At this time, the next window of the installation program appears, but the Windows desktop does not appear in the background. This is normal. The Windows desktop reappears when the next window of the installation program appears.

To install the product database

1 Log on to the server as **Administrator**.

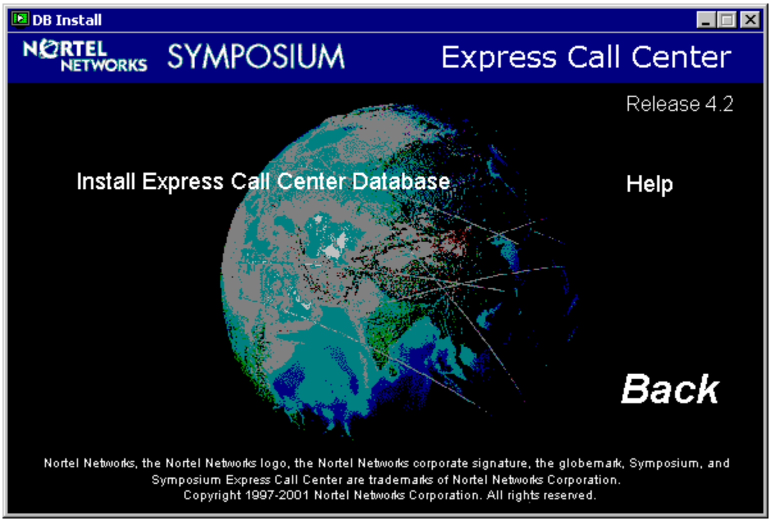
2 If the Server Application CD is not already running, insert the CD and wait for it to autorun.

Result: The Setup main menu appears.



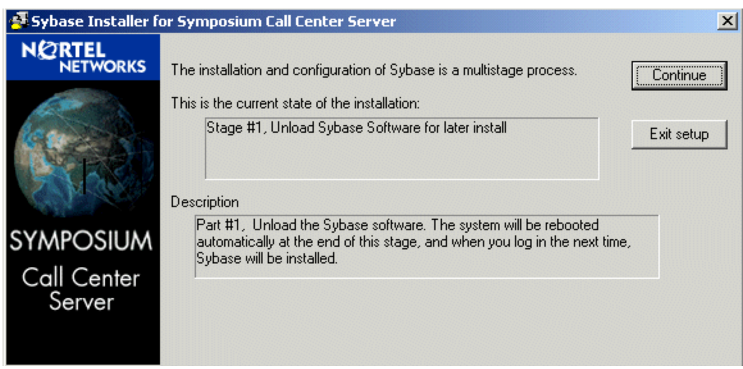
3 Click Install Product Database.

Result: The following window appears:



4 Select Install Express Call Center Database.

Result: The Sybase Installer window appears.



This window shows the status of the installation in stages and parts. There are six stages to the database installation and configuration; some stages are broken into parts. Stages appear in the top status box, and parts appear in the Description box.

ATTENTION

Before you proceed to the next step, ensure that the Nortel Networks Symposium Express Call Center Server Application CD is in the CD-ROM drive. The installation CD must be in the CD-ROM drive during the entire database installation process. Do not create a shortcut to the installation CD. To access the Nortel Networks Symposium Express Call Center setup wizard if autorun does not launch, from Windows Explorer, double-click Setup.exe under the CD-ROM directory.

5 Click Continue.

Note: When the installation begins, you can view the progress of each stage in a progress bar that appears at the bottom of the window.

Result: The system proceeds with Stage 1, Part 1. When Part 1 is complete, the server automatically restarts.

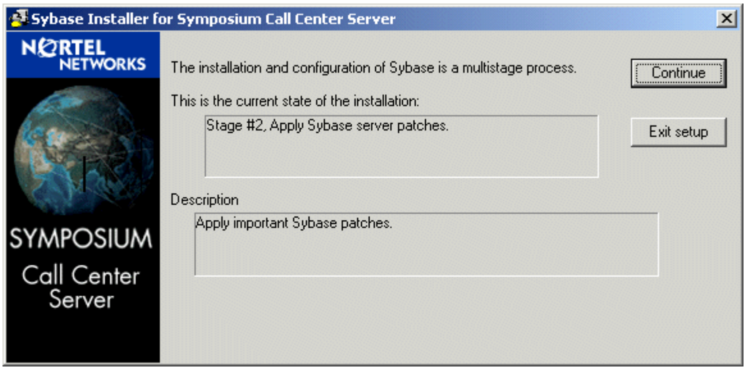
6 Log on as **Administrator**.

Result: The Sybase Installer window reappears, showing the status as Stage 1, Part 2.

Note: In rare cases, an MS-DOS window appears, instead of the Sybase Installer window. When this happens, the database installation still continues. Wait until the MS-DOS window completes its processes (do not close it), and the Sybase Installer window reappears, as shown in the Result following step 7. When this window appears, proceed to step 8.

7 Click Continue.

Result: Stage 1, Part 2 proceeds to completion. When it is finished, the desktop reappears, followed by the next installation window, as shown:



8 Click Continue.

Result: The installation proceeds through Stage 2, and Stage 3, Part 1. When Part 1 is complete, the server automatically restarts.

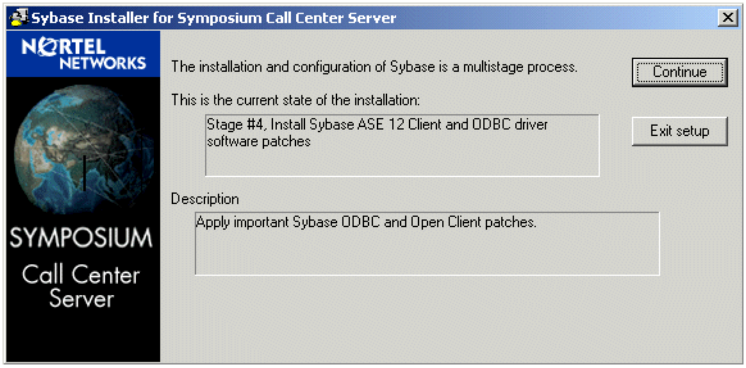
9 Log on as **Administrator**.

Result: The Sybase Installer window reappears, showing the status as Stage 3, Part 2.

Note: In rare cases, an MS-DOS window appears, instead of the Sybase Installer window. When this happens, the database installation still continues. Wait until the MS-DOS window completes its processes (do not close it), and the Sybase Installer window reappears, as shown in the Result following step 10. When this window appears, proceed to step 11.

10 Click Continue.

Result: Stage 3, Part 2 proceeds to completion. When it is finished, the desktop reappears, followed by the next installation window, as shown:

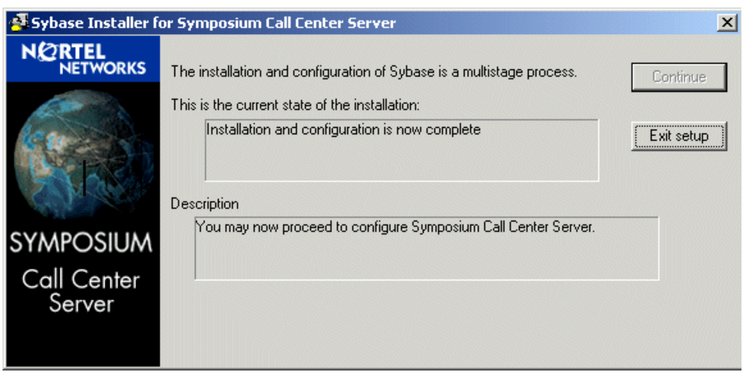


11 Click Continue.

Result: The installation proceeds through Stages 4, 5, and 6.

Note: These stages can take from 1 to 3 hours to complete, depending on your CPU speed, and the size and number of database partitions that you have.

12 Wait until the following window appears:



13 Click Exit setup. Do not restart the server.

14 Remove the CD from the drive.

Result: The database is installed.

Note: If you completed this procedure as part of a server recovery scenario or a platform migration, return to the chapter that referenced this procedure now. That chapter tells you what procedure to perform next.

Note: If you are installing an Asian version of Nortel Networks Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.

Configuring the server and database (phase 3)

If the Nortel Networks Symposium Express Call Center software and database software is installed on your server, you can proceed to configure the server and database. In this procedure, a configuration utility presents a series of dialog boxes where you enter information about your server and your call center site. Before you start, you should have the following information ready:

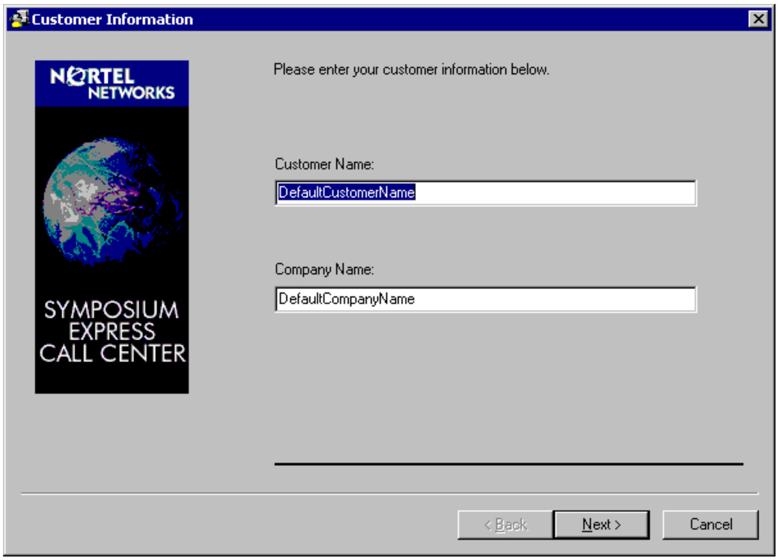
- customer and company name
- the serial number and keycode for your Nortel Networks Symposium Express Call Center software
- your switch name and IP address
- your ELAN IP address, and if required, your CLAN IP address
- the site name for your Nortel Networks Symposium Express Call Center
- if you are using CallPilot for voice processing, information on your voice connection setup

To configure the server and database (phase 3)

1 Log on to the server as **Administrator**.

2 From the Start menu, choose Programs → Nortel Networks Symposium Express Call Center → Server Setup Configuration.

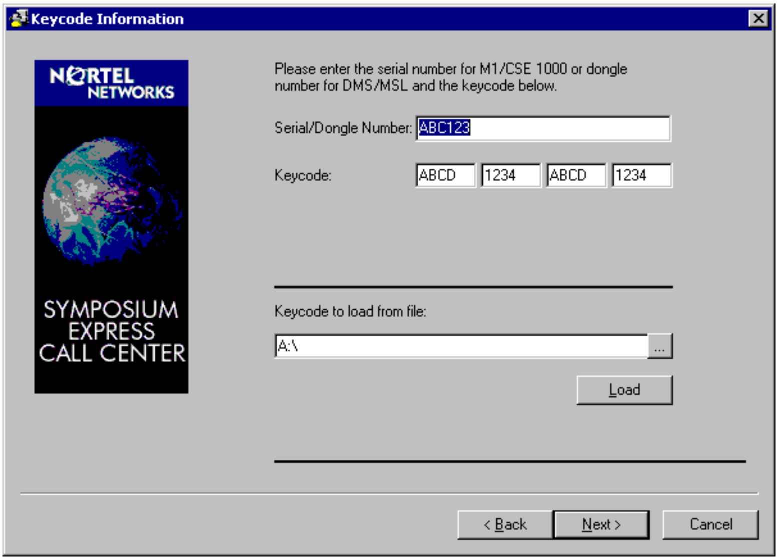
Result: The Customer Information dialog box of the configuration utility appears.



3 Enter the customer and company names.

4 Click Next.

Result: The Keycode Information dialog box appears.



5 Type your serial number for the switch and the keycode in the appropriate boxes.

Note: The serial number is used in the generation of the keycode. Make sure you enter the correct keycode for the serial number that you have.

6 Click Next.

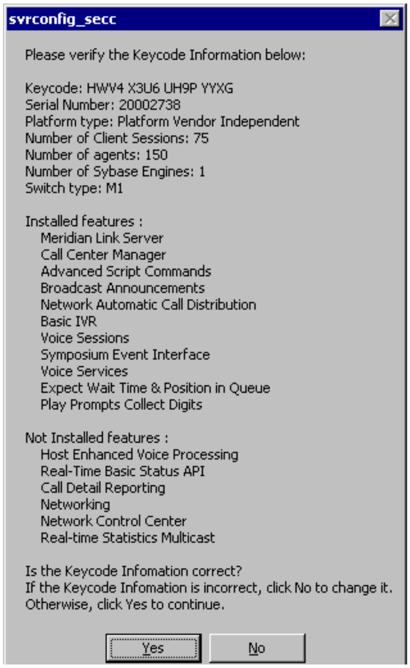
Note: If the system cannot validate your entries, it displays an error message. Do the following:

a. Click OK on the error message(s).

b. Check your entries in the Keycode Information dialog box, and make any corrections.

c. Click Next.

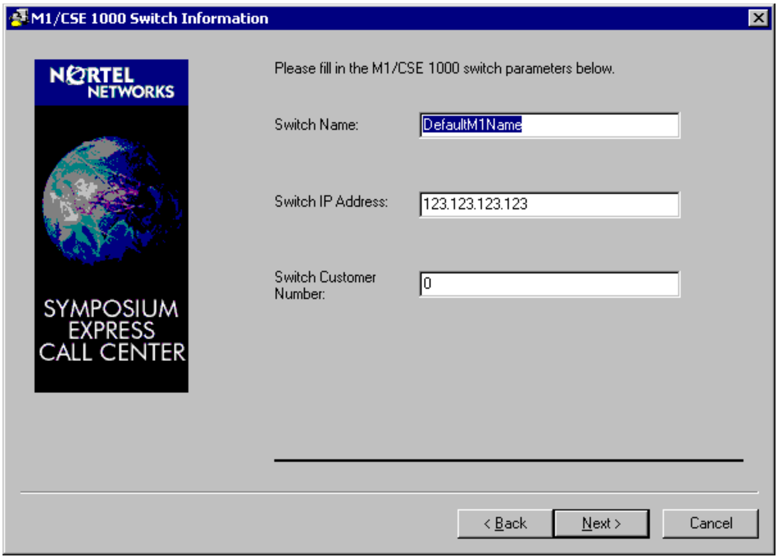
Result: If you entered a valid keycode and serial number, the system displays a dialog box similar to the following:



7 Check that the features listed match the product you purchased, and then do one of the following:

- If the information is not correct, you may have entered the keycode and serial number incorrectly. Click No and go back to step 5.
- If the information is correct, click Yes to continue.

Result: The M1/CSE 1000 Switch Information dialog box appears.



8 Enter the appropriate information for your switch.

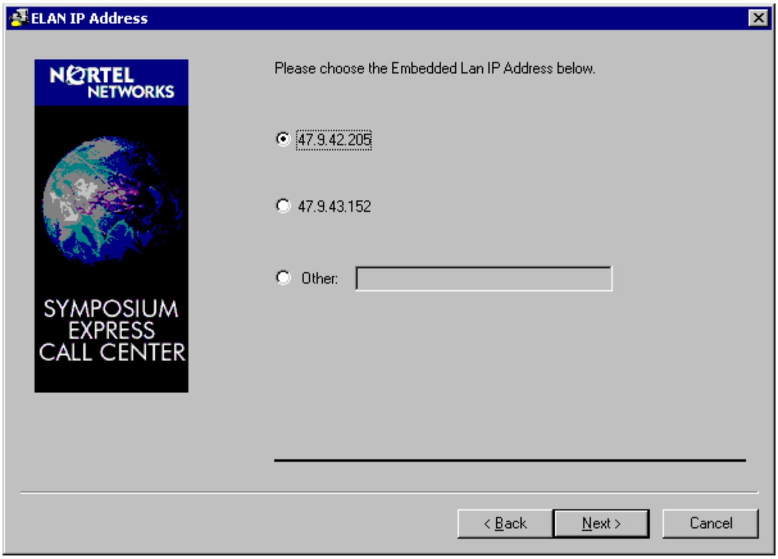
Note: The following restrictions apply to switch names:

- Valid characters for switch names are A–Z, a–z, 0–9, _ (underscore), and . (period).
- Switch names must begin with an alphabetic character and cannot contain spaces.
- The last character must not be an underscore or a period.
- Switch names must not exceed 80 characters in length.

Tip: If you are unsure of the correct information or if you make a mistake, you can change the switch information after you finish the installation. For more information, see “Feature Report” on page 594.

9 Click Next.

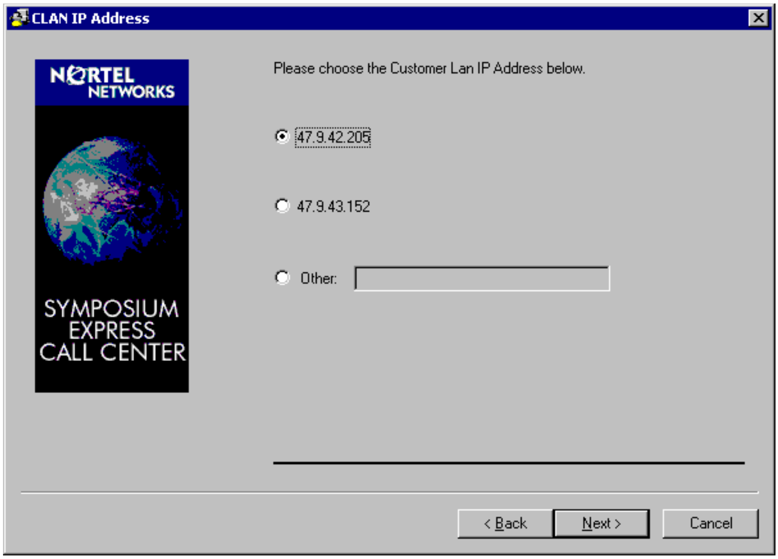
Result: The ELAN IP Address dialog box appears.



10 Click the radio button beside the correct IP address for your ELAN. If none of the addresses are correct, click Other, and then type the IP address.

11 Click Next.

Result: The CLAN IP Address dialog box appears.

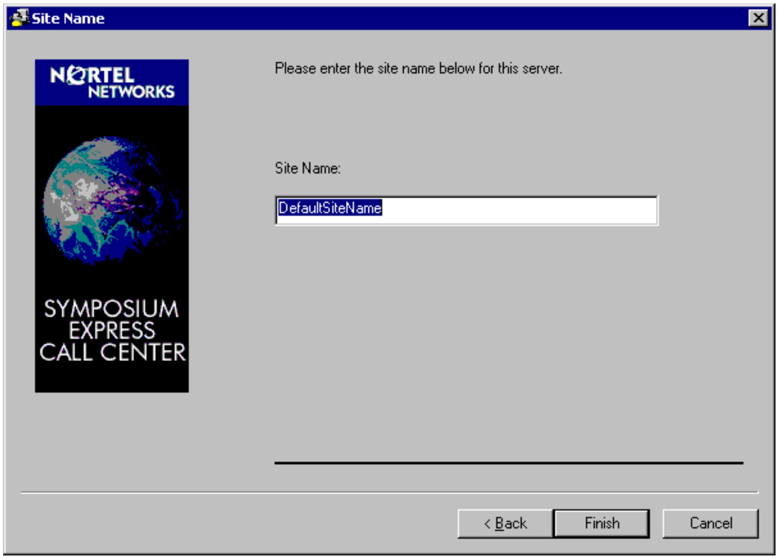


12 Click the radio button beside the correct IP address for your CLAN. If none of the addresses are correct, click Other, and then type the IP address.

Note: If your server does not have a CLAN network interface card, select the radio button beside the IP address that you assigned to the ELAN. Do not enter a dummy IP address in the Other field.

13 Click Next.

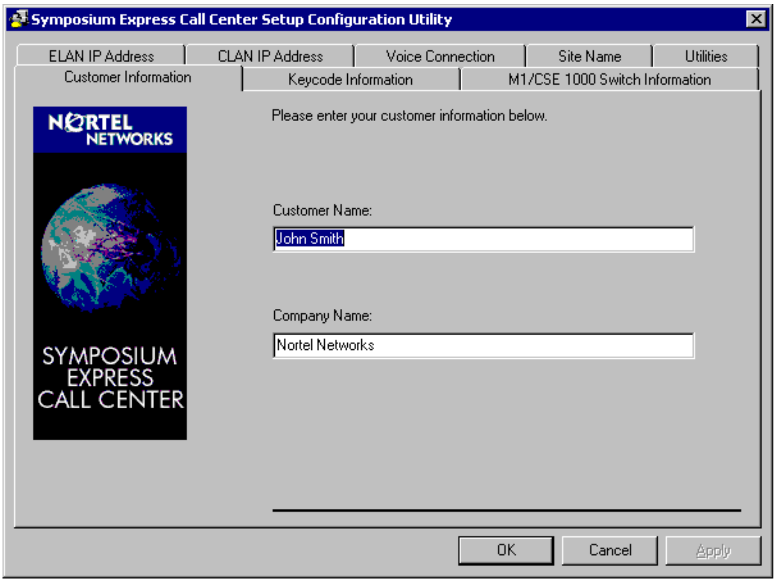
Result: The Site Name dialog box appears.



14 Enter a site name for the server, and then click Finish.

Tip: The site name must be unique and can consist of any combination of up to 15 characters. Do not use spaces or the backslash (\) character.

Result: The Nortel Networks Symposium Express Call Center Setup Configuration Utility window appears. It contains a tab for each of the dialog boxes in which you entered information during the configuration. (It also contains a Utilities tab, which you can use to import and export configuration data and to create a Platform Recovery Disk.)



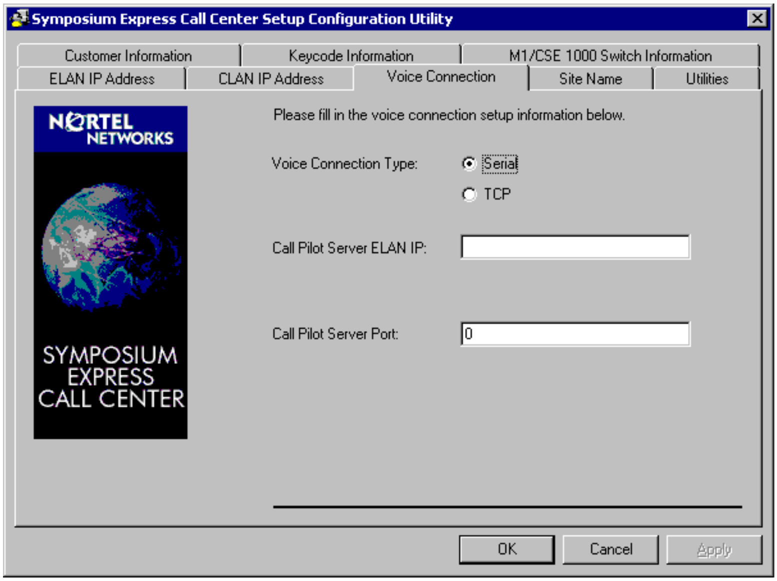
15 Click each tab and check that the information is correct. Make any necessary corrections.

16 For the Voice Connection tab, do one of the following:

- If you are not using CallPilot for voice processing services, continue to the next step.
- If you are using CallPilot for voice processing services, do the following:

a. Click the Voice Connection tab.

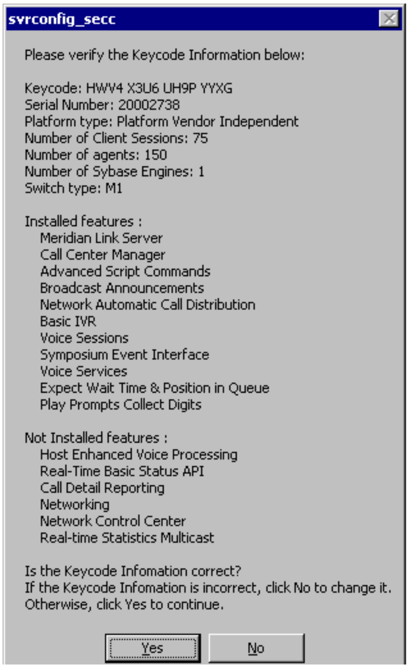
Result: The Voice Connection window appears.



b. Complete the voice connection setup information, and then click OK.

17 On the Nortel Networks Symposium Express Call Center Setup Configuration Utility window, click OK to save your changes.

Result: A dialog box appears, similar to the one shown below, asking you to verify your keycode information again:

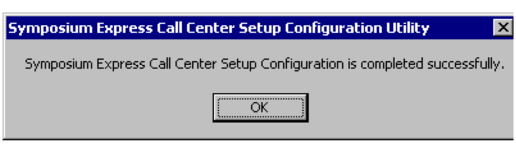


18 Click Yes.

Result: The Server Configuration Utility configures your server using the data you entered. It displays a status of each stage that the configuration passes through.

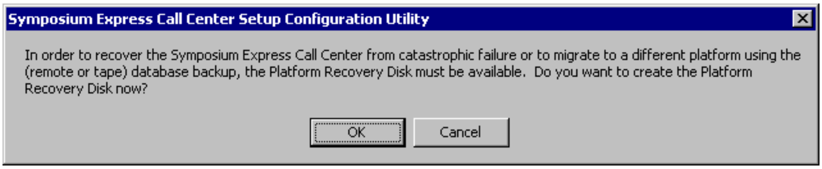
Note: This process can take 20 to 30 minutes to complete, depending on your server's CPU and database size. Do not close any windows during the configuration.

19 Wait until you see the following message:



20 Click OK.

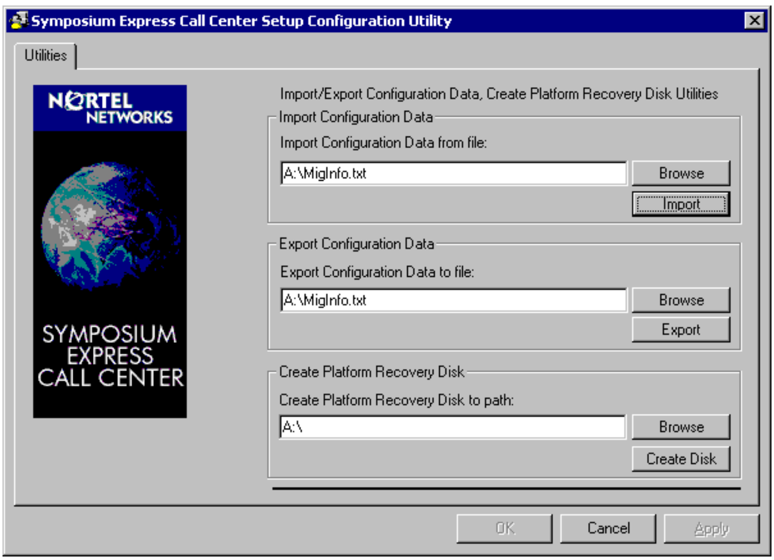
Result: The following message appears:



21 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in step 27.

Result: The Utilities tab appears.



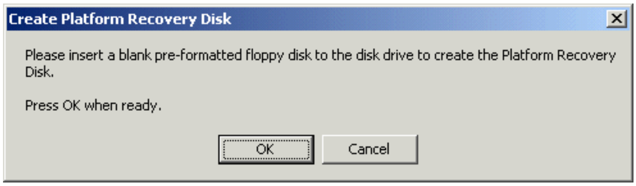
22 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:

  a. Insert a blank floppy disk in drive A.

  b. Click Create Disk.

  Result: The following message appears:



c. Click OK.

- To save the Platform Recovery Disk to a remote directory:

  a. Map a network drive to the remote directory.

  Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

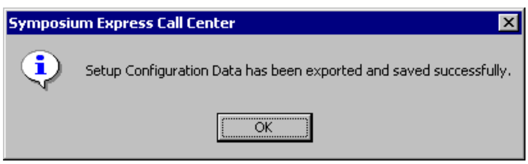
  b. Click Browse, and then navigate to the mapped network drive.

  c. Select the drive, and then click OK.

  d. Click Create Disk.

  Result: The system creates the Platform Recovery Disk.

23 Wait until the following message appears:



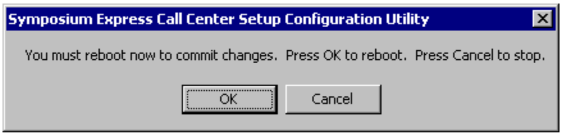
24 Click OK. The following message appears:

25 Click OK.

26 If you used a floppy disk, remove it from the drive. Make sure the Platform Recovery Disk is labeled appropriately and stored in a safe place.

27 Click OK to close the Nortel Networks Symposium Express Call Center Setup Configuration Utility dialog box.

Result: The following message appears:



28 Click OK.

Result: The server automatically restarts.

29 Log on as **NGenSys**.

ATTENTION

You must log on as NGenSys to perform many server management functions, such as installing PEPs. If you log on to the server as Administrator to perform Windows management functions, when you finish, always remember to log off and log on again as NGenSys.

Note: It may take several minutes for the desktop to appear.

Result: The MAS Trace Window appears. The server and database configuration is complete, and the Nortel Networks Symposium Express Call Center software is ready for use.

Note: If you completed this procedure as part of a server recovery scenario or a platform migration, return now to the chapter that referenced this procedure. That chapter tells you what procedure to perform next.

To check that the server services start up successfully

From the Start menu, choose Programs → Nortel Networks Symposium Express Call Center → System Monitor.

Result: The SMonW window appears and Nortel Networks Symposium Express Call Center services begin the startup process. The services take approximately 15 to 20 minutes to start up. For more information about the services and their statuses, see “Troubleshooting problems with Symposium Express Call Center services” on page 636.

Installing the latest Service Update pack and any required PEPs

Extract and install the latest server Service Update pack and any required PEPs now. For more information, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Installing the client software

Install a copy of the client software on the server PC so you can administer the server and create a database backup. For more information, see Section A: “Installing a coresident client” on page 209. You can also install additional copies of the client software on stand-alone PCs. For instructions, see Section A: “Installing a stand-alone client” on page 237.

Completing the required post-installation activities

Follow the instructions in Chapter 8, “Post-installation.”

Creating backups

Create the following types of backups on your new server:

- database backup and Platform Recovery Disk
- full backup (using a third-party backup utility)
- Voice Services backup, if applicable
- RAID backup, if applicable

For instructions, refer to Chapter 15, “Backing up data.”

Installing pcAnywhere on the server

Install pcAnywhere on the server so that support personnel can connect to your server remotely. Follow the instructions in Section C: “Installing and configuring pcAnywhere” on page 171.

Section C: Installing and configuring pcAnywhere

In this section

Overview

Introduction

With pcAnywhere, you can perform advanced administrative tasks on the server from a remote PC and control the server as though you were directly connected to it. Remote access allows your distributor or Nortel Networks customer support to log on to your server remotely to provide support.

Installing pcAnywhere version 10.5

Introduction

When you have completed the installation of the Nortel Networks Symposium Express Call Center software, install the pcAnywhere software on the server. One licensed copy of pcAnywhere version 10.5 for host computers only is provided for the server on the NTJK08AA pcAnywhere Host-Only CD. This software license enables you to configure the server as the host computer in remote control sessions (that is, the computer to which remote computers connect).

1. To install the remote format of pcAnywhere version 10.5 on the server, you must purchase a remote license for the server. Since most users only require that the server act as a host computer, this chapter outlines the installation and configuration of only the host format of the pcAnywhere software. For information on the installation and configuration of the remote format, consult the pcAnywhere web site at www.symantec.com/pcanywhere.

2. To install pcAnywhere version 10.5 on the client PC, you must purchase a separate license for the client PC.

CAUTION

Risk of system failure

Before you install pcAnywhere version 10.5, ensure that the video drivers on the server PC are current by consulting the driver manufacturers' web sites for any available updates. Failure to do so can result in the appearance of a blue screen after pcAnywhere installation or after use of pcAnywhere for operations such as file transfer. For more information, refer to the pcAnywhere web site at www.symantec.com/pcanywhere.

To install pcAnywhere version 10.5

Note: You do not have to manually uninstall previous versions of pcAnywhere before installing pcAnywhere 10.5; the pcAnywhere 10.5 installation wizard automatically uninstalls previous versions of pcAnywhere before continuing with the installation. If the installation wizard asks if you want to preserve configuration data from a previous version after the uninstall, select No. Configuration data from previous versions of pcAnywhere is incompatible with pcAnywhere version 10.5.

1 Log on to the server as **Administrator**.

   Note: If you have already installed the Nortel Networks Symposium Express Call Center software and you are now reinstalling pcAnywhere, then before you proceed with the installation, you must shut down all the services on the server. To shut down the services, perform the following procedure:

   a. From the Start menu, click Programs → Nortel Networks Symposium Express Call Center → Shutdown.

      Result: The Nortel Networks Symposium Express Call Center Shutdown window appears.

   b. Click OK to confirm.

      Result: The Nortel Networks Symposium Express Call Center services shut down. This may take several minutes.

   c. When the Service Status log window appears, click Accept to exit the utility.

2 Insert the NTJK08AA pcAnywhere Host-Only CD into the CD-ROM drive.

   Result: Autorun starts and the Symantec pcAnywhere Setup wizard window appears.

   Note: If Autorun does not start when you insert the CD, perform the following steps:

   a. In Windows Explorer, browse to E:\pcAnywhere.exe (where E: is your CD-ROM drive).

   b. Double-click the file pcAnywhere.exe.

      Result: The Symantec pcAnywhere Setup wizard window appears.

3 Click Next.

   Result: The License Agreement window appears.

4 Select I accept the terms in the license agreement, and then click Next.

Result: The Customer Information window appears.

5 Enter your User Name and Organization, and then click Next.

Result: The Ready to Install the Program window appears.

6 Click Install.

Result: The Installing Symantec pcAnywhere window appears, showing a status of the installation. When the installation is complete, the Support Solutions window appears.

7 Click Next.

Result: The Windows Solutions window appears.

8 Click Next.

Result: The How To Reach Us Online window appears.

9 Click Next.

Result: The Completing the Symantec pcAnywhere Setup wizard window appears, notifying you that the software was successfully installed.

10 Click Finish.

Result: The system prompts you to restart the server PC.

11 Click Yes to restart the server PC at the prompt.

Note: If the server hangs, restart it manually.

Configuring pcAnywhere

Introduction

This section describes how to configure pcAnywhere to accept remote connections. When you first receive your server, pcAnywhere may already be configured. If so, go through the following procedures to ensure that the network properties and remote caller settings are correct.

To start pcAnywhere for the first time

Tip: To ensure optimum speed when using pcAnywhere, before starting the program, configure the Active Desktop settings on the server as follows:

a. Right-click anywhere on the server desktop.

b. On the resulting pop-up menu, highlight Active Desktop until another pop-up menu appears.

c. On this pop-up menu, ensure that Show Web Content is not selected.

1 Log on to Windows as **Administrator**.

2 From the Windows Start menu, choose Programs → Symantec pcAnywhere.

Note: If the system asks you to register pcAnywhere, select Skip, and then choose Yes when asked to confirm.

ATTENTION

If the following message appears, it indicates that your video driver is incompatible with pcAnywhere: `pcAnywhere detected and fixed a display driver problem. Please restart your computer to allow the change to take effect`. In this case, you must uninstall pcAnywhere, update your video driver, and then reinstall pcAnywhere. For more information, see the troubleshooting information for this issue in the table on page 630.

Result: If you are going to use networking for pcAnywhere connections, or if you are going to use a modem that you have already configured, then the pcAnywhere Manager window appears. In this window, you can configure and start to use pcAnywhere. However, if you are going to use a modem for pcAnywhere connections, and did *not* configure the modem during the operating system installation, then the Smart Setup Wizard window appears, prompting you for the modem device. Continue to step 3.

3 In the Smart Setup Wizard window, choose the entry that matches your modem, and then click Next.

Result: The system prompts you to select the network device.

4 Ensure that only TCP/IP is selected, and then click Next.

Result: The system prompts you to select a port.

5 Select COM1, and then click Next.

6 Click Finish.

Result: The pcAnywhere Manager window appears.

To configure pcAnywhere user access rights

Configuration of pcAnywhere sets up a secure caller account to access the server. You can add a caller account for each remote PC. These caller accounts restrict usage of pcAnywhere to appropriate users (for example Nortel Networks support personnel and distributors).

If, during the pcAnywhere configuration, you get a message indicating that you do not have the rights to modify a setting or create a new caller, follow the procedure below to change the Windows User access rights for pcAnywhere files.

1 Exit pcAnywhere.

Tip: This procedure requires you to browse to a hidden directory. To view hidden directories, follow these steps:

a. Open My Computer.

b. Choose Tools → Folder Options.

c. Click the View tab.

d. Scroll down until you see Show Hidden Files and Folders, and select this option.

e. Click OK.

2 In Windows Explorer, navigate to the following folder:

c:\Documents and Settings\All Users\Application Data\Symantec\pcAnywhere

where *c:* is the drive on which pcAnywhere is installed.

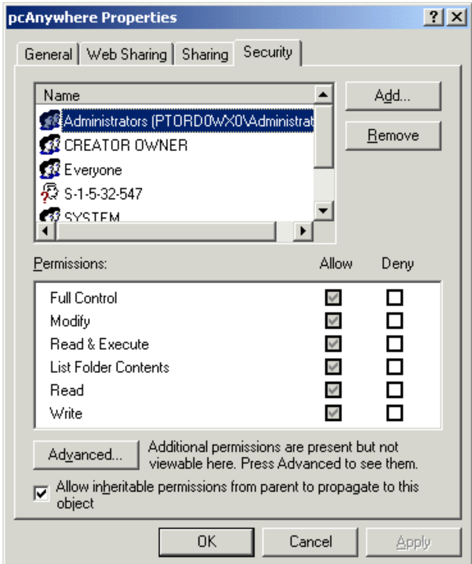
3 Right-click the pcAnywhere folder icon.

Result: A pop-up menu appears.

4 From the pop-up menu, click Properties.

Result: The pcAnywhere Properties window appears.

5 Click the Security tab.



6 In the Name box, highlight Administrators.

7 To grant administrators full access to the pcAnywhere folder, in the Permissions box, ensure that there is an Allow check mark beside Full Control.

8 Click OK to save your changes and close the Properties window.

To set the video mode

1 Start pcAnywhere.

Result: The pcAnywhere Manager window appears.

2 Click Tools → Options.

Result: The pcAnywhere Options window appears.

3 Click the Host Operation tab.

4 From the drop-down list in the Video mode selection area, ensure that the Default (accelerator enabled) option is selected.

5 Click OK to save your changes and exit the window.

To configure pcAnywhere as a host PC

1 Start pcAnywhere.

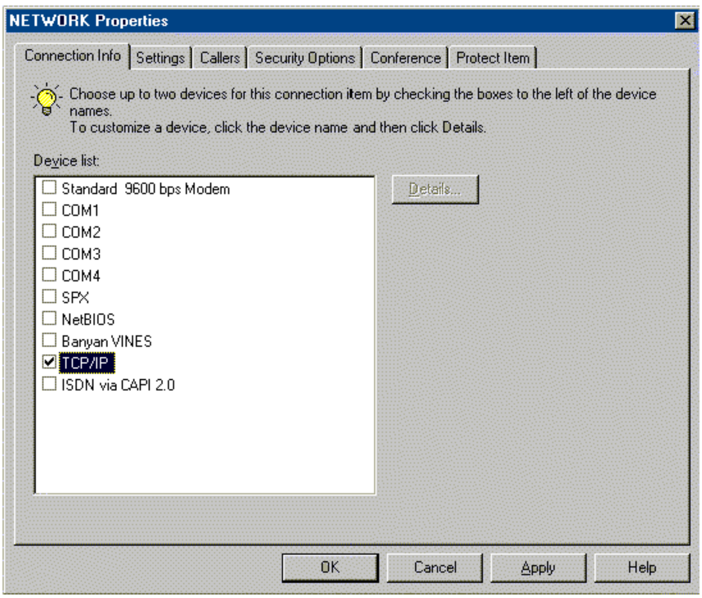
Result: The pcAnywhere Manager window appears.

2 In the pcAnywhere Manager window, right-click the Network, Cable, DSL icon, and then choose Properties.

Result: The pcAnywhere Host Properties: Network, Cable, DSL window appears.

3 Click the Connection Info tab.

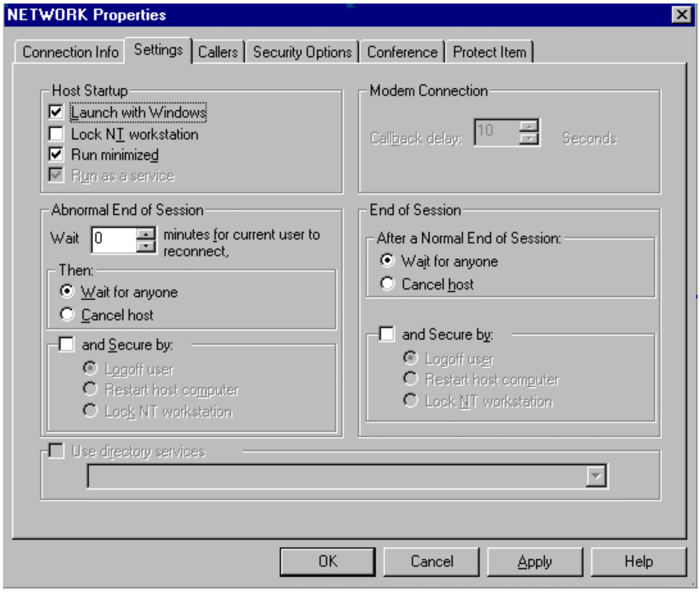
4 Ensure that only TCP/IP is checked, as in the following example:



5 Click Apply to save your changes.

6 Click the Settings tab.

7 Ensure that the Launch with Windows and Run minimized settings are selected, as shown in the following example:



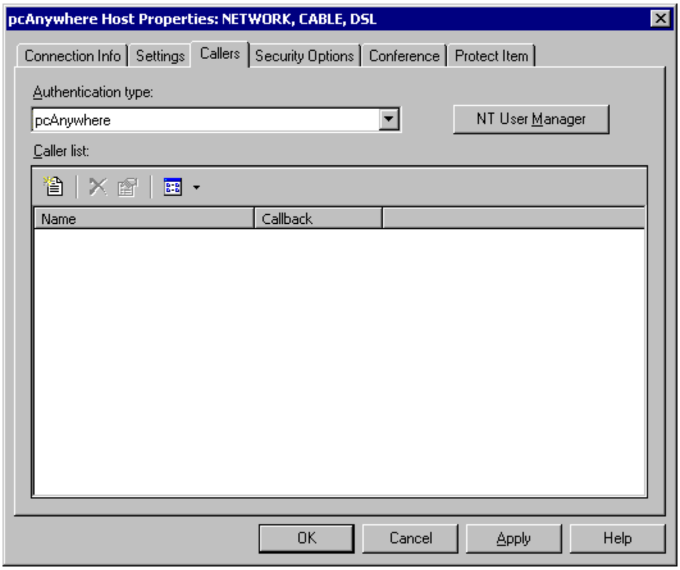
8 Click Apply to save your changes.

ATTENTION

If you have not yet installed Nortel Networks Symposium Express Call Center, skip to step 23. When you complete this procedure, install the server. After you install the server, return to this procedure, and complete steps 9 to 22.

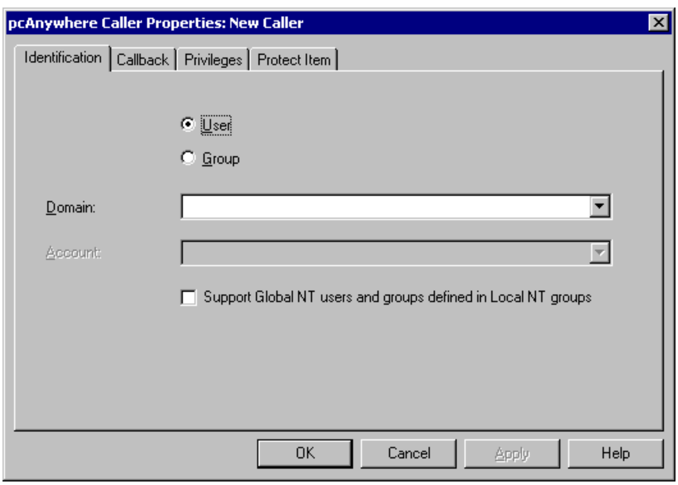
9 Click the Callers tab.

10 From the Authentication type drop-down list, select pcAnywhere.



11 Below the Caller list heading, click the New item icon ().

Result: The pcAnywhere Caller Properties: New Caller window appears.



12 On the Identification tab, ensure that the User radio button is selected.

13 From the Domain drop-down list, select the computer name of the server in Nortel Networks Symposium Express Call Center.

14 From the Account drop-down list, select NGenDist.

Note: The NGenDist and NGenDesign user accounts are automatically created on the server as Windows user accounts when you install the Nortel Networks Symposium Express Call Center software. To allow authorized remote personnel to use pcAnywhere to log on to and administer the server with either of these accounts, you must designate these Windows accounts as valid pcAnywhere caller accounts. By creating this link between Windows and pcAnywhere, you never have to change the passwords for these accounts in pcAnywhere; when you change the passwords in Windows, the information is automatically updated in pcAnywhere to match.

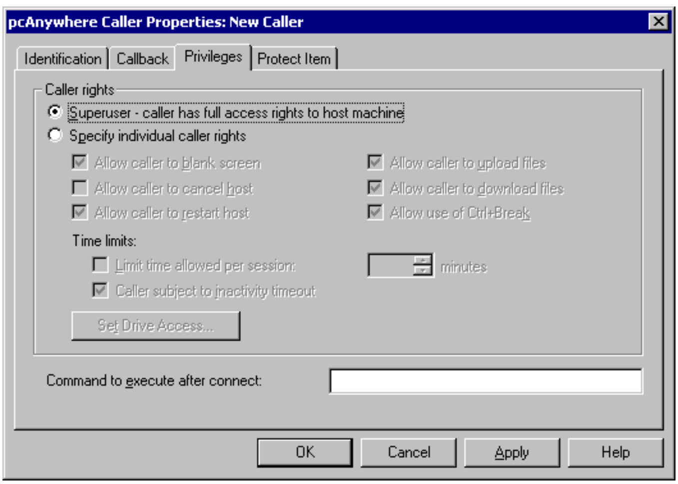
15 Click Apply.

16 Click the Callback tab.

17 Ensure that the check box beside Callback the remote user is not checked.

18 Click the Privileges tab.

19 Click the Superuser radio button.



20 Click Apply.

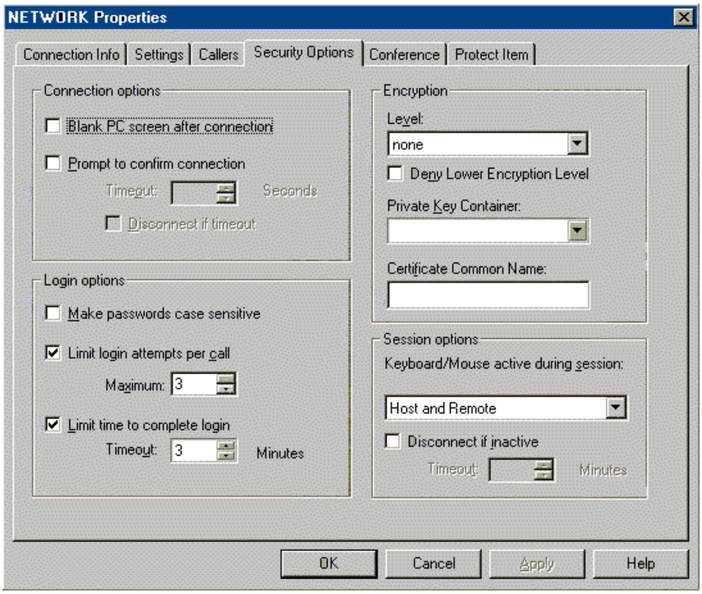
21 Click OK to save the NGenDist caller account settings.

Result: The Callers tab in the pcAnywhere Host Properties: Network, Cable, DSL window reappears.

22 Perform steps 11 to 21 again to add the NGenDesign caller account.

23 Click the Security Options tab.

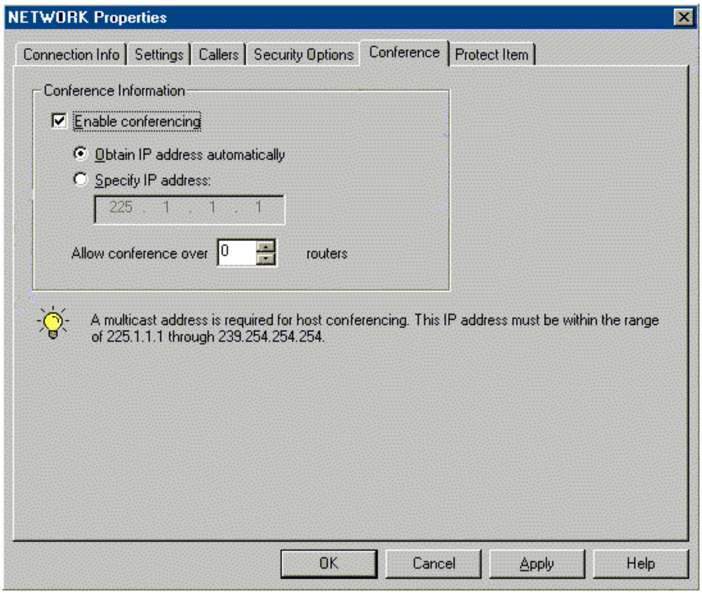
24 Ensure that the settings are as shown in the following example:



25 Click Apply if you have made any changes.

26 Click the Conference tab.

27 Ensure that Enable conferencing and Obtain IP address automatically are selected, as shown in the following graphic:



28 Click Apply if you have made any changes.

29 Click the Protect Item tab if you want to protect the settings for this caller account by assigning a password to control access to the settings. If you do not want to assign a password, skip to step 32.

30 In the Password box, type the password you want to use to protect the Network icon settings.

31 In the Confirm password box, type the password again.

ATTENTION

If you select the Required option to modify properties, you must enter the password each time a setting is changed. You should record the password and keep a copy of it in a safe place. If you forget the password, you cannot change any settings.

32 Click OK to apply all pcAnywhere Host PC settings.

33 Click Exit to close the pcAnywhere Manager window.

Establishing a pcAnywhere connection using dial-up

Introduction

This section offers an overview of how to configure a connection profile on the client PC that is used to connect with the server. Since client PCs are not limited to running one particular operating system, the steps below include general guidelines for accessing the Windows utilities that are required for configuring the connection. For specific instructions on accessing these utilities, consult the Windows online Help on the client PC.

To create a server connection profile on the client PC

1 On the client PC, open the Network and Dial-up Connections utility (or the Dial-up Networking utility).

Note: The name of this utility differs according to the operating system installed on the client PC. For specific instructions on accessing either of these utilities, consult the Windows online Help on the client PC.

2 In the Network and Dial-up Connections window (or the Dial-up Networking window), click Make New Connection to open the new connection wizard.

3 Select your modem.

4 Enter a name for the connection.

5 Enter the server telephone number.

6 When you have finished following all the wizard prompts, click Finish.

7 Continue with the following procedure.

To configure a connection profile

1 Right-click the icon for the server connection that you created in "To create a server connection profile on the client PC" above, and then select Properties.

2 Verify the information on the General property page, and correct it if necessary.

3 Click Configure.

4 In the property pages, configure the settings for your connection. Ensure that you configure the following properties as shown:

- For the dial-up server type, select PPP.
- For the network protocols, select only TCP/IP and NETBEUI.
- Select the option to specify the IP address of the server, and type the server’s IP address.
- Ensure that the option to use a default gateway on a remote network is *not* selected.

5 The remaining boxes are optional. Fill them in as required for your network.

6 Click OK to save your changes.

Uninstalling pcAnywhere 10.5

To uninstall pcAnywhere 10.5

Follow this procedure if you experience problems with pcAnywhere that require reinstallation of the software.

Note: Before uninstalling pcAnywhere, ensure there is no pcAnywhere Waiting icon in the taskbar on your desktop. If the icon is on your desktop, right-click it and select Cancel Host.

1. From the Windows Start menu, choose Settings → Control Panel.
2. Double-click Add/Remove Programs.
3. Select Symantec pcAnywhere, and then click Remove.
4. When prompted to confirm, click Yes.

   Result: The Symantec pcAnywhere window appears. pcAnywhere is uninstalled.
5. The system prompts you to restart the server PC.
6. Click Yes.

   Result: The server restarts.

   Note: If the server hangs, restart it manually.

Section D: Reinstalling the database and server software

In this section

Overview

You can perform a reinstallation only on a server that has already been installed properly. For example, if you have a working server that suddenly has problems in the server or database software, you can try to uninstall and then reinstall the software.

Note: You cannot downgrade features (that is, remove features or reduce the number of purchased agents) with this procedure.

For more information on reinstalling the database and server software, see Chapter 16, “Restoring data,” in one of the following sections:

- “Recovery (reinstallation) of Sybase ASE 12 and database software” on page 751
- “Recovery (reinstallation) of the server software” on page 756

Section E: Uninstalling the database and server software

Overview

Introduction

You can uninstall the Nortel Networks Symposium Express Call Center server software and database if you want to use your server for another purpose, or if you need to reinstall your server as part of a recovery procedure.

ATTENTION

If you want to reinstall your server after you uninstall it, use the procedures in “Recovery (reinstallation) of Sybase ASE 12 and database software” on page 751, or “Recovery (reinstallation) of the server software” on page 756. These sections include important information about backing up data before you uninstall the software.

To provide more flexibility, the uninstall procedure is broken down into two independent steps: removing the database, and uninstalling the server software. This saves you time if you need to perform only one of these two steps. For a complete uninstall, you perform both.

When you remove the database, this does not remove the Sybase ASE 12.0 software from your server. If required, you can remove Sybase ASE 12.0 using a separate procedure provided in this section.

Note: You must remove the coresident client software before you uninstall the server software.

Options and procedures for uninstalling the database and server software

Use the table below to determine the types of uninstall procedures that are available, what they do, and which procedures in this section you must follow to accomplish your goals.

For information on how uninstalling procedures relate to various recovery scenarios, see “Overview of recovery procedures” on page 732.

Type of uninstall	What it does	Procedures to follow
Complete uninstall	Removes all software and files related to the Nortel Networks Symposium Express Call Center server.	Complete the following procedures in this order: 1 “Removing the database” on page 195 2 “Uninstalling Sybase ASE 12.0” on page 198 3 “Uninstalling the server software” on page 199
Database removal (excluding Sybase)	Removes all database folders and files on all installed database drives. Does not remove ■ Sybase ASE 12.0 software ■ server software files, folders, registries, services, and shortcuts	Complete the following procedure: ■ “Removing the database” on page 195
Database uninstall (including Sybase)	Removes all database folders and files on all installed database drives, and removes the Sybase ASE 12.0 software. Does not remove server software files, folders, registries, services, and shortcuts.	Complete the following procedures in this order: 1 “Removing the database” on page 195 2 “Uninstalling Sybase ASE 12.0” on page 198

Type of uninstall	What it does	Procedures to follow
Server software uninstall	Removes the server software files, folders, registries, services, and shortcuts. Also removes the Voice Services database, for those systems with the Voice Services feature. Does not remove ■ database folders and files on the installed database drives ■ Sybase ASE 12.0 software	Complete the following procedure: ■ “Uninstalling the server software” on page 199

Uninstalling the database and server software

Introduction

Use the following procedures to uninstall the database, the server software, or both. Make sure you refer to the table in “Options and procedures for uninstalling the database and server software” on page 192 to understand which of the following procedures applies to your situation.

Removing the database

This procedure removes all database folders and files on all installed database drives. It does not remove Sybase ASE 12.0.

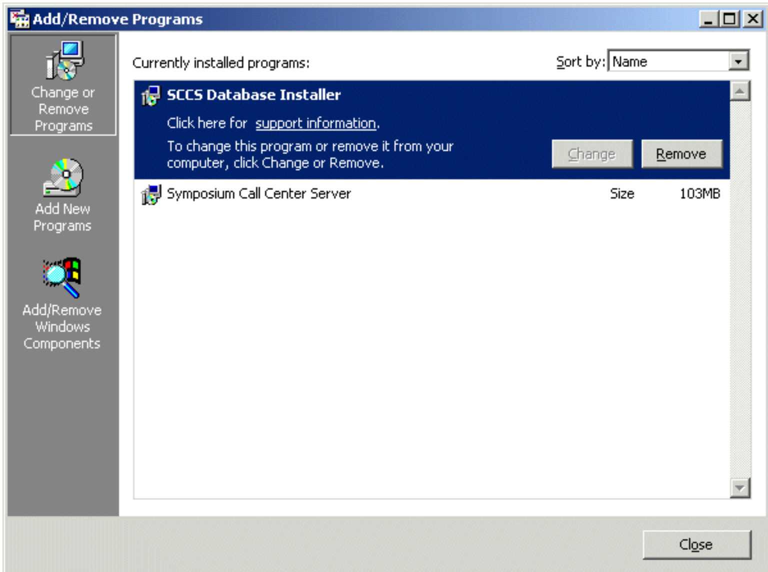
To remove the database

1. Log on to the server as **NGenSys** or **Administrator**.
2. Shut down all services on the server.
3. Close all windows and exit all applications.
4. Uninstall any PEPs or Service Update packs that are installed on the server. For instructions, see “Uninstalling server PEPs and SUs” on page 285. If you are planning to reinstall your server, you should take note of the PEPs and Service Update packs that you uninstall so you can reinstall them later.
5. From the Start menu, choose Settings → Control Panel.

   Result: The Control Panel window appears.

6 Double-click Add/Remove Programs.

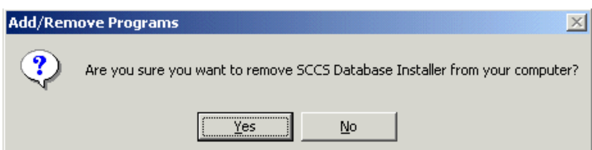
Result: The Add/Remove Programs window appears.



7 Highlight SCCS Database Installer.

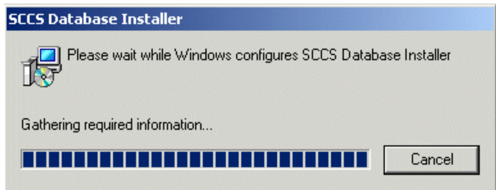
8 Click Remove.

Result: A message box asks you to confirm your choice.

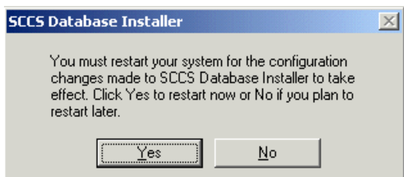


9 Click Yes.

Result: The SCCS Database Installer window appears. The status bar indicates the progress of the uninstall.



10 When the system is finished removing the database from the server, a message box appears, asking you to restart the server.



11 Click Yes to restart the server.

Note: Do not bypass this restart or you may encounter problems with the remaining steps in this procedure.

12 Log on to the server as **Administrator**.

13 Do the following tasks to make sure that all the database folders and files on the database partitions have been removed:

a. Open Windows Explorer, and then navigate to the F partition (first database partition).

b. Make sure the drive does not contain any files or folders. Take note of the drive letter if there are remaining files or folders.

c. If you have additional database partitions (G, H, I, and so on), repeat steps a and b for each partition.

d. Do one of the following:

- If you found files or folders on any of the database partitions, continue to the next step.
- If you did not find any files or folders, go to step 14.

e. To remove remaining files or folders from all database partitions, from the Start menu, choose Run.

f. Type **D:\nortel\installdb\installdb -removedb**.

Result: The system checks that all services are down. Then it removes any remaining database files and folders.

g. Recheck the database partitions to ensure they contain no files or folders.

14 Close Windows Explorer.

Result: The database is removed.

Uninstalling Sybase ASE 12.0

This procedure removes the Sybase ASE 12.0 software. If you want to use this procedure, you must first complete the procedure “Removing the database” on page 195.

To uninstall Sybase ASE 12.0

1 Log on to the server as **NgenSys** or **Administrator**.

2 Shut down all services on the server.

3 Close all windows and exit all applications.

4 From the Start menu, choose Run.

5 Type **D:\nortel\installdb\installdb -removesybase**, and then click OK.

Result: The system removes the Sybase ASE 12.0 software. It then prompts you to restart the server.

6 Click OK to restart the server.

7 Log on to the server as **NGenSys** or **Administrator**.

8 Check to ensure that the D:\Sybase directory has been removed. If it has not, delete the directory and its contents.

Result: Sybase is now uninstalled.

Uninstalling the server software

This procedure removes the server software files, folders, registries, services, and shortcuts.

ATTENTION

If you have the Voice Services feature, this procedure also removes the Voice Services database. If you do not want to permanently lose this information, make sure you have a current backup of the Voice Services database and configuration information. For details, see Section C: “Performing Voice Services backups” on page 707.

This procedure does not remove any software or folders related to the Sybase database.

Note: If you want to uninstall the database software as well, do not start this procedure unless you have already uninstalled the database software. To understand the correct order in which to uninstall different parts of Nortel Networks Symposium Express Call Center, see “Options and procedures for uninstalling the database and server software” on page 192.

Choose one of the following methods for uninstalling the server software:

1. You can use the uninstall wizard included on the Server Application CD (see the procedure below). This method automatically uninstalls PEPs and Service Update packs so you do not have to perform this step separately.
2. You can use the Windows Add/Remove Programs dialog box (see the procedure on page 203). This method does not automatically uninstall PEPs and Service update packs, so you must perform this as a separate step.

To uninstall the server software using the Server Application CD

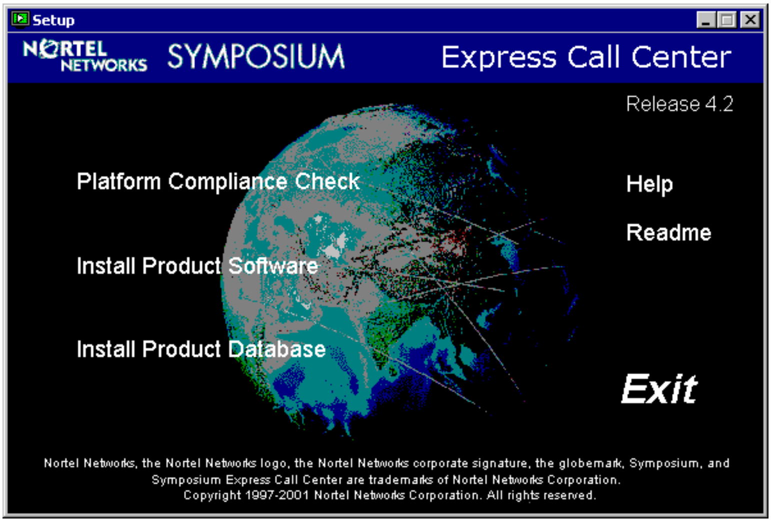
1 Log on to the server as **Administrator**.

Note: Do not log on as **NGenSys**. Uninstallation of the software removes the NGenSys account, and you may encounter problems.

2 Close all windows and exit all applications.

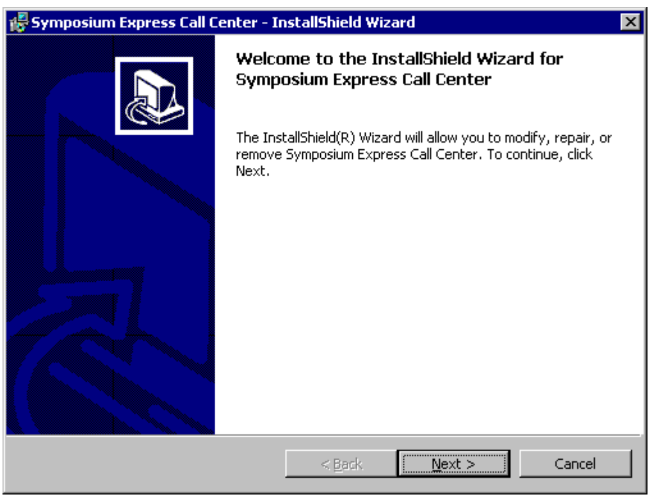
3 Insert the Server Application CD into the server.

Result: The Setup main menu appears.



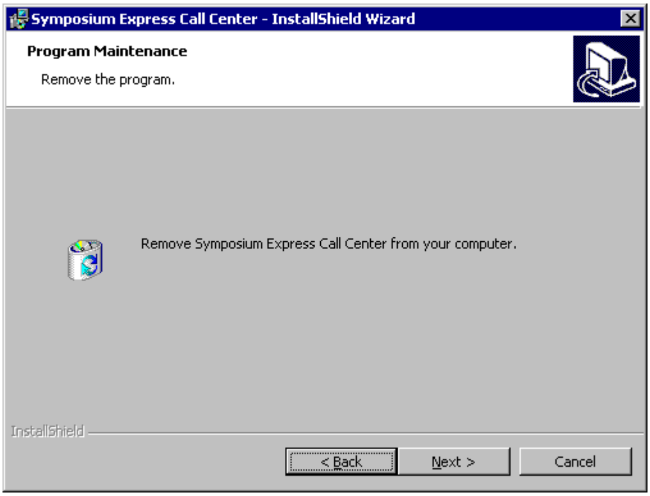
4 Click Install Product Software.

Result: The Nortel Networks Symposium Express Call Center - InstallShield Wizard window appears.



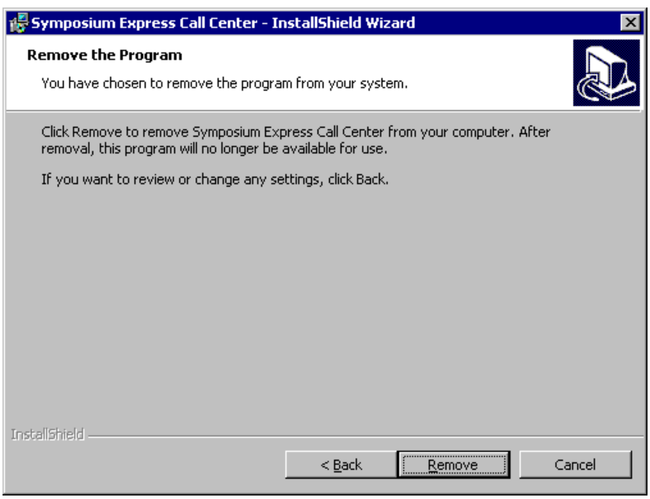
5 Click Next.

Result: The Program Maintenance window appears.



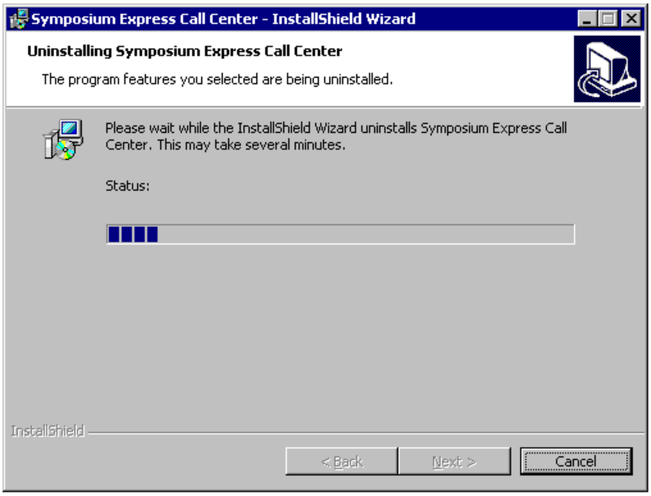
6 Click Next.

Result: The Remove the Program window appears.



7 Click Remove.

Result: The Uninstalling Nortel Networks Symposium Express Call Center window appears, showing a status of the uninstall. The program also shuts down the services at this time.



8 When the system has shut down all Nortel Networks Symposium Express Call Center services and uninstalled the software, the InstallShield Wizard Completed window appears.

9 Click Finish to complete the uninstall and exit the wizard.

10 Close all open windows and restart the server.

Result: The uninstall of the software is complete.

To uninstall the server software using Add/Remove Programs

1 Log on to the server as **Administrator**.

Note: Do not log on as **NGenSys**. Uninstallation of the software removes the NGenSys account, and you may encounter problems.

2 Shut down all services on the server.

3 Close all windows and exit all applications.

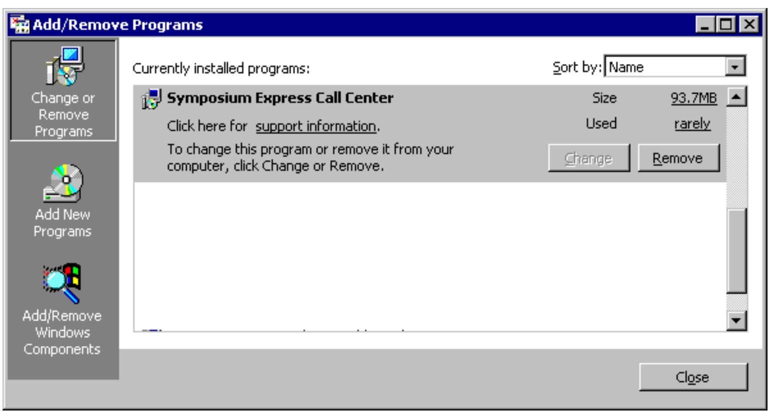
4 Uninstall any PEPs or Service Update packs that are installed on the server. For instructions, see "Uninstalling server PEPs and SUs" on page 285. If you are planning to reinstall your server, you should take note of the PEPs and Service Update packs you uninstall so you can reinstall them later.

5 From the Start menu, choose Settings → Control Panel.

Result: The Control Panel window appears.

6 Double-click Add/Remove Programs.

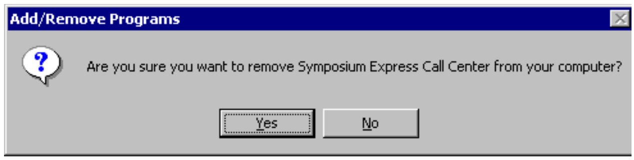
Result: The Add/Remove Programs window appears.



7 Ensure that Nortel Networks Symposium Express Call Center is highlighted.

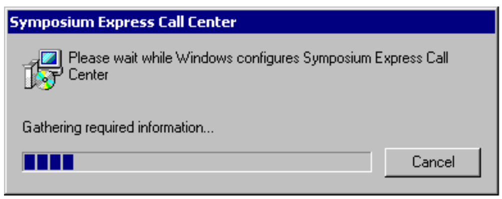
8 Click Remove.

Result: A message box asks you to confirm your choice.

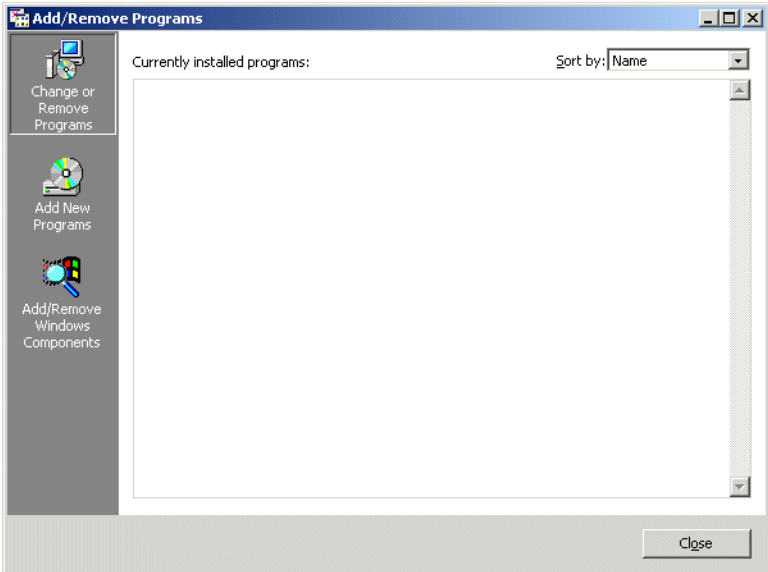


9 Click Yes.

Result: The Nortel Networks Symposium Express Call Center window appears, displaying the progress of the uninstall.



When the uninstall is complete, the Add/Remove Programs window reappears. This may take a few seconds.



10 Verify that Nortel Networks Symposium Express Call Center does *not* appear in this window.

11 Close all open windows and restart the server.

Result: The uninstall of the software is complete.

Chapter 5

Coresident client software

In this chapter

Overview

Introduction

This chapter describes the procedures for installing and managing Symposium Express Call Center client software on the same PC as the server software. This PC must be running the Windows 2000 Server or Windows 2000 Advanced Server operating system.

This type of client installation is referred to as a coresident client. For information on installing and managing client software on additional PCs, see Chapter 6, “Stand-alone client software.”

Procedures in this chapter include

- installing coresident client software
- upgrading coresident client software
- uninstalling coresident client software

Section A: Installing a coresident client

In this section

Overview

Introduction

You must install a copy of the Symposium Express Call Center Release 4.2 client software on the same PC onto which you installed the server software. The client software allows you to administer and monitor the server. This version of the client is referred to as a coresident client. You should install the coresident client only after you have installed the server software, as described in Section B: “Installing server software” on page 139.

For information on installing a stand-alone client on a separate PC, see Section A: “Installing a stand-alone client” on page 237.

Checklist for installing coresident client software

The following table summarizes the steps involved in installing the coresident client software. You must complete all of these steps:

Step	✔
Obtain the user ID and password that you need to log on to the Symposium Express Call Center server PC. This account must have local administrative privileges.	
Make sure you have already installed the server software as described in Section B: “Installing server software” on page 139.	
Perform the activities to prepare for installation (see page 212).	
Make sure you have the required software (see page 213).	
Install the Nortel Networks Symposium Express Call Center client software (see page 214).	
Install client PEPs or Service Update packs. See “Installing client PEPs and SUs” on page 290.	

Preparing to install the coresident client software

Introduction

Perform the following checks before you install the Nortel Networks Symposium Express Call Center client software on the same PC onto which you installed the server software. Make any required changes.

Decide where to install the coresident client

Nortel Networks recommends that you install the coresident client software on the C partition. You can install it on a different partition as long as that partition is not

- the D partition, which contains the server software
- the F partition, or any additional partitions used for the database

Install Internet Explorer 5.5 or later with Service Pack 1 or later

To install and use the Nortel Networks Symposium Express Call Center client, you must first install Internet Explorer 5.5 or later, with Service Pack 1 or later. You can download this software from the Microsoft web site onto a separate PC, and then install it on the Nortel Networks Symposium Express Call Center PC over the network.

If you do not have this software installed, you will not be able to install the Nortel Networks Symposium Express Call Center client.

Required installation software checklist

Installation items

The following table lists the software you need to complete the Nortel Networks Symposium Express Call Center coresident client installation:

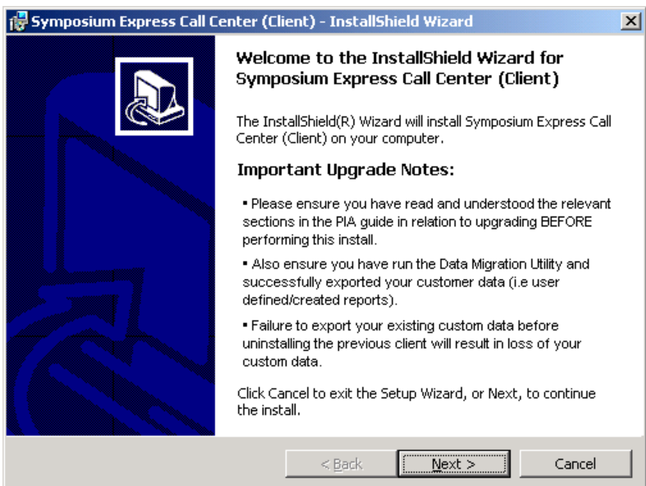
Check	Qty	Description
	1	Nortel Networks Symposium Express Call Center Release 4.2 Client Application CD. This CD contains the setup program and all software to be installed for a client.
	1	Nortel Networks Symposium Express Call Center Supplementary CD (if supplied). If no Supplementary CD is supplied, you must download any required client PEPs or Service Update packs from the Meridian PEP Library. For more information, contact your Nortel Networks customer support representative.

Installing the coresident client software

To install the coresident client

1. Log on to the server PC using an account that has administrative privileges.
2. Exit all applications and close all windows, except for the MAS Trace Window. It can remain minimized.
3. Insert the Nortel Networks Symposium Express Call Center Release 4.2 Client Application CD into the CD-ROM drive.

   Result: The Setup program starts automatically and the InstallShield Wizard window appears.



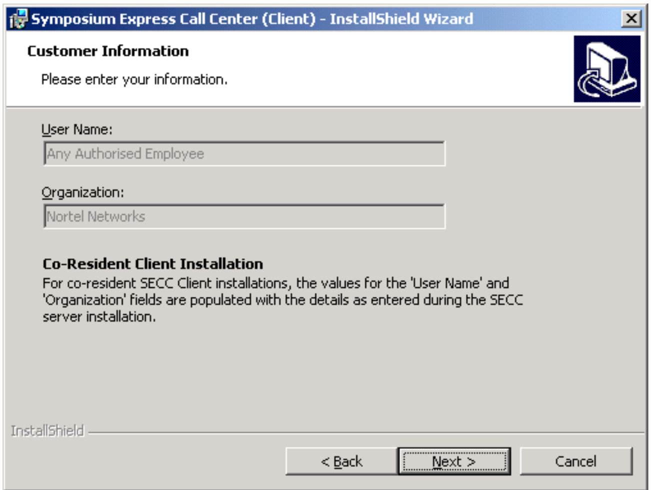
   Note: If the CD does not autorun (that is, start the installation automatically), then click Start → Run → Browse, and select Setup.exe from the root directory on the CD. Click OK to run.

ATTENTION

As highlighted in the window above, if you are performing an upgrade, refer to Section B: "Upgrading a coresident client" on page 221.

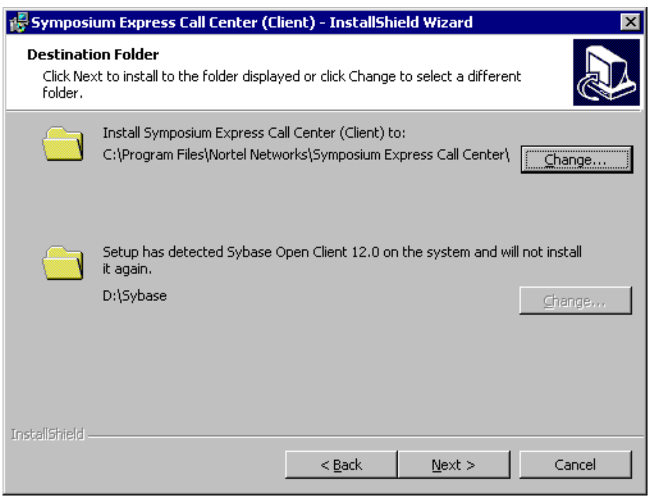
4 Click Next.

Result: The Customer Information window appears, showing the same User Name and Organization data that you entered for the server.



5 Click Next.

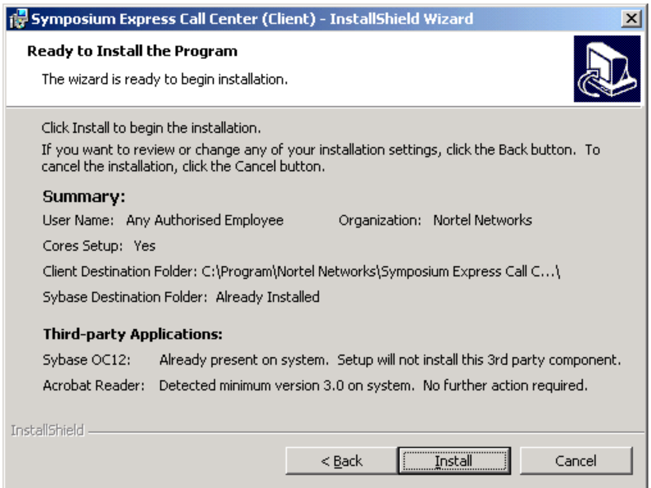
Result: The Destination Folder window appears.



6 To change the location of Symposium Express Call Center (Client), click Change, and then select the desired location (for restrictions, see “Decide where to install the coresident client” on page 212).

7 Click Next.

Result: The Ready to Install the Program window appears.



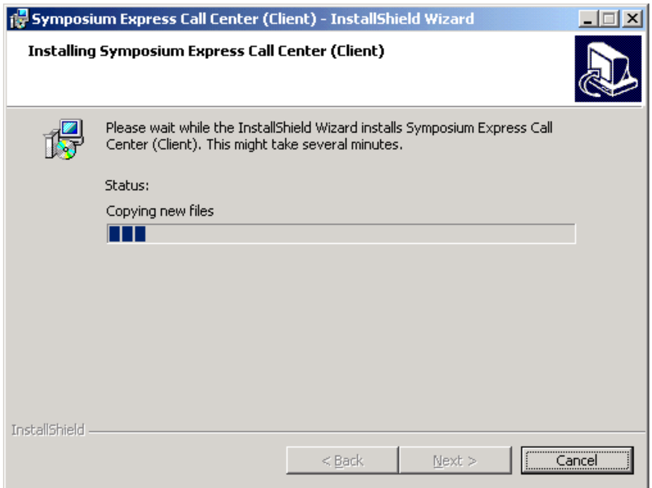
8 Verify that all options showing in this window are correct. If any details appear incorrect, click Back to make the necessary corrections

Note: The Third-party Applications section identifies whether Sybase Open Client 12 and Adobe Acrobat Reader are present on the PC.

- Sybase Open Client 12 is already present on a coresident server because it is installed as part of the server software.
- If Adobe Acrobat Reader is not present, you must install it later on so that you are able to read the customer documentation. The Acrobat software is on the client CD at e:\acrobat\setup.exe, where e:\ is your CD-ROM drive letter.

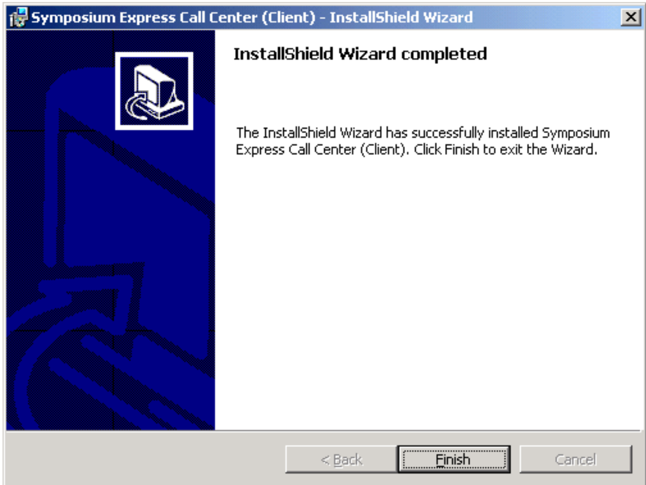
9 If the details in the Ready to Install the Program window appear correct, click Install.

Result: Setup installs the listed components. This takes approximately 10 minutes. A status bar shows the progress of the installation. The installation details and status messages change as the installation proceeds.



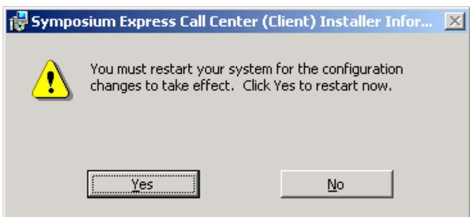
Note: If there is not enough free space available in the destination folder for the client installation, the system displays a window telling you this. You can then select a different location to install the client software.

Result: When the installation is complete, the InstallShield Wizard completed window appears.



10 Click Finish to complete the installation process.

Result: The program prompts you to restart.



11 Click Yes to restart the computer.

Result: The computer restarts, and the client installation is complete.

To access the Nortel Networks Symposium Express Call Center server

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → SMI Workbench.

Note: In the SMI Workbench folder, you must add an SMI system for each server before you can connect from the client application. For information, see “To add an SMI system” on page 306.

Install Acrobat Reader 3.0 with the Search plug-in

If Acrobat Reader 3.0 is not installed, install it now. You need Adobe Acrobat Reader to view online documentation. Adobe Acrobat Reader is available on the Symposium Express Call Center Release 4.2 Client Application CD in e:\acrobat\setup.exe, where e:\ is your CD-ROM drive. It is not automatically installed; you must install it.

What's next?

You must install the latest Service Update pack and any required Product Enhancement Packages (PEPs) for the version of the client software you just installed. Do one of the following:

- If you did not receive a Supplementary CD, check whether there are any client Service Update packs or PEPs available on the Meridian PEP Library web site for the version of the software you just installed. For more information, contact your Nortel Networks customer support representative.
- If you did receive a Supplementary CD, then install the client Service Update pack and any required PEPs included on the CD. For information, see "Installing client PEPs and SUs" on page 290.

Section B: Upgrading a coresident client

In this section

Overview

Introduction

This section describes how to upgrade Nortel Networks Symposium Express Call Center client software from Release 2.0 or 3.0 to Release 4.2. Procedures in this section apply to client software installed on the same PC as the server, also known as a coresident installation. If you want to upgrade stand-alone client software, see Section B: "Upgrading a stand-alone client" on page 253.

You must upgrade the client software after you convert your Symposium Express Call Center server from Release 2.0 or Release 3.0 to Release 4.2. You cannot connect to a Release 4.2 Symposium Express Call Center server using a Release 2.0 or Release 3.0 client.

To upgrade the client software from Release 1.0 to Release 4.2, you must first upgrade to Release 2.0. Refer to the *Nortel Networks Symposium Express Call Center Planning, Installation, and Administration Guide*, Release 2.0.

You cannot downgrade to a previous version of Symposium Express Call Center software.

Data Migration Utility

The Data Migration Utility, also referred to as the Data Migration Wizard, enables you to back up the existing customized client data (user-created and user-defined reports and SMI Workbench icons) before completing an upgrade of the client software. (Note that SMI Workbench icons that have been moved from the <*install directory*>\Programs\SMI Workbench are not exported.)

The Data Migration Utility is included on the Symposium Express Call Center Release 4.2 Client Application CD, and provides the facility to export data from the existing client and import data to the new Release 4.2 client.

Checklist for upgrading the coresident client

Use the following checklist to ensure you complete all required upgrade steps in the correct order:

Step	✔
Run the Data Migration Utility to export client data to a safe location. **IMPORTANT** **Risk of data loss** You must perform this step as part of the *server* conversion steps, *before* you convert the server to Release 4.2. This is because server conversions may involve erasing all data from the original server, which includes the coresident client data (user-created and user defined reports). This step has already been covered in “Step 10. Export client data from the existing coresident client” in Chapter 9, “Converting from server Release 2.0 or 3.0 to Release 4.2,” on page 354.	
Install Release 4.2 of the Symposium Express Call Center client software. Follow the procedure in “Installing the coresident client software” on page 214, and then return to this checklist.	
Run the Data Migration Utility to import the data you previously exported (see page 225).	
Install the latest client Service Update pack and any required PEPs (see page 290).	
Add an SMI system (see page 304).	

Upgrading the coresident client software

Introduction

Follow this procedure to upgrade a coresident client to Symposium Express Call Center Release 4.2.

Note: You must have administrator privileges to perform client installations.

ATTENTION

If you are removing the existing installation from the client, you must ensure that client data is safely stored (for example, to a separate partition) before starting the uninstall. See below for details.

Reports location management

It is important to understand how the Data Migration Utility manages the location of your user-created and user-defined reports. This is covered in the server conversion procedures. Read the details in "Reports location management" on page 354.

Exporting client data from the existing client

For a coresident client, you perform this step during the server conversion procedure. Since the server must be converted before the coresident client, you should already have performed this step. For details, see "Step 10. Export client data from the existing coresident client" in Chapter 9, "Converting from server Release 2.0 or 3.0 to Release 4.2," on page 354.

Installing the Release 4.2 client software

Follow the procedures in "Installing the coresident client software" on page 214.

Note: Once you have installed the client software, return to this section and go to the next step, "Importing client data to the coresident client."

Importing client data to the coresident client

During the conversion of your server, you exported client data (user-created and user-defined reports, and for Release 3.0 clients, SMI Workbench icons) to a safe location. You must now use the Data Migration Utility to import your client data to the new Release 4.2 client. You must then copy the reports back to their original locations.

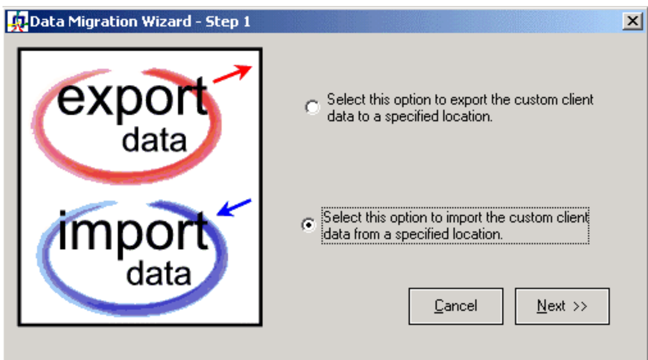
To import client data

1 Log on to the PC on which the client is installed using the local Administrator account.

Note: You must be logged on with administrative privileges to run the Data Migration Utility.

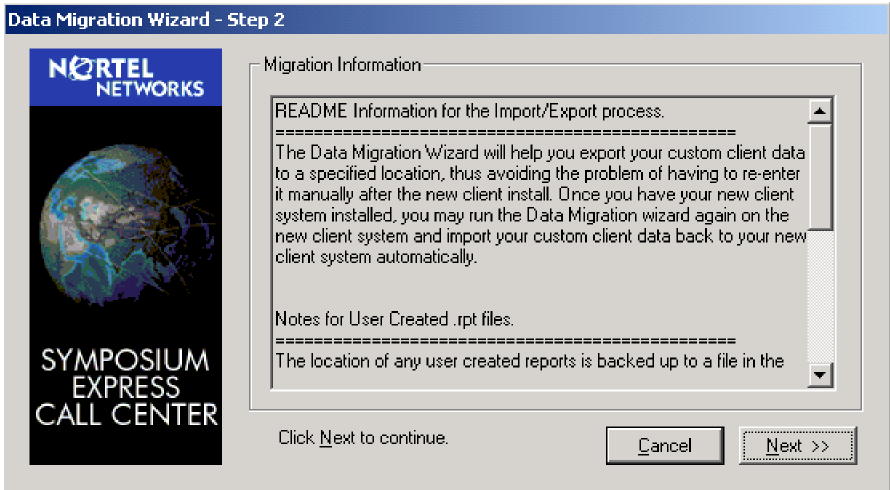
2 Click Start → Programs → Symposium Express Call Center → Data Migration Wizard.

Result: The Data Migration Wizard - Step 1 dialog box appears.



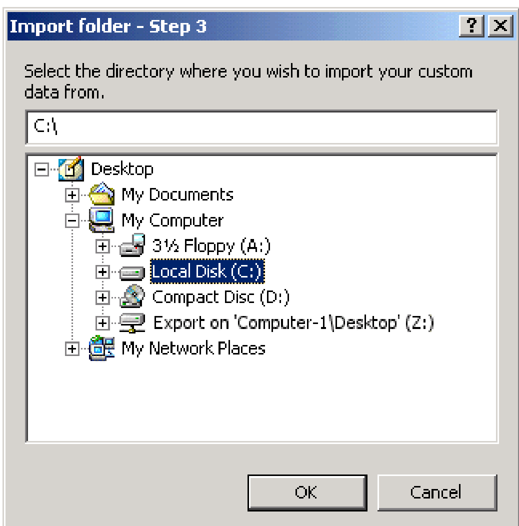
3 Select the import data button, and then click Next.

Result: The Data Migration Wizard - Step 2 window appears with general information concerning the import/export process.



4 Read the text, and then press Next to continue.

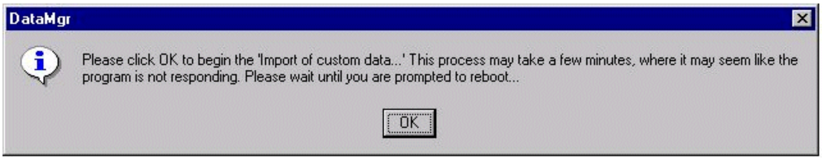
Result: The Import folder - Step 3 window appears.



5 Select the folder from which you want to import your data, and then click OK. This is the location to which you exported the data earlier.

6 Click OK to continue.

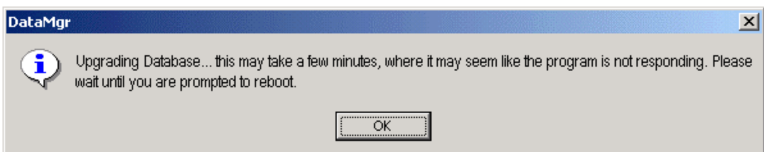
Result: A confirmation dialog box appears informing you that the import may take a few minutes.



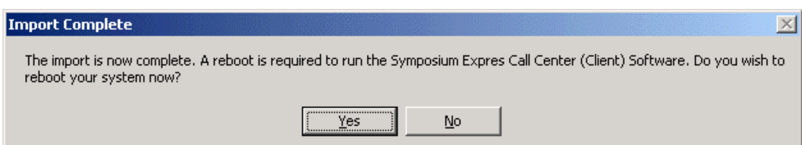
7 Click OK to continue.

At this point, you may need to wait while the program completes its tasks.

Note: If you are importing data from Symposium Express Call Center Release 2.0 or Release 3.0, the dialog box below appears. This dialog box appears during the reports database conversion phase. Click OK to continue.



Result: The data is imported. When the import is complete, the system informs you that you must restart the computer.



8 Click Yes to restart.

Result: The system restarts.

9 When the operating system has restarted, copy all user-created report files from the location to which they were imported (that is, <*install directory*>\client\en\rpt\UserCreated\..) to the exact location where they were on the previous system. (<*install directory*> is the folder where you installed the coresident client.) For information about where the reports were located on the previous system, refer to the file UserCreatedReports.txt, which is in the root directory of the safe location where you exported the client data.

Result: The data is now imported from the backup location to the client.

Installing the latest client Service Update pack and any required PEPs

Ensure that the latest Service Update pack and any required PEPs are applied to the client software. Check both the Supplementary CD supplied with Release 4.2 software and Nortel Network’s Meridian PEP Library web site.

For more information, see “Installing client PEPs and SUs” on page 290.

Adding an SMI system

Add an SMI system so you can connect to the Symposium Express Call Center server. See “To add an SMI system” on page 306.

Section C: Uninstalling a coresident client

In this section

Overview

Introduction

Follow the procedures in this section if you want to uninstall the client software for Nortel Networks Symposium Express Call Center from the same PC on which the server software is installed. This process removes any registry entries and other Symposium Express Call Center application software related to the client from the PC.

Uninstalling coresident client software

Introduction

Uninstall the client software when you want to use the coresident PC for another purpose, or if you need to remove or reinstall the client software as part of a recovery or conversion procedure.

Checklist for uninstalling the coresident client software

Steps	✔
Obtain the user ID and password that you need to log on to the client PC. This account must have local administrative privileges.	
Uninstall all client Service Update packs and PEPs. See "Uninstalling client PEPs and SUs" on page 297. **Note:** To save time, you can remove client PEPs and Service Update packs as part of the client software uninstall procedure. These steps are included in the "Uninstalling the coresident client software" procedure below.	
Uninstall the client software (see below).	

Uninstalling the coresident client software

1 Log on to the PC on which the client software is installed as **Administrator**. You must be logged on with an account that has local administrative privileges to uninstall Symposium Express Call Center software.

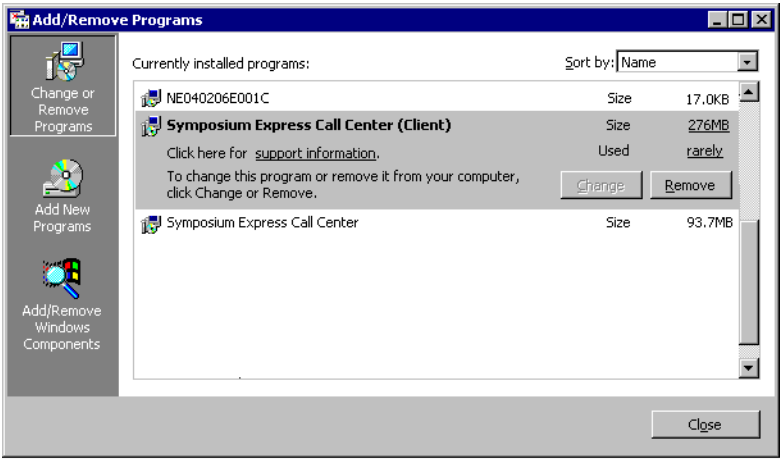
2 If the SMonW (System Monitor) window is open, close it.

3 Exit from the client application so that it is no longer connected to the server.

Note: You do not have to shut down the server's services; they will be automatically shut down at the end of the client uninstall procedure when the server restarts.

4 From the Start menu, choose Settings → Control Panel, and then double-click Add/Remove Programs.

Result: The Add/Remove Programs window appears.



5 Check the list of installed programs to see if there are any client PEPs or Service Update packs installed. (The names of client PEPs and Service Update packs end with the letter C, for example, NE040206E001C). Then do one of the following:

- If there are no client PEPs or Service Update packs installed, continue to step 6.
- If there are client PEPs or Service Update packs, do the following to remove them:

Note: If multiple PEPs are installed on the system, you must remove them in the reverse sequence from which they were installed. For example, if the PEP install sequence is PEP 1, PEP 2, and PEP 3, the PEP removal sequence must be PEP 3, PEP 2, and PEP 1. If you try to remove a PEP out of sequence, you get an error message and the PEP removal is aborted.

a. Click the Remove option opposite the PEP or SU name to uninstall it.

Result: A confirmation dialog box appears, asking you to confirm if you are sure you want to proceed with the uninstall.

b. Click Yes.

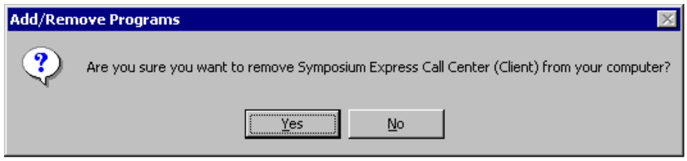
Result: The selected PEP or SU is uninstalled.

c. Repeat these steps until there are no client PEPs or SUs installed.

Note: You do not have to restart the server until you have uninstalled the client software, as described in the following steps.

6 From the list of installed programs in the Add/Remove Programs window, select Symposium Express Call Center (Client), and then click Remove.

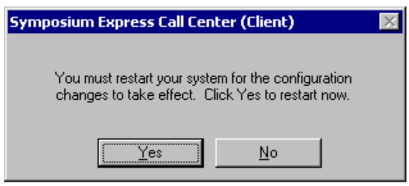
Result: The following window appears:



7 Click Yes.

Result: The system displays a status bar as it removes the client software from the PC.

8 It then prompts you to restart the system.



9 Click OK.

10 Restart the system to ensure that all the changes are applied.

Chapter 6

Stand-alone client software

In this chapter

Overview

Introduction

This chapter describes the procedures for installing and managing Symposium Express Call Center client software on a PC that is

- separate from the PC running the server software
- running the Windows 2000 Professional/Windows XP Professional operating system

This type of client installation is referred to as a stand-alone client. For information on installing and managing client software on the same PC as the server, see Chapter 5, “Coresident client software.”

Procedures in this chapter include

- installing stand-alone client software
- upgrading stand-alone client software
- uninstalling stand-alone client software

Section A: Installing a stand-alone client

In this section

Overview

Introduction

You can install the Symposium Express Call Center Release 4.2 client software on a stand-alone PC running Windows 2000 Professional or Windows XP Professional. A client PC allows you to administer and monitor the server.

Note: You must also have a copy of the client software installed on the same PC as the server software. This is referred to as a coresident client. For information on installing a coresident client, see Section A: “Installing a coresident client” on page 209.

Checklist for installing stand-alone client software

The following table summarizes the steps involved in installing the client software. You must complete all of these steps:

Step	✔
Obtain the user ID and password that you need to log on to the client PC. This account must have local administrative privileges.	
Perform the activities to prepare for installation (see page 240).	
Make sure you have the required software (see page 242).	
Review the limitations on page 243.	
Uninstall the Software Development Kit (SDK), if it is installed (see page 244).	
Install the Symposium Express Call Center client software (see page 245).	
Install any required client PEPs or Service Update packs. See “Installing client PEPs and SUs” on page 290.	
Optionally, if you are using Symposium Voice Services on CallPilot, install CallPilot Application Builder on the client PC. See the *CallPilot Application Builder Guide* (NTP 555-7171-325).	

Preparing to install the client software

Introduction

Perform the following checks before you install the Symposium Express Call Center client software on a stand-alone client PC running either Windows 2000 Professional or Windows XP Professional. Make any required changes to your client PC.

Check the operating system configuration

- Ensure that the PC is running the Windows 2000 Professional (with Service Pack 3) or Windows XP Professional (with Service Pack 1) operating system.
  - To check the Windows 2000 version, right-click the My Computer icon, and then choose Properties. In the Properties window, click the General tab to view the current installed version of Windows.
  - To check the Windows XP version, click Start → My Computer, and then select View System Information. The current installed version of Windows appears in the General tab.
- Ensure that the client PC is running Microsoft TCP/IP. Other types of TCP/IP do not work with Symposium Express Call Center.
  - To check the TCP/IP version in Windows 2000, select Start → Settings → Control Panel → Network and Dial-up Connections → Local Area Connections. Microsoft TCP/IP should appear in the list of installed network components. For more information, select Properties. The IP addresses appear.
  - To check the TCP/IP version in Windows XP, select Start → Control Panel → Network and Internet Connections → Network Connections → Local Area Connections. Microsoft TCP/IP should appear in the list of installed network components. For more information, select Properties. The IP addresses appear.

Check for earlier versions of Sybase Open Client

If an earlier version than version 12 of Sybase Open Client is installed on the client PC, uninstall it before installing the Symposium Express Call Center client software.

Check hardware and software requirements

Make sure your PC meets all the requirements in the “Minimum hardware specifications for the stand-alone client PCs (Windows 2000 Professional/ Windows XP Professional)” on page 43.

Ensure Internet Explorer 5.5 or later (with Service Pack 1 or later) is installed

The Symposium Express Call Center client requires Internet Explorer 5.5 or later. If you do not have this software installed, you will not be able to install the client software.

- If your client PC is running the Windows 2000 Professional operating system, you can download the Internet Explorer software from the Microsoft web site and install it on the client PC.
- If your client PC is running the Windows XP operating system, it already includes Internet Explorer 6.0, so no additional installation is required.

Required installation software checklist

Installation items

The following table lists the software you need to complete the Symposium Express Call Center stand-alone client installation:

Check	Qty	Description
	1	Nortel Networks Symposium Express Call Center Release 4.2 Client Application CD. This CD contains the setup program and all software to be installed on the client PC.
	1	Nortel Networks Symposium Express Call Center Supplementary CD (if supplied). If no Supplementary CD is supplied, you must download any required Windows 2000/Windows XP client PEPs from the Meridian PEP Library. For more information, contact your Nortel Networks customer support representative.

Limitations and coresidency

Number of clients

The server keycode determines the number of clients that can simultaneously connect to the server. The number of installed clients can exceed the number of licensed clients, although only the licensed number can connect to the server at any one time.

Unsupported combinations

The Symposium Express Call Center client application cannot reside on the same PC as

- earlier versions of the Symposium Express Call Center client application
- the Symposium Call Center Server client application

Note: If you must use the same PC for more than one of these applications, you can use a third-party application to partition the PC hard disk and install multiple copies of Microsoft Windows. Install a separate application on each partition. When you want to use an application, start with the appropriate partition.

Uninstalling the Software Development Kit

Before you install client software, you must ensure that the Software Development Kit (SDK) is not installed on the client PC. SDK and Symposium Express Call Center are not compatible. Use the procedures in this section to check whether SDK is installed, and then to uninstall it if it is present.

To uninstall SDK

1 Ensure that all applications on the client PC are closed.

2 Open the Control Panel in one of the following ways:

- In Windows 2000, from the Windows Start menu, choose Settings → Control Panel.
- In Windows XP, from the Windows Start menu, choose Control Panel.

3 Double-click Add or Remove Programs.

4 Click Change or Remove Programs.

5 Scroll through the list, looking for Symposium Express Call Center Runtime or Symposium Call Center Runtime. If this program appears in the list, continue with the following steps to uninstall it.

6 Click Remove.

Result: A Warning dialog box appears.

7 Click Yes to remove the program.

Result: The system displays the following message: `Uninstall Finished. Please reboot your system.`

8 Click OK.

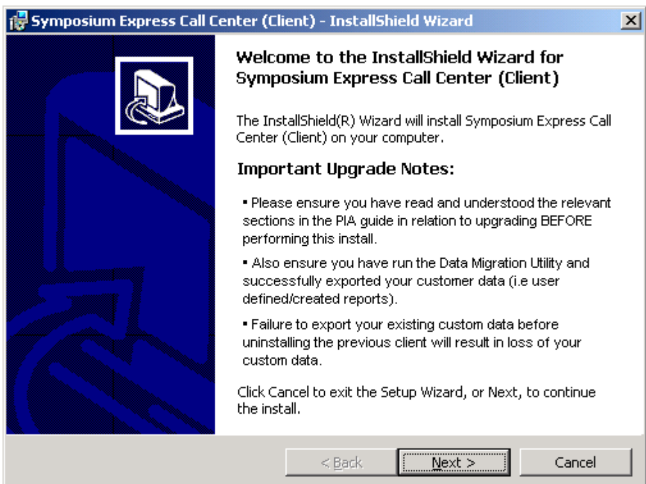
9 Restart the computer.

Installing the stand-alone client software

To install the stand-alone client

1. Log on to the client PC as **Administrator**. You must be logged on with an account that has local administrative privileges to install Symposium Express Call Center software.
2. Exit all applications and close all windows.
3. Insert the Symposium Express Call Center Release 4.2 Client Application CD into the CD-ROM drive.

   Result: The Setup program starts automatically and the InstallShield Wizard window appears.



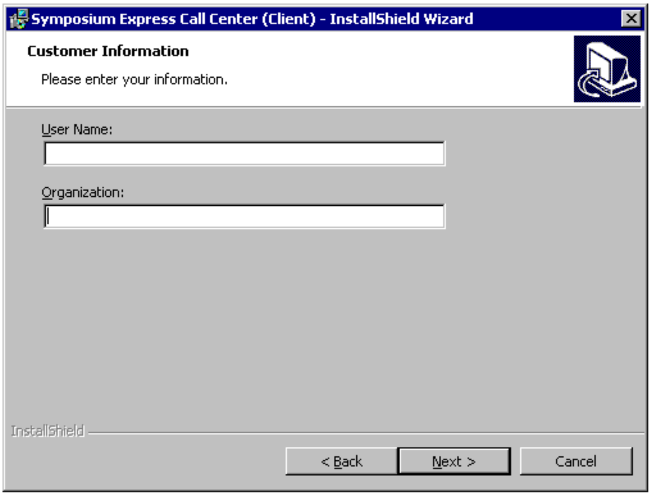
Note: If the CD does not autorun (that is, start the installation automatically), then click Start → Run → Browse, and select Setup.exe from the root directory on the CD. Click OK to run.

ATTENTION

As highlighted in the window above, if you are performing an upgrade, refer to Section B: “Upgrading a stand-alone client” on page 253.

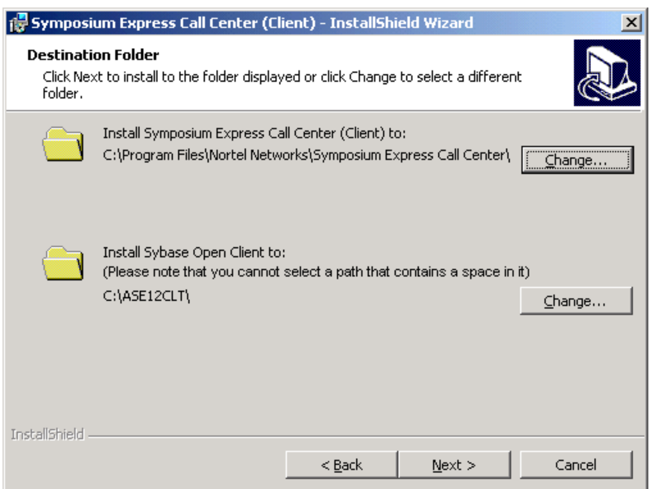
4 Click Next.

Result: The Customer Information window appears.



5 Enter the User Name and Organization, and then click Next.

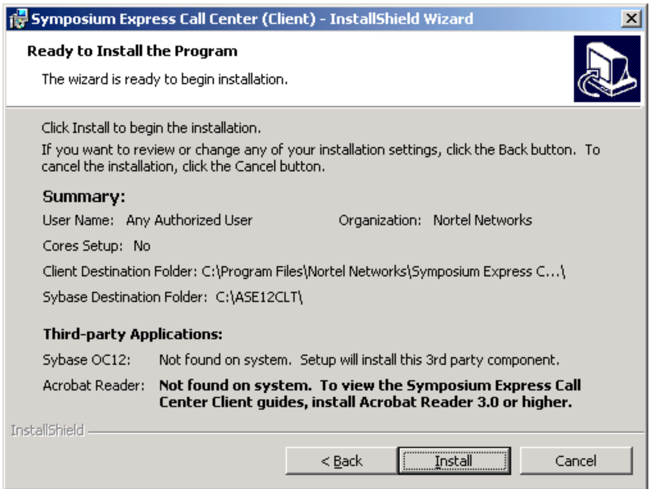
Result: The Destination Folder window appears.



6 To change the location of either Symposium Express Call Center (Client) or Sybase Open Client, click Change, and then select the desired location.

7 Click Next.

Result: The Ready to Install the Program window appears.



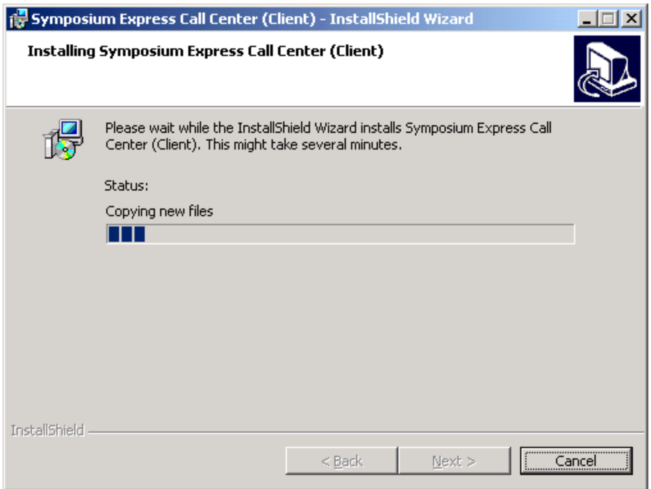
8 Verify that all options showing in this window are correct. If any details appear incorrect, click Back to make the necessary corrections.

Note: The Third-party Applications section identifies whether Sybase Open Client 12 and Adobe Acrobat Reader are already installed.

- If Sybase Open Client 12 is not found, Setup will install it automatically.
- If Adobe Acrobat Reader is not found, you must install it later on so that you are able to read the customer documentation. The Acrobat software is on the client CD at e:\acrobat\setup.exe, where e:\ is your CD-ROM drive letter.

9 If the details in the Ready to Install the Program window appear correct, click Install.

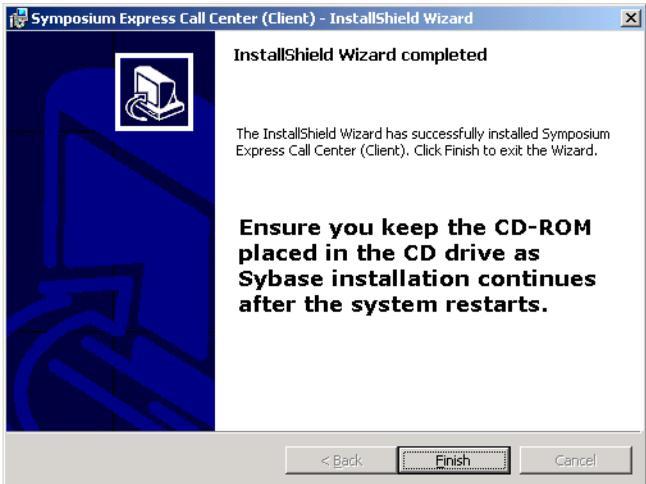
Result: Setup installs the listed components. This takes approximately 10 minutes. A status bar shows the progress of the installation.



Note: If there is not enough free space available in the destination folder for the client installation, the system displays a window telling you this. You can then select a different location to install the client software.

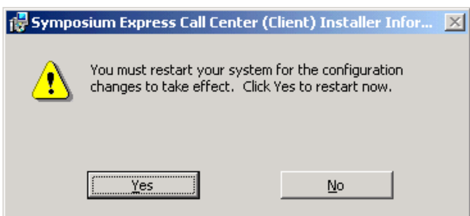
When Setup finishes copying new files, it installs the Sybase Open Client Version 12 (if it was not already there), and populates both the MAS and Symposium Express Call Center databases. The installation details and status messages change as the installation proceeds.

Result: When the first part of the installation is complete, the InstallShield Wizard completed window appears.



10 Click Finish to complete the first part of the installation process.

Result: The program prompts you to restart.



11 Click Yes to restart the computer.

Result: The computer restarts, and the first part of the client installation is complete.

12 Log on again using the same User ID and password as before.

Result: The system completes the installation by configuring Sybase Open Client. Once Sybase is configured, the client is fully installed.

To access Symposium Express Call Center

1. Log on to the client PC.
2. From the Windows Start menu, choose Programs → SMI Workbench.

   Note: In the SMI Workbench folder, you must add an SMI system for each server before you can connect from the client PC. For information, see “To add an SMI system” on page 306.

Installing Sybase Open Client manually

In rare cases during the client installation, the system displays a message indicating that Sybase Open Client has not been installed properly. The message tells you to install Sybase Open Client manually and rerun the client installation.

If you get this message, use the following procedure to install the Sybase Open Client manually. Then you can rerun the client installation.

To install Sybase Open Client manually

1. Click Browse and navigate to the ASE12CLT folder on the Client Application CD (for example, D:\ASE12CLT, where D:\ is the CD-ROM drive).
2. Double-click the setup.exe file.

   Result: The Installation Type window appears.
3. Click Standard Install, and then click Next.

   Result: The Choose Directory window appears.
4. Type a custom location in which to install the software, or accept the default path (C:\SYBASE).
5. Click Next.

   Result: The Summary window appears, displaying the components being installed.
6. Click Next.

   Result: The Create Directory window appears, prompting you to confirm the name of the directory to which the files will be copied.

7 Click Yes.

Attention: If Sybase Open Client displays a dialog box indicating that it is attempting to overwrite an existing .DLL file, click No to prevent the installation wizard from overwriting the new Windows 2000 / XP .DLL file with an older version.

Result: The Sybase Installer window appears, prompting you to restart the system before configuring the installed components.

8 Click Yes to restart.

Result: This can take several minutes. Do not attempt to manually restart the system.

Attention: Do not remove the Symposium Express Call Center CD from the CD-ROM drive during the system restart process. The Installation Wizard carries out some final configuration procedures after the system restarts.

After the system restarts, the Information window appears, confirming the Sybase installation.

9 Click OK to complete the installation.

10 Rerun the client installation.

Install Acrobat Reader 3.0 with the Search plug-in

If Acrobat Reader 3.0 is not installed on the PC, install it now. You need Adobe Acrobat Reader to view online documentation. Adobe Acrobat Reader is available on the Symposium Express Call Center Release 4.2 Client Application CD in e:\acrobat\setup.exe, where e:\ is your CD-ROM drive. It is not automatically installed; you must install it.

What's next?

You must install any required client Service Update packs or Product Enhancement Packages (PEPs) for the version of the software you just installed. Do one of the following:

- If you did not receive a Supplementary CD, check whether there are any client Service Update packs or required PEPs available on the Meridian PEP Library web site for the version of the software you just installed. For more information, contact your Nortel Networks customer support representative.

- If you did receive a Supplementary CD, then install the client Service Update packs or PEPs included on the CD. For information, see“Installing client PEPs and SUs” on page 290.

Section B: Upgrading a stand-alone client

In this section

Overview

Introduction

This section describes how to upgrade Symposium Express Call Center client software from Release 2.0 or Release 3.0 to Release 4.2. Procedures in this section apply to client software installed on stand-alone PCs. If you want to upgrade coresident client software, see Section B: “Upgrading a coresident client” on page 221.

You must upgrade the client software after you convert your Symposium Express Call Center server from Release 2.0 or Release 3.0 to Release 4.2. You cannot connect to a Release 4.2 Symposium Express Call Center server using a Release 2.0 or Release 3.0 client.

To upgrade from Release 1.0 to Release 4.2, you must first upgrade to Release 2.0. Refer to the *Nortel Networks Symposium Express Call Center Planning, Installation, and Administration Guide,* Release 2.0.

You cannot downgrade to a previous version of Symposium Express Call Center software.

Data Migration Utility

The Data Migration Utility, also referred to as the Data Migration Wizard, enables you to back up the existing customized client data (user-created and user-defined reports and SMI Workbench icons) before completing an upgrade of the client software, where no direct upgrade path is available. (Note that SMI Workbench icons that have been moved from the <*install directory*>\Programs\SMI Workbench are not exported.)

The Data Migration Utility is included on the Symposium Express Call Center Release 4.2 Client CD, and provides the facility to export data from the existing client and import data to the new Windows 2000/Windows XP client.

Checklist for upgrading the stand-alone client

Use the following checklist to ensure you complete all required upgrade steps in the correct order.:

Step	✔
Run the Data Migration Utility to export client data to a safe location (see page 257).	
Prepare the PC for installation of the Release 4.2 client software (see page 260). (Based on your situation, this may involve uninstalling the existing client software, upgrading the operating system, or completely reinstalling the operating system.)	
Install Release 4.2 of the Symposium Express Call Center client software for Windows 2000/Windows XP. Follow the procedures in Section A: “Installing a stand-alone client” on page 237, and then return to this checklist.	
Run the Data Migration Utility to import the data you previously exported (see page 261).	
Install the latest client Service Update pack and any required PEPs (see page 289).	
Add an SMI system (see page 304).	

Upgrading the stand-alone client software

Introduction

Follow this procedure to upgrade a stand-alone client to Symposium Express Call Center Release 4.2 on Windows 2000 or Windows XP.

Note: You must have administrator privileges to perform client installations for Windows 2000/Windows XP.

ATTENTION

If you are removing the existing installation from the client, you must ensure that client data is safely stored (for example to a separate partition) before starting the uninstall. See below for details.

Reports location management

It is important to understand how the Data Migration Utility manages the location of your user-created and user-defined reports.

When exporting client data, the Data Migration Utility asks you to select a location to store the client data. This must be a safe location that will still exist after you uninstall the original client and, if required, install the new operating system. This location can be a secondary partition that is not shared by the operating system, or a mapped network shared location. At the location you specify, the Data Migration Utility creates a subdirectory (client\en\rpt\UserCreated), and exports the data there. It also creates a file (UserCreatedReports.txt) and locates this file in the root directory of the export location you specified. This UserCreatedReports.txt file contains the location of all user-created and user-defined reports on the original client.

Later, after you have installed the Release 4.2 client software, you use the Data Migration Utility to import the data from the export location you specified onto the upgraded client. You must then copy all the reports to the exact location where they were located on the original client. Refer to the file UserCreatedReports.txt for the location.

Exporting client data from the existing client

Use the Data Migration Utility to export client data to a safe location.

To export client data

1 Ensure that no SMI workbench sessions are running on the client PC before you start the exporting process.

ATTENTION

Ensure that all user-created and user-defined Crystal Reports have a unique name. If they do not have a unique name, they are overwritten during the exporting process and cannot function properly.

2 Decide where you want to store the exported client data. This must be a safe location that will still exist after you uninstall the original client and, if required, install the new operating system. This location can be a secondary partition that is not shared by the operating system, or a mapped network shared location.

3 Log on to the client PC. If applicable, use the local administrator account.

4 Run the Data Migration Utility, which is located on the Symposium Express Call Center Windows 2000/Windows XP Release 4.2 Client CD.

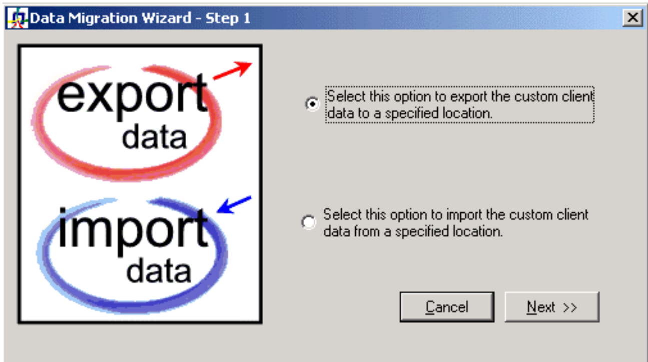
To run the utility, follow these steps:

a. Insert the CD into the CD-ROM drive.

Note: The setup program starts automatically and loads the installation wizard. As you will not be performing an install, click Cancel to exit the wizard.

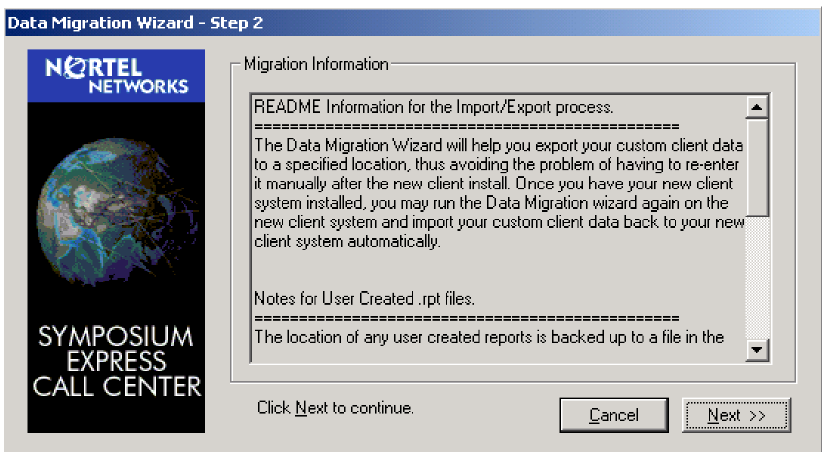
b. From the Start menu, select Run → Browse, and Datamgr.exe from the root directory of the CD. Click OK to run.

Result: The Data Migration Wizard window appears.



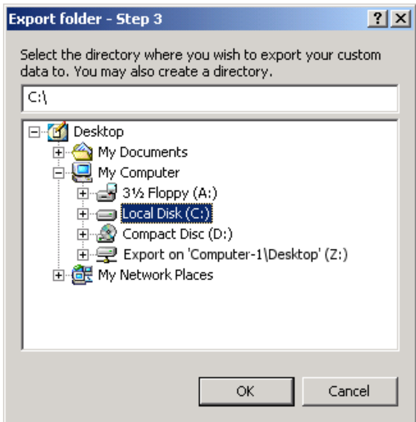
5 Ensure the export option button is selected, and then click Next.

Result: The next Data Migration Wizard window appears with general information concerning the import/export process.



6 Read the text, and then press Next to continue.

Result: The Export folder - Step 3 window appears.



7 Select the folder where you want to save your exported data.

a. In this folder, the Data Migration Utility creates a subdirectory: client\en\rpt\UserCreated.

b. The Data Migration Utility also creates a file called UserCreatedReports.txt, which is located in the root directory that you selected.

For example, if you selected z:\Export as the location for your exported data, the Data Migration Utility creates the subdirectory in z:\Export\client\en\rpt\UserCreated.
It also creates the file UserCreatedReports.txt in z:\Export.

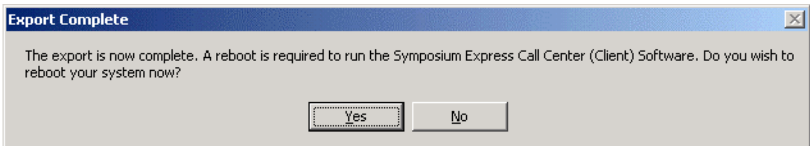
ATTENTION Ensure that the folder you select is in a safe location.

8 Click OK.

Result: A dialog box appears stating that the data export may take a few minutes, and to wait until you are prompted to restart the computer.

9 Click OK.

Result: At this point, you may need to wait while the program completes its tasks. The system informs you when the export is complete and asks you to restart the client computer.



10 Click Yes to reboot and complete the export procedure.

Preparing the PC for installation of the Release 4.2 client software

Choose one of the following options and perform the required tasks:

IF	THEN perform the following task(s)
you are already running the Windows 2000 or Windows XP operating system, and you do not want to change it	■ Uninstall the existing client software. For instructions, refer to Release 3.0 of the *Symposium Express Call Center Planning, Installation, and Administration Guide.*
you want to upgrade the operating system to Windows 2000 or Windows XP	1 Uninstall the existing client software. For instructions, refer to one of the following: ■ Release 2.0 of the *Symposium Express Call Center Planning, Installation, and Administration Guide* ■ Release 3.0 of the *Symposium Express Call Center Planning, Installation, and Administration Guide* 2 Upgrade the operating system. For instructions, refer to the documentation provided with the operating system.

IF	THEN perform the following task(s)
you want perform a new installation of the Windows 2000 or Windows XP operating system	■ Install the new operating system (this will also remove the earlier release of the Symposium Express Call Center client). For instructions, refer to the documentation provided with the operating system.

Installing the Release 4.2 client software

Follow the procedures in Section A: "Installing a stand-alone client" on page 237.

Note: Once you have installed the client software, return to this section and go to the next step, "Importing client data to the Release 4.2 client" below.

Importing client data to the Release 4.2 client

Use the Data Migration Utility to import your client data to the new Release 4.2 Windows 2000/Windows XP client. You must then copy the reports back to their original locations.

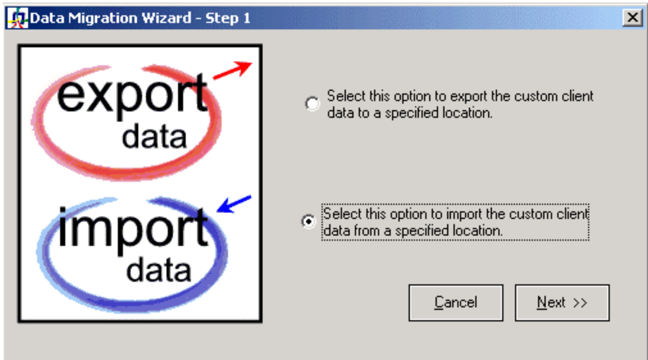
To import client data

1. Log on to the client PC using the local Administrator account.

   Note: You must be logged on with administrative privileges to run the Data Migration Utility.

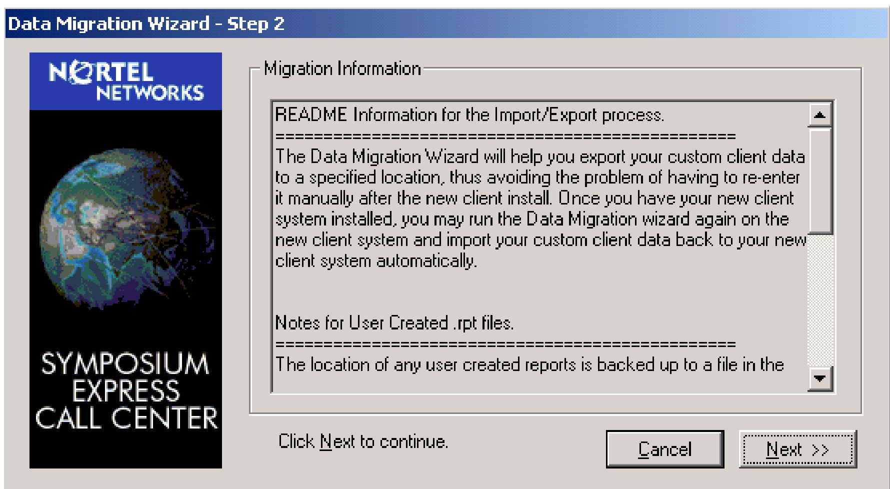
2 Click Start → Programs → Symposium Express Call Center → Data Migration Wizard.

Result: The Data Migration Wizard - Step 1 dialog box appears.



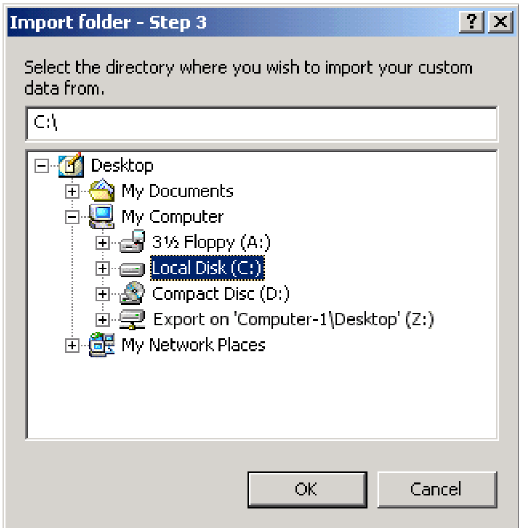
3 Select the import data button, and then click Next.

Result: The Data Migration Wizard - Step 2 window appears with general information concerning the import/export process.



4 Read the text, and then press Next to continue.

Result: The Import folder - Step 3 window appears.



5 Select the folder from which you want to import your data, and then click OK. This is the location to which you exported the data earlier.

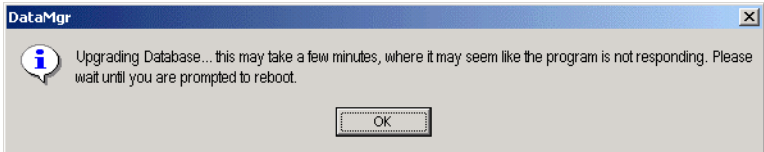
6 Click OK to continue.

Result: A confirmation dialog box appears informing you that the import may take a few minutes.

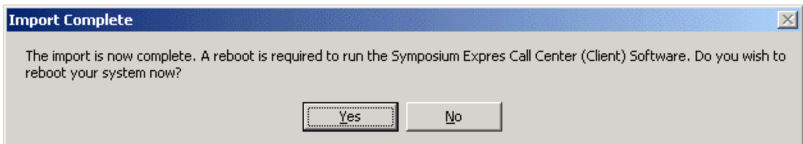
7 Click OK to continue.

At this point, you may need to wait while the program completes its tasks.

Note: If you are importing data from Symposium Express Call Center Release 2.0 or Release 3.0, the dialog box below appears. This dialog box appears during the reports database conversion phase. Click OK to continue.



Result: The data is imported. When the import is complete, the system informs you that you must restart the computer.



8 Click Yes to restart.

Result: The system restarts.

9 When the operating system has restarted, copy all user-created and user-defined report files from the location to which they were imported (that is, <*install directory*>\client\en\rpt\UserCreated\..) to the exact location where they were on the previous system. (<*install directory*> is the folder where you installed the Windows 2000 or Windows XP client.)

For more information, see "Reports location management" on page 256.

Result: The data is now imported from the backup location to the Release 4.2 client.

Installing the latest Service Update pack and any required PEPs

Ensure that the latest Service Update pack and any required PEPs are applied to the client software. Check both the Supplementary CD supplied with Release 4.2 software and Nortel Networks' Meridian PEP Library web site.

For more information, see "Installing client PEPs and SUs" on page 290.

Adding an SMI system

If you do not have a supplementary CD, or after you install the Service Update pack or PEPs, you must add an SMI system. This enables you to connect to the Symposium Express Call Center server. See “To add an SMI system” on page 306.

Section C: Uninstalling a stand-alone client

In this section

Overview

Introduction

Follow the procedures in this section if you want to uninstall the client software for Symposium Express Call Center from a stand-alone PC. This process removes any registry entries and other Symposium Express Call Center application software from the PC.

Uninstalling stand-alone client software

Introduction

Uninstall the client software when you want to use the client PC for another purpose, or if you need to reinstall the client software.

Checklist for uninstalling the stand-alone client software

Steps	✔
Obtain the user ID and password that you need to log on to the client PC. This account must have local administrative privileges.	
Uninstall all Service Update packs and PEPs. See “Uninstalling client PEPs and SUs” on page 297. **Note:** To save time, you can remove client PEPs and Service Update packs as part of the client software uninstall procedure. These steps are included in the “Uninstalling the stand-alone client software” procedure below.	
Uninstall the stand-alone client software (see below).	
Uninstall related software manually (see page 271).	
Uninstall Sybase ASE 12 manually (see page 272).	

Uninstalling the stand-alone client software

1 Log on to the client PC as **Administrator**. You must be logged on with an account that has local administrative privileges to uninstall Symposium Express Call Center software.

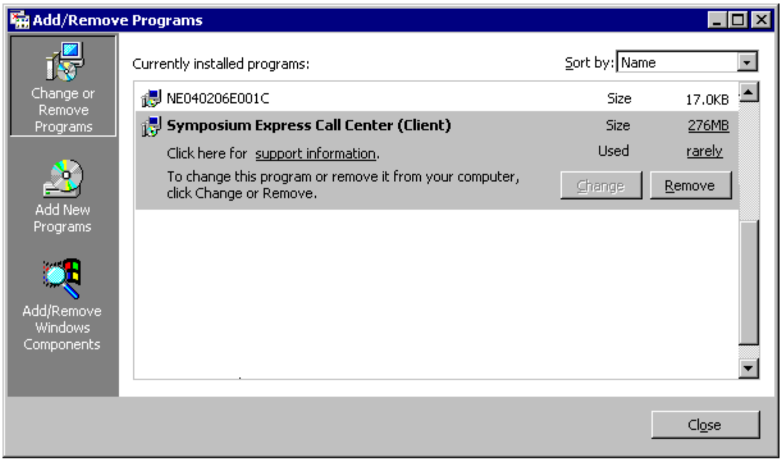
2 Exit from the client application so that it is no longer connected to the server, and ensure there are no other programs running on the client PC.

3 Do one of the following:

- For Windows 2000, from the Start menu, choose Settings → Control Panel, and then double-click Add/Remove Programs.

- For Windows XP, from the Start menu, choose Control Panel, and then click Add or Remove Programs.

Result: The Add/Remove Programs window appears.



4 Check the list of installed programs to see if there are any client PEPs or Service Update packs installed. (The names of client PEPs and Service Update packs end with the letter C, for example, NE040206E001C). Then do one of the following:

- If there are no client PEPs or Service Update packs installed, continue to step 5.
- If there are client PEPs or Service Update packs, do the following to remove them:

Note: If multiple PEPs are installed on the system, you must remove them in the reverse sequence from which they were installed. For example, if the PEP install sequence is PEP 1, PEP 2, and PEP 3, the PEP removal sequence must be PEP 3, PEP 2, and PEP 1. If you try to remove a PEP out of sequence, you get an error message and the PEP removal is aborted.

a. Click the Remove option opposite the PEP or SU name to uninstall it.

Result: A confirmation dialog box appears, asking you to confirm if you are sure you want to proceed with the uninstall.

b. Click Yes.

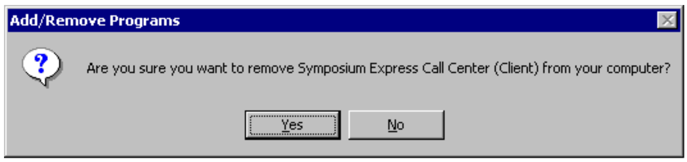
Result: The selected PEP or SU is uninstalled.

c. Repeat these steps until there are no client PEPs or SUs installed.

Note: You do not have to restart the server until you have uninstalled the client software, as described in the following steps.

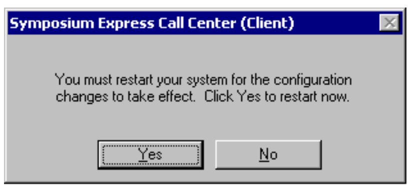
5 From the list of installed programs in the Add/Remove Programs window, select Symposium Express Call Center (Client), and then click Remove.

Result: The following window appears:



6 Click Yes.

Result: The system displays a status bar as it removes the software from the PC. The system then prompts you to restart.



7 Click Yes.

8 Restart the system to ensure that all the changes are applied.

Uninstalling related software manually

The following folders and registry entries can be removed manually when the client uninstall has completed (only if there is no other Nortel Networks software installed):

Files/Folders

- C:\secc42.log
- *<install directory>*\Program Files\Nortel Networks

Registry Entries

- HKEY_LOCAL_MACHINE\SOFTWARE\Nortel

Uninstall Sybase ASE 12 manually

There is no uninstall program for the Sybase ASE 12 software, which is installed during the Symposium Express Call Center Windows 2000/Windows XP client installation. Use the following procedure to uninstall Sybase ASE 12.

ATTENTION

There is a risk of corrupting the operating system. The following procedure assumes that you can make changes to the registry with the Registry Editor tool (regedit). Incorrect changes to the registry can disable parts of the operating system or other programs.

To remove Sybase ASE 12

1 From the Windows start menu, choose Run.

2 Type regedit, and then click OK.

Result: The Registry Editor window appears.

3 Navigate to HKEY_LOCAL_MACHINE/SYSTEM/CurrentControlSet/Control/Session Manager/Environment.

4 From the right pane of the Registry Editor window:

a. Delete the values Sybase and Sybase_OCS.

b. Modify the Path value to remove any Sybase-related paths.

Note: Be very careful not to remove any WINNT paths.

5 In HKEY_LOCAL_MACHINE/SOFTWARE, remove the key SYBASE.

6 Close the Registry Editor window.

7 On the hard drive, delete the Sybase folder, which is named ASE12CLT.

Note: When Sybase is installed with Symposium Express Call Center Windows 2000/Windows XP client, the default folder is C:\ASE12CLT.

8 Restart the client PC.

Result: The Sybase software is removed.

Chapter 7

Installing and uninstalling PEPs and Service Update packs

In this chapter

Overview

Introduction

Product Enhancement Packages (PEPs) are small software updates that are installed on the server or client for Symposium Express Call Center. PEPs contain product enhancements and bug fixes, and may be required to ensure smooth operation of your system.

General PEPs and Install-time PEPs for the server

There are two types of server PEPs: Install-time PEPS and General PEPs. Install-time PEPs must be installed after the product software is installed but before the product database is installed. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue with the installation. General PEPs must be installed after the server software and database have been installed and configured.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

Service Update packs

Periodically, individual PEPs are consolidated into Service Update packs or “super PEPs.” Service Update packs (SUs) are installed in the same way as PEPs, although they can take longer to download because they are larger. There are normally two SUs: one for the client and one for the server.

When you install the software (or convert to a new version), you should install the latest SU on the server and on the client. If no SU is available, check with your Nortel Networks customer support representative.

How to obtain SUs and PEPs

You can obtain PEPs and SUs as follows:

- All SUs and PEPs are available on the Meridian PEP Library web sites, located at
  - https://www21.nortelnetworks.com/MPL (Europe)
  - https://www43.nortelnetworks.com/MPL (North America)

  Note: To register for either of these web sites, follow the instructions provided at http://nortelnetworks.com/register.
- Any SUs and PEPs that are available at the time of shipping are included on the Symposium Express Call Center Supplementary CD shipped with your software.

Before you begin

If you are not installing PEPs from a CD, download them from the web site or obtain them from your Nortel Networks customer support representative.

Section A: Installing and uninstalling server PEPs and SUs

Installing server PEPs and SUs

Timing of PEP or Service Pack installation

When you install a PEP or an SU, the installation automatically shuts down all services on your system. You should plan your installation for a time when you can shut down the call center.

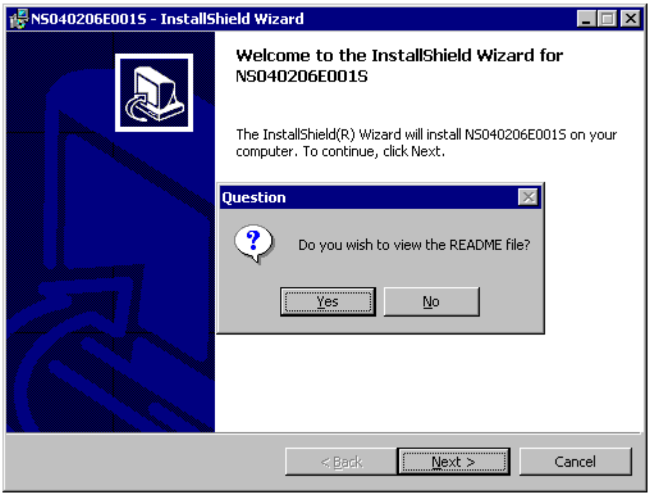
To install a PEP on the server

Note: The following procedure applies to both Install-time PEPs and General PEPs. To install an SU, see “To install an SU on the server” on page 282.

1. Log on to the server as **NGenSys**.
2. Use the PEP Viewer utility to ensure that the PEP has not already been installed. For more information, refer to “PEP Viewer” on page 605.
3. Ensure that you have closed all applications.
4. To install PEPs from CD-ROM, insert the Supplementary CD into the CD-ROM drive.
5. Locate the PEP directory on the CD, or the directory into which you downloaded the PEP from the Web.

6 Double-click the <*PEP ID*>.msi file associated with the PEP.

Result: The following window appears:



7 Click Yes to read the information in the readme file.

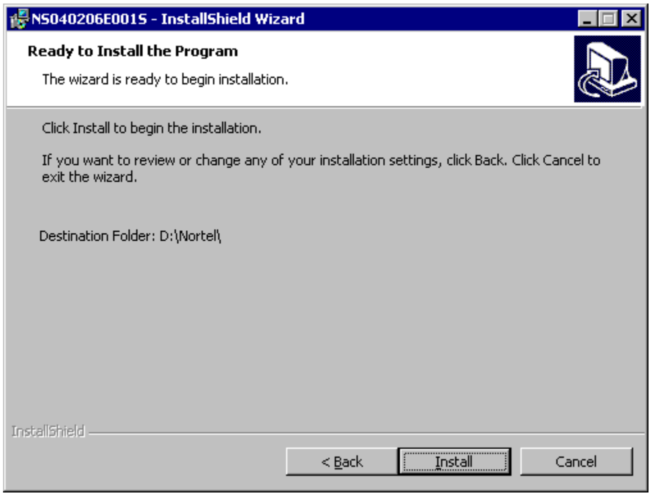
Note: If you do not want to read it, click No and go to step 9.

Result: The contents of the readme file appear.

8 When you are finished reading, close the readme file window.

9 Click Next to proceed.

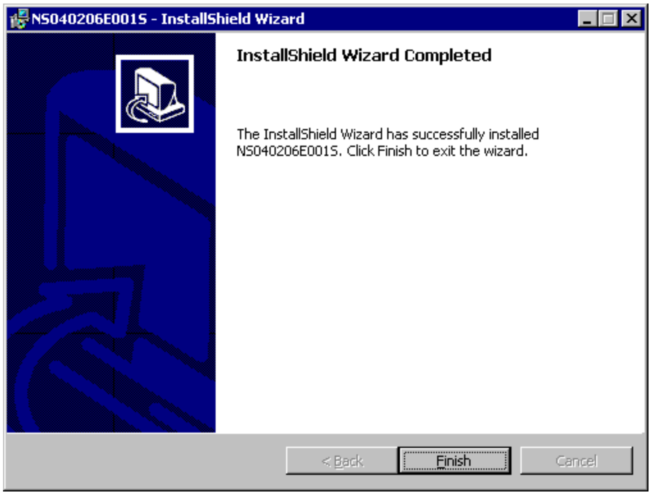
Result: The following window appears:



10 Click Install.

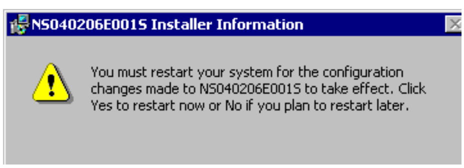
Note: When you install an Install-time PEP, the server is not active, so there are no services running that must be shut down.

Result: The system displays messages as it brings down each of the server's services. It then installs the PEP on the server. When installation is complete, the following window appears:



11 Click Finish.

Result: The following window appears:



12 Click OK.

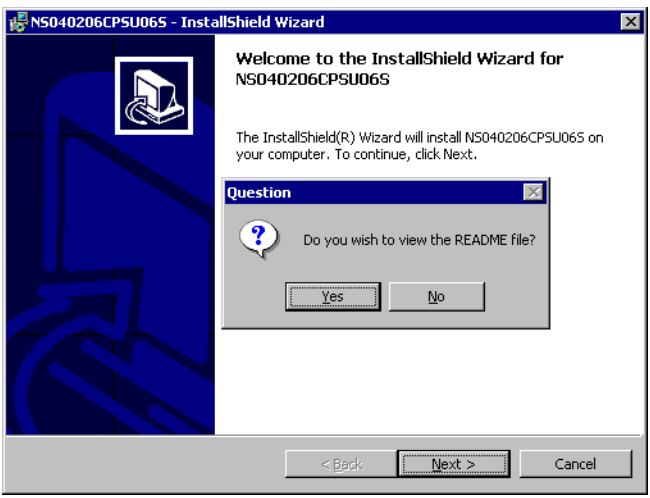
13 You can use the PEP Viewer utility to confirm that the PEP has been installed on the server. For more information, refer to "PEP Viewer" on page 605.

To install an SU on the server

1. Use the PEP Viewer utility to ensure that the Service Update pack (SU) has not already been installed. For more information, refer to “PEP Viewer” on page 605.
2. Ensure that you have closed all applications.
3. To install SUs from a CD-ROM, insert the Supplementary CD into the CD-ROM drive.
4. Locate the SU directory on the CD, or the directory into which you downloaded the SU from the Web.
5. Double-click the <*SUID*>.msi file associated with the SU.

   Note: If the required build for the Service Update is not detected, the Symposium Express Call Center Server Build Version Not Matched dialog box appears, and you must cancel the installation.

   Result: The following window appears:



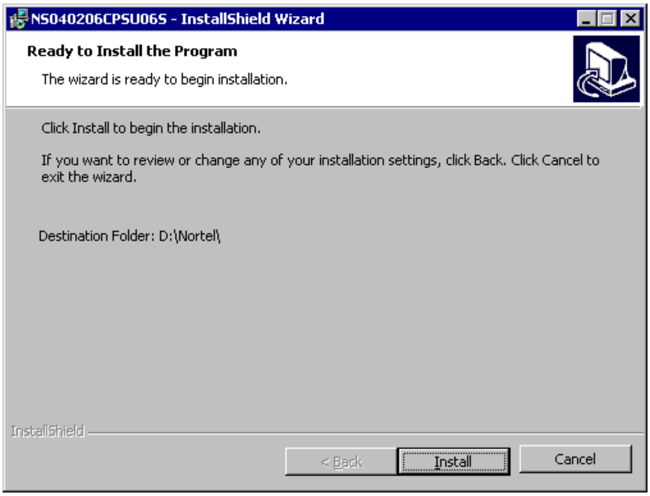
6. Click Yes to read the information in the readme file.

   Note: If you do not want to read it, click No and go to step 9.

   Result: The contents of the README file appear.
7. When you are finished reading, close the readme file window.

8 Click Next to proceed.

Result: The following window appears:



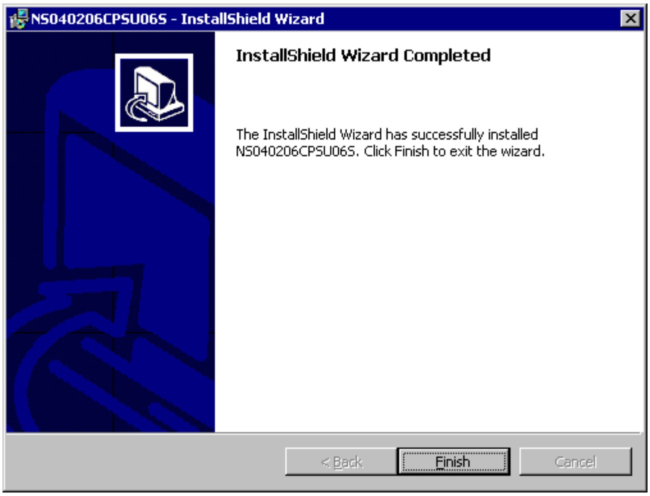
9 Click Install.

Note:

- If known server PEPs are installed on the system, the Known PEPs Found dialog box appears. To uninstall the known PEPs, click Next. (To exit the installation, click Cancel.) If there are unknown server PEPs installed on the system, the Unknown PEPs Found dialog box appears. To uninstall the unknown PEPs, click Cancel to exit the installation, remove the unknown PEPs, and restart the installation.
- If an older version of a server SU is installed on the system, the Older Version of SU Found dialog box appears. Installation of the current SU automatically uninstalls older SUs. To uninstall the older SU, click Next. (To exit the installation, click Cancel.)
- If both known PEPs and an older version of an SU are installed on the system, the Known SU and PEPs Found dialog box appears. To uninstall the old PEPs and SU, click Next. (To exit the installation, click Cancel.)
- If a newer version of a server SU is installed on the system, the Newer Version of SU Found dialog box appears. (To exit the installation, click Cancel.)

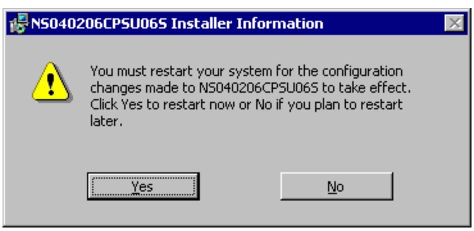
- You can also use the PEP Viewer utility to remove all PEPs and SUs from the system. For more information, refer to “PEP Viewer” on page 605.

Result: The system displays messages as it brings down each of the server’s services. It then installs the SU on the server. When installation is complete, the following window appears:



10 Click Finish to complete installing the SU.

Result: The following window appears:



11 Click Yes to restart your system, or click No if you will be restarting your system later.

Note: You must restart the system at some point to ensure that all the changes are applied.

12 You can use the PEP Viewer utility to confirm that the Service Update has been installed on the server. For more information, refer to “PEP Viewer” on page 605.

Uninstalling server PEPs and SUs

Introduction

If you want to remove all PEPs and all SUs from the server, you can use the PEP Viewer utility to remove them. For more information, refer to “PEP Viewer” on page 605.

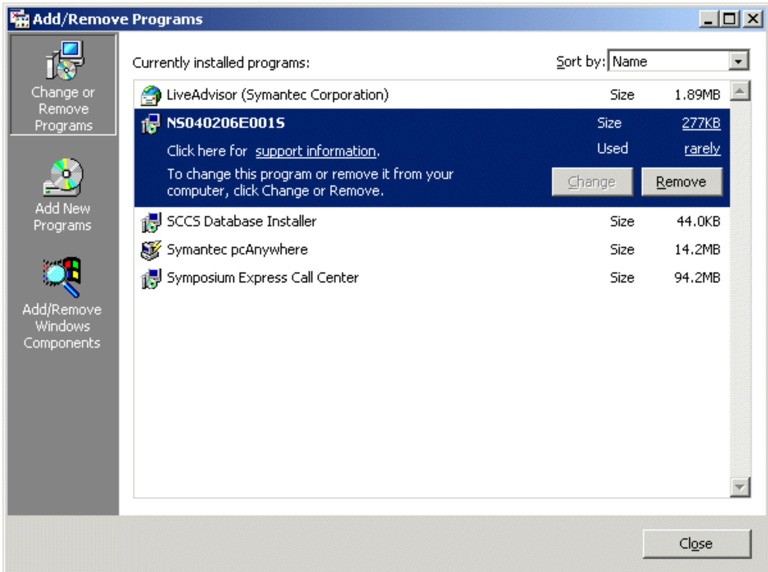
If you want to remove individual PEPs or SUs, use the Add/Remove programs method detailed below.

To uninstall a PEP from the server

1 From the Windows Start menu, choose Settings → Control Panel.

2 Double-click Add/Remove Programs.

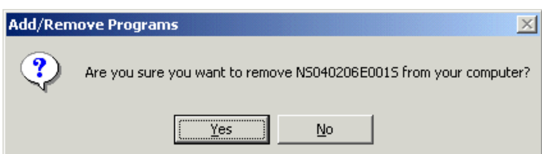
3 From the list, select the PEP that you want to uninstall, as shown in the example below:



Note: If more than one PEP is installed, you must uninstall the PEPs in the proper sequence (beginning with the most recent PEP); otherwise, the uninstall fails.

4 Click Remove.

Result: The following window appears:



5 Click Yes.

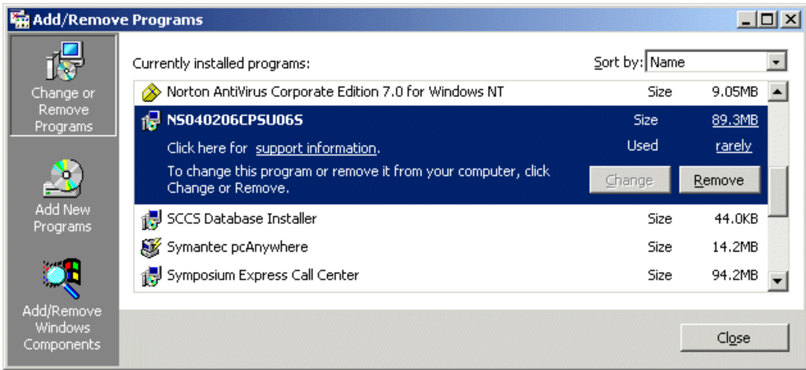
Result: The PEP is uninstalled.

6 If the system prompts you to restart the server, click OK.

7 Restart the system to ensure that all the changes are applied.

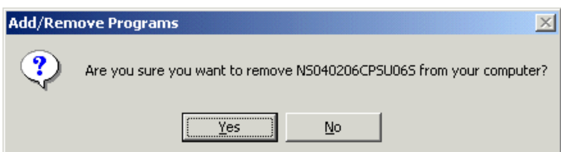
To uninstall an SU from the server

1. From the Windows Start menu, choose Settings → Control Panel.
2. Double-click Add/Remove Programs.
3. From the list, select the SU that you want to uninstall, as shown in the example below:



4. Click Remove.

   Result: The following window appears:



5. Click Yes.

   Result: The SU is uninstalled.
6. If the system prompts you to restart the server, click Yes.
7. Restart the system to ensure that all the changes are applied.

Section B: Installing and uninstalling client PEPs and SUs

In this section

Installing client PEPs and SUs

Introduction

This section contains procedures to install Symposium Express Call Center Service Update packs (SUs) and PEPs on a client PC. SUs and PEPs contain product enhancements and bug fixes, and are required to ensure the smooth operation of your system.

Note: This procedure is applicable to both coresident and stand-alone clients.

How to identify client PEPs and SUs

This section describes the naming conventions for client SUs and PEPs. First, here are examples of client SU and PEP names:

Client PEP example: NS040206**E**001C

Client SU example: NS040206**SU**01C

The first eight characters are the same for SUs and PEPs:

Code	Meaning
NS	Nortel Networks Symposium
040206	Build number

The last five characters are different for client SUs and PEPs:

- For PEPs, the last five characters are

Code	Meaning
E	Symposium Express PEP
nnn	the PEP number (for example, *001*)
C	for a client PC

- For SUs, the last five characters are:

SU	Symposium Express Service Update
nn	the Service Update number (for example, *01*)
C	for a client PC

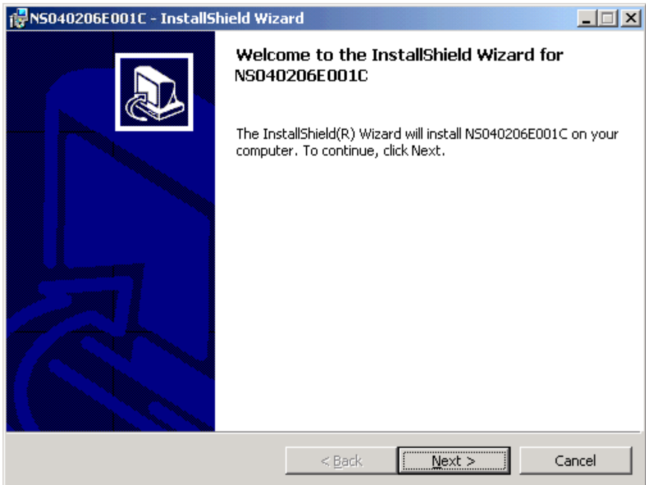
ATTENTION Check the readme file in the PEP or SU directory for any special instructions or dependencies before installing the PEP or SU.

To install PEPs or SUs on the Symposium Express Call Center client PC

1. Log on to the client PC as **Administrator**. You must be logged on with an account that has local administrative privileges.
2. Shut down all applications.
3. Locate the PEP or SU that you want to install.
4. Load it onto the client PC.
5. Go to the directory where you placed it.

6 To install the PEP or SU, double-click its file name. For example, a PEP named NS040206E001C has the file name NS040206E001C.msi.

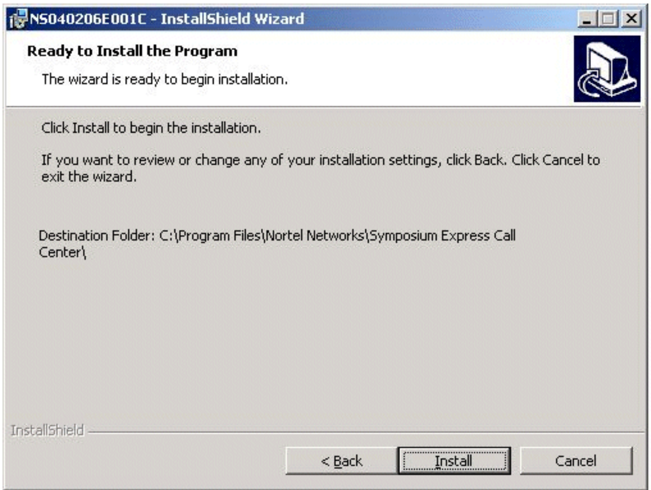
Result: An InstallShield Wizard window opens. It checks that no Symposium Express Call Center services are currently running. The client PC is not shut down.



7 Click Next.

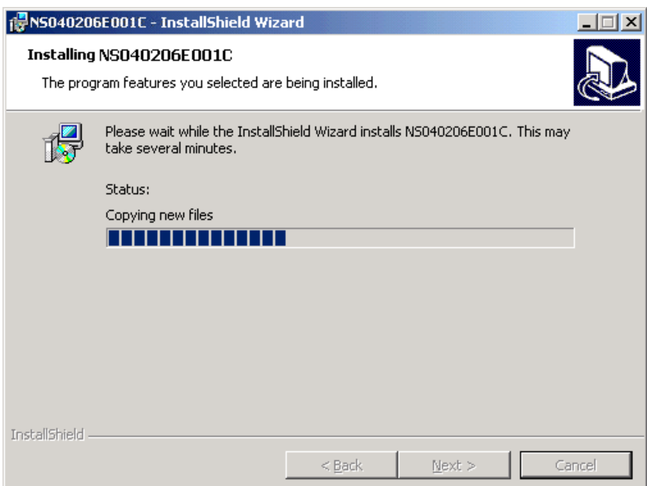
Result: The Ready to Install window opens.

If you want to change any installation settings, click Back. If you want to exit the wizard, click Cancel.

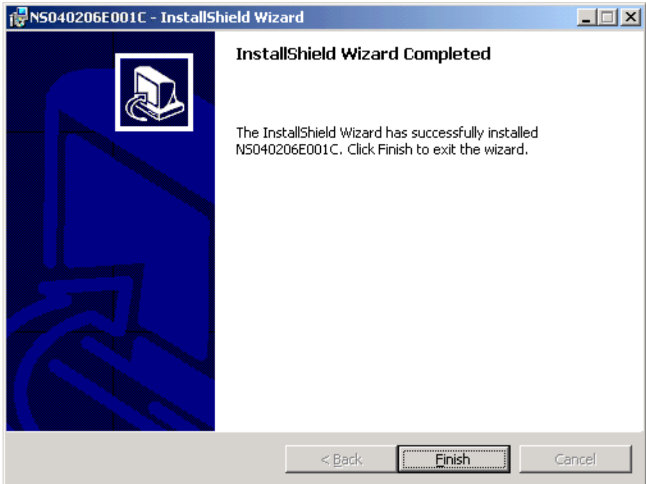


8 Click Install.

Result: The installation begins.



When installation is complete, the InstallShield Wizard Completed window appears.



Note: If the installer detects that the PEP or SU cannot be installed successfully, contact your Nortel Networks customer support representative for assistance.

PEP Viewer

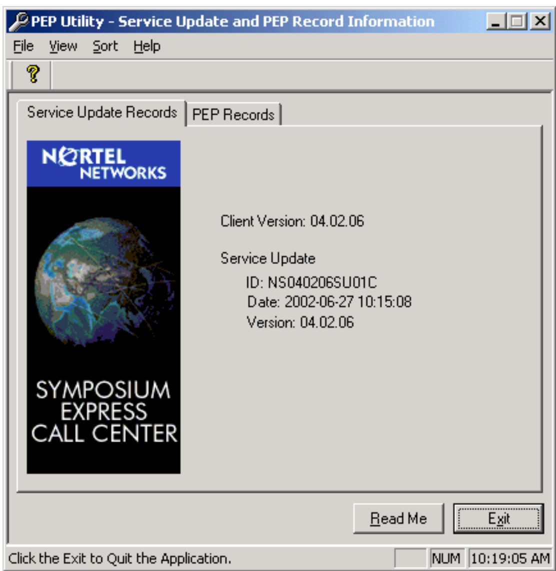
Introduction

To see which SUs and PEPs are installed on a Symposium Express Call Center client, use the PEP Viewer.

To view PEPs

1 Start the PEP Viewer by choosing, from the Windows Start menu, Programs → Symposium Express Call Center Client → Client PEP Viewer.

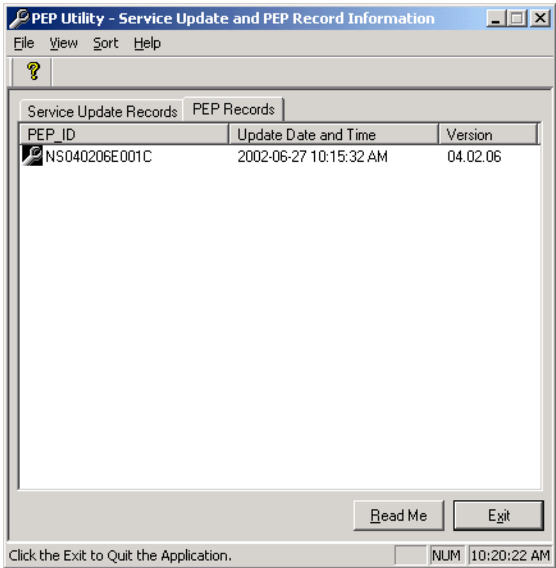
Result: The PEP Utility window appears.



The current Client Version and details of any service updates that have been applied appear on the main window. In the example above, Service Update NS040206SU01C is installed on the system.

2 To view the list of installed PEPs, click the PEP Records tab.

Result: The list of installed PEPs appears. (PEPs are shown for illustrative purposes only in this window. Service Updates are not listed here.)



3 To view the PEP read me file, select the PEP_ID, and click Read Me.

Uninstalling client PEPs and SUs

ATTENTION

You must remove all PEPs and SUs prior to uninstalling the client software.

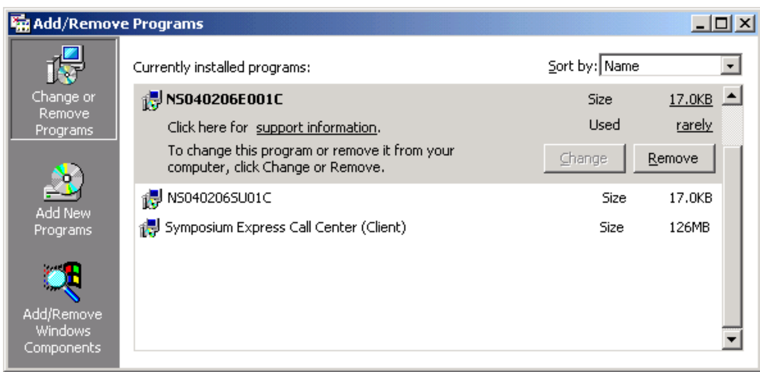
To uninstall client PEPs and SUs

1 Log on to the client PC as **Administrator**. You must be logged on with an account that has local administrative privileges to uninstall PEPs.

2 From the start menu, choose Settings → Control Panel → Add/Remove Programs.

Result: The installed PEPs and SUs appear in the list of currently installed programs.

Note: The contents of the list of currently installed programs will vary.



Note: If multiple PEPs are installed on the system, you must remove them in the reverse sequence from which they were installed. For example, if the PEP install sequence is PEP 1, PEP 2, and PEP 3, the PEP removal sequence must be PEP 3, PEP 2, and PEP 1. If you try to remove a PEP out of sequence, you get an error message and the PEP removal is aborted.

3 Click the Remove option opposite the PEP or SU name to uninstall it.

Result: A confirmation dialog box appears, asking you to confirm if you are sure you want to proceed with the uninstall.

4 Click Yes.

Result: The PEP Setup examines the system, and the PEP uninstall program dialog box appears. The selected PEP or SU is uninstalled.

5 Repeat these steps for each PEP or SU you want to uninstall.

Chapter 8

Post-installation

In this section

Overview

Introduction

After you complete the installation of the server and client on the same PC, there are a number of tasks to complete to verify and safeguard your installation. These include

- changing the NGenDist and NGenDesign passwords
- configuring the NGenSys, NGenDesign, and NGenDist passwords for remote access
- adding an SMI system
- checking the connection to the server
- setting the default printer
- configuring SNMP on the server
- logging off the system

Changing the NGenDist and NGenDesign passwords

Introduction

To protect your system from unauthorized access, change the passwords for the Nortel Networks user accounts as soon as you finish the installation.

NGenDist and NGenDesign

NGenDist and NGenDesign are Windows remote access accounts that enable the distributor or Nortel Networks customer support to remotely log on to the server if requested by the customer. These accounts are created during the server software installation. To ensure server security, change the NGenDist and NGenDesign passwords.

To change the NGenDist and NGenDesign passwords

Note: You are not required to change the NGenSys password. If you do change it, you must apply the same password change to the Meridian Application Server (MAS) Backup/Restore service.

1 Log on to the server as **Administrator**.

2 Click Start → Programs → Computer Management.

Result: The Computer Management window appears.

3 Click Local users, and then click Users.

Result: The Computer Management displays a list of available user accounts, including NGenDist and NGenDesign.

4 Right-click NGenDist.

5 Click Set Password.

Result: The Properties window appears.

6 In the Password box, type the new password.

Note: Ensure that you use a password that contains a combination of numbers and letters.

7 In the Confirm Password box, type the same password entered in the Password box.

8 Click OK.

9 Repeat steps 4 to 8 for NGenDesign.

10 Select Exit to save changes.

11 Record these passwords and store them in a secure place away from the server.

If you have changed the NGenSys password, continue with the following procedure.

ATTENTION

When you are finished changing passwords, remember to log on as NGenSys. You must be logged on as NGenSys to monitor and manage the server.

To change the NGenSys password for MAS Backup/Restore service

Note: This procedure is required only if you change the Windows user account password for NGenSys.

1 Click Start → Settings → Control Panel.

2 Click Services.

Result: The Services dialog box appears.

3 Scroll to MAS Backup/Restore service, and then select it.

4 From the Action menu, choose Properties.

Result: The Service dialog box appears.

5 Click the Log On tab, and then fill in the Password and Confirm Password boxes with the current NGenSys password.

Note: Use the same password you assigned to NGenSys in the previous procedure.

6 Click OK.

ATTENTION When you are finished, remember to log on as NGenSys. You must be logged on as NGenSys to monitor and manage the server.

Configuring the NGenSys, NGenDesign, and NGenDist user accounts for remote access

Introduction

To allow support personnel to access the server remotely with the NGenSys, NGenDesign, and NGenDist user accounts, you must enable these accounts for remote access according to the following procedure.

To configure the NGenSys, NGenDesign, and NGenDist user accounts for remote access

1 From the Start menu, click Settings → Control Panel.

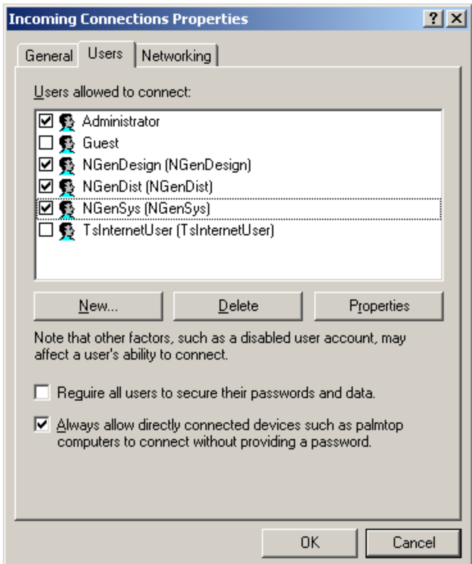
Result: The Control Panel window appears.

2 Double-click Network and Dial-up Connections.

Result: The Network and Dial-up Connections window appears.

3 Right-click the incoming connection that you created during the operating system configuration (see the procedure "To configure remote access" on page 132), and then choose Properties.

Result: The Properties dialog box for your connection appears.



4 Click the Users tab.

5 Place a check mark in the check box beside each of the users, NGenDesign, NgenDist, and NGenSys.

6 Click OK to close the window.

Adding an SMI system

Introduction

Use the SMI Workbench folder to add an SMI system for each server to which you want to connect from the client PC. When you double-click the system icon, the SMI Workbench initiates a connection to the server. When the connection is established, the SMI window opens. The SMI window contains programs for administering and monitoring Symposium Express Call Center.

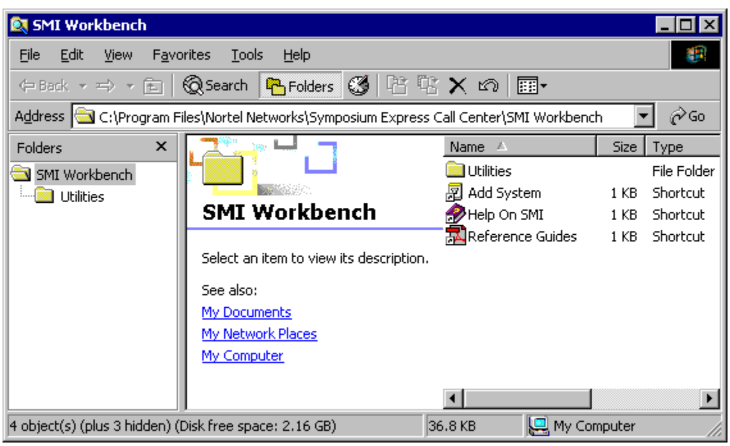
Using a dial-up connection to the server

Client PCs that are not on the same LAN as the server must use Dial-Up Networking to establish a network connection. For more information, refer to your Windows operating system documentation.

To add an SMI system

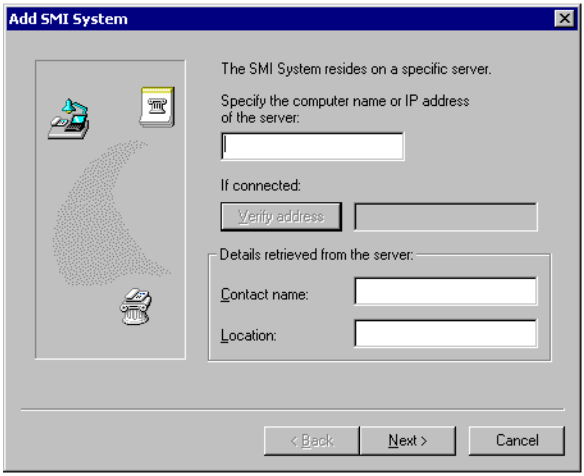
1 From the Windows Start menu on the PC on which the client is installed, choose Programs → SMI Workbench.

Result: The SMI Workbench folder appears.



2 Double-click Add System.

Result: The Add SMI System dialog box appears.



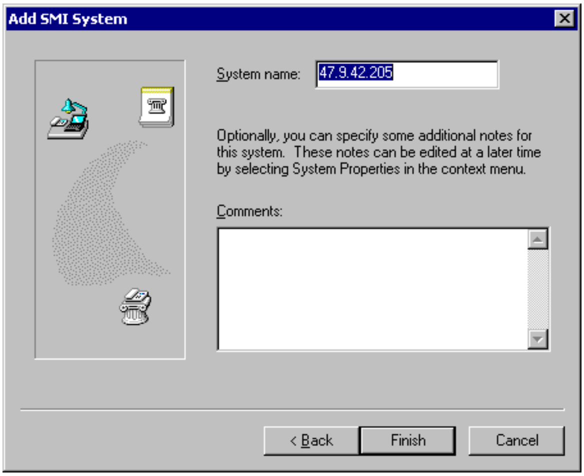
3 Enter the computer name or CLAN IP address of the server you want to access.

Note: If you are using a dial-up connection to the server, enter the CLAN IP address and not the computer name.

4 If the client PC has a network connection established with the server, then click Verify address to verify that the computer name or IP address is correct.

5 Click Next.

Result: A new Add SMI System dialog box appears.



6 Optionally, enter notes or comments that describe this SMI system.

7 Click Finish.

8 An SMI system is added to the SMI Workbench folder.

To add a desktop shortcut

1 From the Windows Start menu, choose Programs → SMI Workbench.

2 In the SMI window, right-click the icon for the Symposium Express Call Center site for which you want to create a shortcut.

3 Drag the cursor to your desktop, release the mouse button, and then choose Create Shortcut(s) Here from the context-sensitive menu.

Result: The shortcut for the system appears on your desktop.

Grouping SMI systems by site

Group SMI systems by site if the client PC is administering servers that are located in different locations.

To group SMI systems

1. Create subfolders in the SMI Workbench folder.
2. Name these subfolders by the site names.
3. Click and drag the SMI systems into the appropriate folders.

What's next?

Continue with "Connecting to the server" on page 310.

Connecting to the server

Introduction

Use this procedure to test connection to the Symposium Express Call Center server that has been configured.

Note: The first time you log on to the server, the End User Licence Agreement window appears. Only the system administrator (sysadmin) can accept this agreement. Therefore, sysadmin should be the first user to log on to the server.

Changing passwords

Note: The first time you connect to the server with a particular user ID, you must change the password for that user ID.

To connect to the server for the first time

1 From the Windows Start menu on the client PC, choose Programs → SMI Workbench.

Result: The SMI Workbench window appears.

2 Double-click the icon for the Symposium Express Call Center server to which you want to connect.

Result: The Nortel Networks SMI Logon window appears.

3 Type **sysadmin** for the user ID.

4 Enter the password. (Contact your Nortel Networks representative for the password.)

Note: User IDs and passwords are case-sensitive.

5 Click OK.

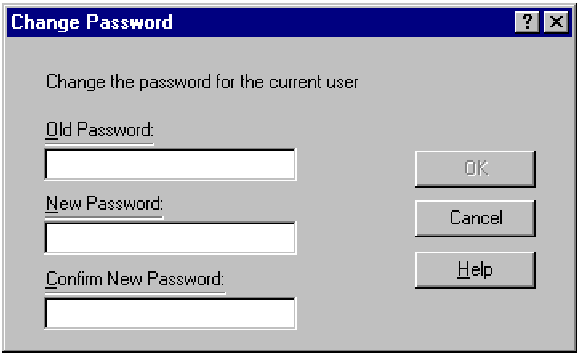
Result: The End User Licence Agreement window appears.

6 Click Accept.

Result: The Password Expiry dialog box appears.

7 Click Change Password.

Result: The Change Password dialog box appears.



8 For Old Password, enter the password that you used in step 4.

9 For New Password and Confirm New Password, enter the new password for the sysadmin user ID, and then click OK.

Result: The Administration window appears. From this window, you can administer the server in Symposium Express Call Center.

Note: If the IP address is incorrect or the link between the server and client is not available, you see the following message:

```
IP address is unreachable. Connection failed.
```

If this happens, click OK, and then check the IP address against the information in "Customer-supplied equipment and data requirements" on page 28.

Setting the default printer

Introduction

To print a scheduled report, a default printer must be set on the client PC on which the report schedule was created.

To set the default printer

1 From the Windows Start menu, choose Settings → Printers.

2 Right-click the printer on which the report is to be printed.

3 Select Set as default.

If the default printer is not set

If a default printer is not set, you will notice display errors in the background. In this case, spool the print jobs until the printer is available.

Configuring SNMP on the server

Introduction

Windows provides a Simple Network Management Protocol (SNMP) agent, which runs as a service on Symposium Express Call Center. You can use this service to forward events to a Network Management System (NMS) on your network. To do so, you must do the following tasks:

- Configure the Windows SNMP service on the server.
- Select the types of events to be forwarded to the NMS.
- Configure the NMS.

These procedures are explained below.

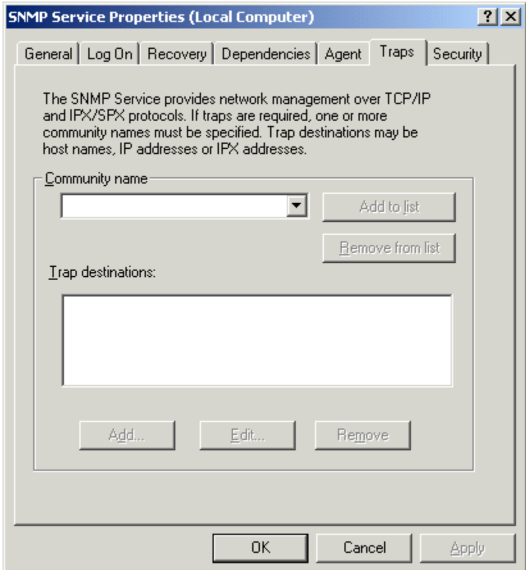
To configure the Windows SNMP service to forward traps to an NMS

1. Log on to the server as **NGenSys**.
2. From the Windows Start menu, choose Programs → Administrative Tools → Services.

   Result: The Services window appears.
3. From the list of Services, select the SNMP Service.
4. Click Action → Properties.

   Result: The SNMP Service Properties property sheet appears.

5 Click the Traps tab.

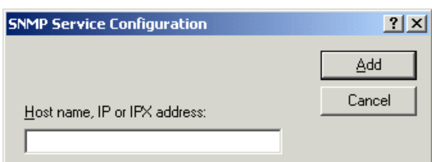


6 If no community name is defined, in the Community name box, type **public.**

7 Click Add to list.

8 To add the IP address of the NMS to which the server will send traps, click Add.

Result: The SNMP Service Configuration window appears.



9 Type the IP address of the NMS.

10 Click Add.

Result: The SNMP Service Configuration window closes.

11 In the SNMP Service Properties property sheet, click OK.

Result: The SNMP Service Properties property sheet closes.

12 In the Services window, right-click the SNMP Trap Service.

13 From the resulting pop-up menu, click Start.

Result: The SNMP Trap Service starts.

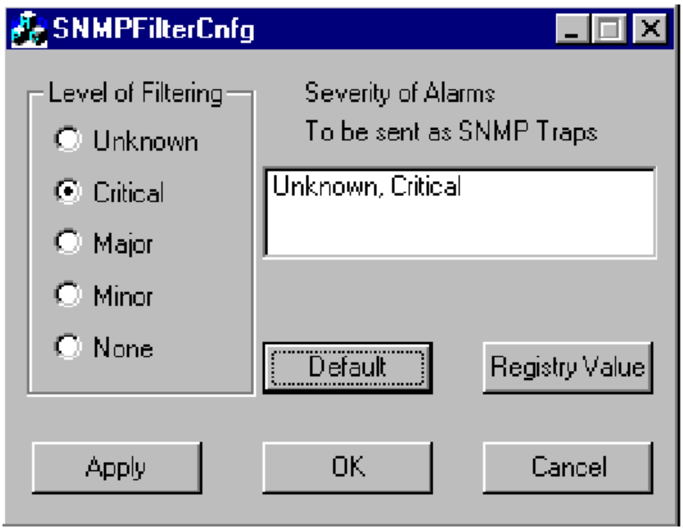
14 Close the Services window.

To select the types of events to be forwarded

1 From the Windows Start menu, choose Programs → Accessories → Windows Explorer.

2 Browse to the folder D:\Nortel\bin, and double-click SNMPFilterCnfg.exe.

Result: The SNMPFilterCnfg dialog box appears.



3 In the Level of Filtering box, select the types of events you want to forward to the NMS. All event types that appear above the type that you select are also forwarded. For example, if you select Major, all of the Unknown, Critical, and Major events are forwarded.

4 Click OK.

Configuring the NMS

After you configure the server, you must configure the NMS to receive and interpret traps (including identification to the NMS, and the origin and format of the Symposium Express Call Center traps). To do so, you must load or compile the Management Information Block (MIB) files for Symposium Express Call Center in the NMS.

The following MIB files describe the format of the traps generated by the server:

- nt-ref.mib (MIB-II)
- nbflt.mib (NGen MIB)

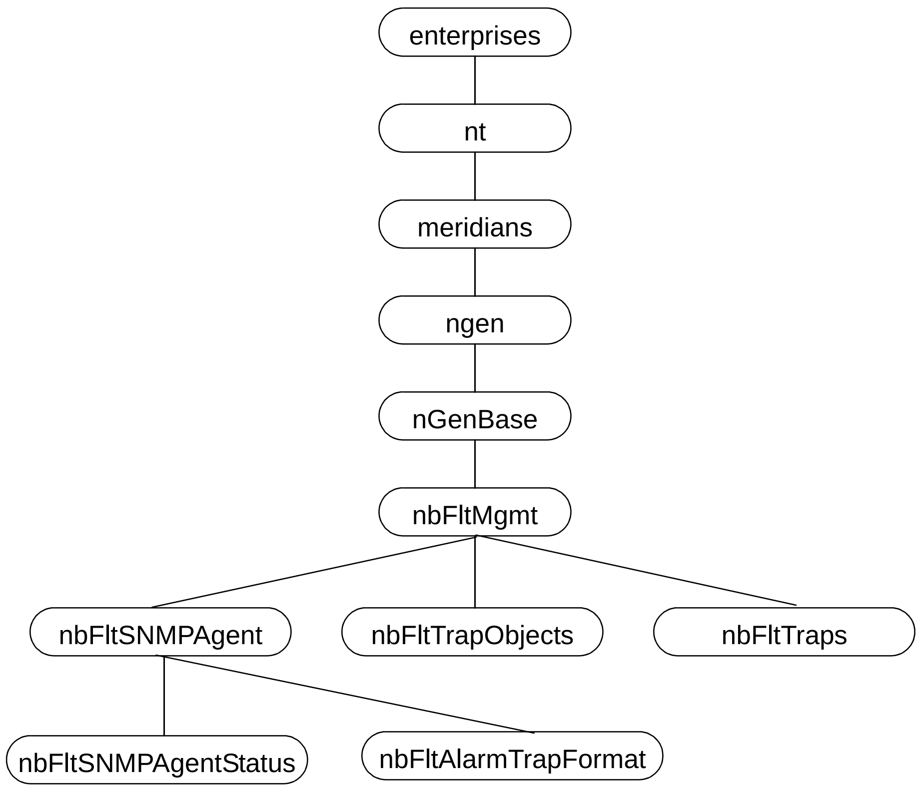
The files are available in the following locations:

- on the Server Application CD for Symposium Express Call Center, in the folder called “data”
- on the Symposium Express Call Center server, in the path d:\nortel\data

For more information about configuring your NMS, refer to your NMS documentation.

Format of the NGen MIB

Symposium Express Call Center supports the Windows standard MIB-II. In addition, it provides its own MIB, the NGen MIB. The NGen MIB has the following structure:


enterprises
nt
meridians
ngen
nGenBase
nbFltMgmt
nbFltSNMPAgent
nbFltTrapObjects
nbFltTraps
nbFltSNMPAgentStatus
nbFltAlarmTrapFormat

Logging off

Introduction

Use this procedure to log off from the Symposium Express Call Center server.

To log off from Symposium Express Call Center

1 In the Administration window, click Close.

2 Click Yes to confirm that you want to log off.

Chapter 9

Converting from server Release 2.0 or 3.0 to Release 4.2

In this chapter

Using this chapter

Introduction

This chapter explains how to convert from Release 2.0 or 3.0 of Symposium Express Call Center to Release 4.2. This involves moving all your setup configuration, call center configuration, and call statistics to a Release 4.2 Platform Vendor Independence (PVI) hardware platform.

CAUTION

Risk of conversion failure. Use the Conversion checklist.

To complete a conversion correctly, you must follow the conversion checklist that is included in this chapter (see “Conversion checklist” on page 321). It provides an overview of each step that you must perform, and the order in which you must perform the steps. Some of the procedures you must complete are referenced from other chapters in this guide, and the checklist provides the correct page references.

Important: Make a photocopy of the checklist and review it thoroughly before you start. During the conversion procedure, check off each item in the checklist as you complete it to ensure that you stay on track.

This chapter references the following chapters in this guide:

- Chapter 1, “Getting started”
- Chapter 4, “Server software”
- Chapter 5, “Coresident client software”
- Chapter 7, “Installing and uninstalling PEPs and Service Update packs”
- Chapter 14, “Tools and troubleshooting”
- Chapter 15, “Backing up data”

Conversion checklist

Introduction

Use the following checklist throughout this procedure to ensure that you perform all the required steps for conversion. Make a photocopy of the checklist and keep it with you while you work.

The checklist is broken into several parts; each part corresponds to a different section in this chapter:

1. Preparing for conversion (perform these steps in advance of the conversion date)
2. Collecting information from the original server
3. Preparing the new server or reconfiguring the existing server
4. Completing the conversion

How to use the checklist

Here are some important points to keep in mind when using this checklist:

- The checklist contains each main step you must perform to prepare for and complete a conversion. The order in which you complete certain steps is critical, so do not change the order of the steps unless the instructions in this chapter provide you with that option.
- Each step in the checklist provides a page reference to the procedure you need to complete that step. Most of these procedures are in this chapter, and they appear in chronological order according to the checklist. However, a few of the procedures are in other chapters in this guide.

  Important: When you complete a procedure that is documented in another chapter, return to the checklist to check off the item and determine the next step in the conversion process.

Preparing for conversion

Note: Perform these steps in advance of the scheduled conversion date. ✔

Step 1. Read the "Overview of conversion" See "Overview of conversion" starting on page 327 of this chapter.	
Step 2. Check for additional documentation. For instructions, see page 338.	
Step 3. Make sure you have the required Windows 2000 knowledge and documentation. For instructions, see page 339.	
Step 4. Gather the materials required for conversion. For instructions, see page 339.	
Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database. For instructions, see page 340.	

Collecting information from the original server

	✔
Step 6. Apply the latest Service Update pack and any required PEPs on the original server. For instructions, see page 346.	
Step 7. Install the pre-conversion patch on the original server. For instructions, see page 347.	
Step 8. Update your Release 3.0 scripts (for Release 3.0 servers only). For instructions, see page 350.	
Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only). For instructions, see page 350.	
Step 10. Export client data from the existing coresident client. For instructions, see page 354.	
Step 11. Perform a database integrity check on the original server. For instructions, see page 358.	
Step 12. Create a Platform Recovery Disk on the original server. For instructions, see page 360.	
Step 13. Create a Voice Services backup disk on the original server (for Release 3.0 servers only). For instructions, see page 363.	
Step 14. Back up the original server's database to a remote directory on a network computer. For instructions, see page 364.	
Step 15. Check the RAM size on the original server. For instructions, see page 374.	

Preparing the new server or reconfiguring the existing server ✔

Step 16. Configure the operating system and drives on the new or reconfigured server. For instructions, refer to one of the two procedures below. See either ■ "To reconfigure the existing server (for conversions within the same server)" on page 379 or ■ "To configure the new server (when migrating to a different server)" on page 380	

Completing the conversion

	✔
Step 17. Perform a platform compliance check on the new server. For instructions, see page 383.	
Step 18. Install the Symposium Express Call Center server software on the new server. For instructions, see page 385.	
Step 19. Apply the latest Install-time PEPs on the new server. For instructions, see "Installing server PEPs and SUs" on page 278.	
Step 20. Import database information from the Platform Recovery Disk. For instructions, see page 389.	
Step 21. Install the Symposium Express Call Center database software on the new server. For instructions, see page 391. **Note:** If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in "Installing server PEPs and SUs" on page 278. For a list of server language PEPs, see "Server language PEPs" on page 844.	
Step 22. Restore the original server's database to the new server. For instructions, see page 397.	
Step 23. Perform a database integrity check on the new server. For instructions, see page 403.	
Step 24. Configure the new server's software and database. For instructions, see page 405.	
Step 25. Apply the latest Service Update pack and any required PEPs to the new server. For instructions, see "Installing server PEPs and SUs" on page 278.	

Step 26. Restore the Voice Services database and configuration data (for Release 3.0 servers only). For instructions, see page 419.	
Step 27. Install pcAnywhere on the new server. Follow the instructions in Section C: “Installing and configuring pcAnywhere” on page 171.	
Step 28. Connect the new server to the network. For instructions, see page 420.	
Step 29. Upgrade the coresident client software to Release 4.2. For instructions, see page 421.	
Step 30. Run the script upgrade utility to upload the Release 2.0 scripts (for Release 2.0 servers only). For instructions, see page 421.	
Step 31. Back up data on your new server. For instructions, see page 425.	
Step 32. Determine whether you need to expand your database. For instructions, see page 426.	

Overview of conversion

Introduction

Conversion from Release 2.0 or 3.0 to 4.2 involves a series of procedures you must complete before the Release 4.2 server is ready for service. In simple terms, the conversion has four main steps:

1. Prepare for conversion, which involves preparing yourself and the site prior to the conversion date.
2. Collect information from the original server, which includes creating a database backup, a Voice Services database and configuration backup (if required), and a Platform Recovery Disk.
3. Configure the new server or reconfigure the existing server as a Release 4.2 PVI server, which involves installing and configuring the Windows 2000 operating system and partitioning the drives.
4. Install and configure Release 4.2 of Symposium Express Call Center on the new or reconfigured server, which also involves importing database information and restoring the database.

Server conversion paths supported in Release 4.2

You can perform any of the following conversions using the instructions in this chapter:

- from Release 2.0 to Release 4.2
- from Release 3.0 to Release 4.2

If you want to upgrade from Symposium Express Call Center to Symposium Call Center Server, see Chapter 10, “Upgrading to Symposium Call Center Server 4.2.” If you are already running Release 4.2 of Symposium Express Call Center and you want to migrate to a new hardware platform, see Chapter 11, “Performing a platform migration.”

Conversions on the same server versus migrations to a new server

The procedures in this chapter apply to

- **conversions on the same server:** In this scenario, you install the Release 4.2 software on the *same hardware platform* as your Release 2.0 or 3.0 software.
- **conversions to a different server:** In this scenario, you install the Release 4.2 software on a *different hardware platform* than your Release 2.0 or 3.0 software.

Whether you are converting within the same server or to a different server, the procedures are basically the same. Any differences are described in this chapter in the relevant section.

Understanding server requirements for conversion to Release 4.2

Release 4.2 of Symposium Express Call Center runs only on the Platform Vendor Independence (PVI) platform. Before you attempt a conversion, you must make sure that the server you plan to use for Release 4.2 meets the requirements for a Release 4.2 PVI server. For information on these requirements, see "Minimum hardware specifications for the server PC" on page 30.

If you want to convert to Release 4.2 on the same server, your existing platform must meet the requirements of a Release 4.2 PVI server. If it does not, or cannot be reconfigured as such, you must choose a different server that does meet the PVI requirements.

Understanding disk partitioning requirements on the new or reconfigured server

The disk partitioning requirements for Release 4.2 of Symposium Express Call Center are different from earlier release requirements. The table below shows a comparison of these requirements:

Drive	For Releases 2.0 and 3.0	For Release 4.2
drive C	**Contents:** coresident client software **System:** FAT or NTFS **Minimum size:** 1 Gbyte **Type:** Primary partition	**Contents:** operating system and coresident client software **System:** NTFS **Minimum size:** 3 Gbytes (4 Gbytes recommended) **Type:** Primary partition
drive D	**Contents:** operating system and server software (including database) **System:** NTFS **Minimum size:** 4 Gbytes **Type:** Logical drive within an Extended partition	**Contents:** server software (excluding database) **System:** NTFS **Minimum size:** 2 Gbytes (4 Gbytes recommended) **Type:** Logical drive within an Extended partition
drive F	n/a	**Contents:** database **System:** NTFS **Minimum size:** 4 Gbytes **Maximum size:** 16 Gbytes **Type:** Logical drive within an Extended partition

Drive	For Releases 2.0 and 3.0	For Release 4.2
drives G to U	n/a	**Contents:** additional database partitions **System:** NTFS **Minimum size:** 4 Gbytes **Maximum size:** 16 Gbytes **Type:** Logical drives within Extended partitions

Note: For Release 4.2, the CD-ROM drive letter must be E.

How you actually partition your disks depends on the hardware configuration of the server on which you are going to run your Release 4.2 system. For more details, see “Minimum hardware specifications for the server PC” on page 30.

Database size and database expansion

When you move from your original server to a new or reconfigured server, the database on the new server will be exactly the same size as the database on the original server, even if you create additional or larger database partitions. Release 4.2 of Symposium Express Call Center does not automatically expand your database into additional or larger database partitions during conversion and platform migration.

If you want to make use of additional space for your database, you must use the Database Expansion utility in either of the following scenarios:

- Your new server has more than one database partition.

  All Release 4.2 servers must have at least one database partition, F. If you have created additional database partitions, for example, G and H, you must use the Database Expansion Utility to make use of the additional partitions.

- You want to take advantage of additional space on the F partition of your new server.

  On your original server, the D partition contains the database, which is a fixed size of 2 Gbytes. If you want to use the additional space on your new server’s F partition, you must use the Database Expansion utility to make use of the extra space.

For more information, see “Database Expansion utility” on page 584.

Using a remote directory for backing up and restoring the database

The conversion procedure involves backing up your original server’s database and restoring it on the new server. You must back up your database to a remote directory on a network computer for conversion to Release 4.2. (Detailed instructions are included later in this chapter.) Tape backups are not supported for conversion to Release 4.2 due to compatibility problems with tape drives and driver software.

If your server has both CLAN and ELAN network interface cards, use the CLAN connection for the remote backup and restore. This way, the server can remain online during the backup. If your server has only an ELAN card, consider the following options for obtaining a temporary network connection during the backup and restore:

- Reconfigure the ELAN card with a CLAN IP address to connect the server to the customer network.
- Disconnect the ELAN card from the switch and connect it to a temporary server via a hub, creating a local LAN.

If you use the ELAN card, your call center must be shut down for the duration of the backup, since it must be disconnected from the switch.

Keycode requirements for conversion to Release 4.2

You need a new keycode if you are converting from an earlier release to Release 4.2. You cannot reuse the keycode from the earlier release.

Upgrading features during conversion to Release 4.2

If you want to add on additional software features when you convert the server to Release 4.2, you can obtain a keycode that includes the new features, and use this keycode when you configure the Release 4.2 server.

Dealing with call statistics during conversion

During the conversion procedure, you must create a backup of your original server’s database. In most cases, the database backup is an online operation, so the server remains in service during the backup. However, if the call center continues to respond to calls after the database backup, then call statistics recorded after the database backup of the original server will be missing from the restored database of the new or reconfigured server.

If you must transfer all call statistics to the new server, Nortel Networks recommends that

- you take the original server out of service as soon as you have completed the database backup, and keep it out of service during the entire conversion procedure
- you collect all of the needed call statistics from the original server’s database before taking the server out of service

Ways to save time during conversion

Most conversions take place in situations where down time for the server is limited. Here are a number of suggestions for minimizing the amount of down time and making the conversion go more smoothly.

Complete the checklist “Preparing for conversion” ahead of time

The first section in the Conversion Checklist, titled “Preparing for conversion,” lists a number of steps you can perform well in advance of the scheduled date for conversion. These steps include

- reading overview information
- making sure you have the required knowledge and materials
- checking historical statistics and, if necessary, allowing the daily maintenance process to purge data overnight

Perform a trial run of the Database Integrity Check, Platform Recovery Disk creation, and database backup

Some conversions are slowed down when database errors are detected during a Database Integrity Check, or during the creation of a Platform Recovery Disk, which checks for database segmentation problems. Also, it takes time to set up and test a database backup to a remote directory (tape backups are not supported for conversion to Release 4.2).

For these reasons, it is good practice to perform a trial run of the Database Integrity Check, Platform Recovery Disk creation, and database backup at least a few days before the conversion is scheduled. This way, any problems can be detected and resolved ahead of time. Performing trial runs ahead of the conversion date also enables you to estimate the time required to complete each step.

Note: Keep in mind that the time required to do a database backup can vary between the trial run and the actual backup day due to several factors. For example, the amount of data to back up and the amount of network traffic can change from day to day.

Estimating the time it takes to perform a conversion

When planning a conversion, you must consider the length of time the call center will be out of service and schedule an appropriate time slot. This section provides some estimates of how long conversions take for two different scenarios. For each scenario, it also estimates the amount of downtime for the server.

These estimates are approximate and assume the installer is familiar with the procedures. Actual conversion times in the field varies, depending on the hardware used (processing speed, memory, and so on), the size of the database, the network bandwidth and load during backups and restores, and the installers' experience. Unforseen problems can also cause delays.

Notes:

1. Estimates are for Standard Pentium IV servers.
2. Time spent preparing for the conversion prior to the conversion date is not included in the estimates (this includes reading the customer documentation and gathering the materials required for conversion).
3. The estimates apply to conversion from either Release 2.0 or Release 3.0 servers. Although there are minor differences in the conversion steps for these two scenarios, they make little difference to the overall times.
4. In some cases, separate time estimates are provided for
   - small databases (50 percent full, 2 Gbytes)
   - large databases (90 percent full, 4 Gbytes)

Summary of conversion time estimates

The following table summarizes the time estimates for two scenarios. This summary is provided for a small database only (2 Gbytes, 50 percent full). Conversions on servers with larger databases take more time:

Scenario	Total time (small database)	Total call center downtime
Scenario 1: A conversion on the same server In this scenario, the Release 4.2 software is installed on the *same hardware platform* as the Release 2.0 or 3.0 software.	12.5 hours	10 hours
Scenario 2: A conversion to a different server In this scenario, the Release 4.2 software is installed on a *different hardware platform* than the Release 2.0 or 3.0 software.	8.5 hours	2 hours

It is clear from the time estimates in this table that Scenario 2, which involves moving to a different hardware platform, takes less time and results in less downtime for the call center. There are several reasons for this:

- The original server can remain in operation while you are installing and configuring the new server.

  Note: You must still plan for downtime on the original server when installing the latest PEPs and Service Update packs, installing the pre-conversion patch, and performing a database integrity check.

- You can perform certain steps from the conversion checklist in parallel. For example, while you are gathering data from the original server (database backup, Platform Recovery Disk, and so on) you can begin the installation and configuration of the new server.

Detailed breakdown of conversion time estimates

The following table lists approximate conversion times for three of the four major parts of the conversion process, as per the “Conversion checklist” on page 321. (No time estimates are provided for Part 1, “Preparing for conversion,” since these steps are performed in advance of the conversion date.)

Conversion part/steps	**Time** (2 Gbyte DB, 50% full)	**Time** (4 Gbyte DB, 90% full)
1. Preparing for conversion ■ Step 1. Read the “overview of conversion.” ■ Step 2. Check for additional documentation. ■ Step 3. Make sure you have the required Windows 2000 knowledge. ■ Step 4. Gather the materials required for conversion. ■ Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database.	n/a	n/a
2. Collecting information from the original server ■ Step 6. Apply the latest Service Update pack and any required PEPs on the original server. ■ Step 7. Install the pre-conversion patch on the original server. ■ Step 8. Update your Release 3.0 scripts (for Release 3.0 servers only). ■ Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only). ■ Step 10. Export client data from the existing coresident client. ■ Step 11. Perform a database integrity check on the original server. ■ Step 12. Create a Platform Recovery Disk on the original server. ■ Step 13. Create a Voice Services backup disk on the original server (for Release 3.0 servers only). ■ Step 14. Back up the original server’s database to a remote directory on a network computer. ■ Step 15. Check the RAM size on the original server.	3 to 3.25 hours	4.25 to 4.75 hours

Conversion part/steps	Time (2 Gbyte DB, 50% full)	Time (4 Gbyte DB, 90% full)
3. Preparing the new server or reconfiguring the existing server ■ Step 16. Configure the operating system and drives on the new or reconfigured server.	1.5 hours	1.5 hours
4. Completing the conversion ■ Step 17. Perform a platform compliance check on the new server. ■ Step 18. Install the Symposium Express Call Center server software on the new server. ■ Step 19. Apply the latest Install-time PEPs on the new server. ■ Step 20. Import database information from the Platform Recovery Disk. ■ Step 21. Install the Symposium Express Call Center database software on the new server. ■ Step 22. Restore the original server's database to the new server. ■ Step 23. Perform a database integrity check on the new server. ■ Step 24. Configure the new server's software and database. ■ Step 25. Apply the latest Service Update pack and any required PEPs to the new server. ■ Step 26. Restore the Voice Services database and configuration data (for Release 3.0 servers only). ■ Step 27 Install pcAnywhere on the new server. ■ Step 28. Connect the new server to the network. ■ Step 29. Upgrade the coresident client software to Release 4.2. ■ Step 30. Run the script upgrade utility to upload the Release 2.0 scripts (for Release 2.0 servers only). ■ Step 31. Back up data on your new server. ■ Step 32. Determine whether you need to expand your database.	8 hours	9.5 hours

Preparing for conversion

Introduction

This section contains conversion steps you can do ahead of time to plan and prepare for conversion.

The following summary lists the procedures you must complete in this section:

- Step 1. Read the “Overview of conversion”
- Step 2. Check for additional documentation.
- Step 3. Make sure you have the required Windows 2000 knowledge and documentation.
- Step 4. Gather the materials required for conversion.
- Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database.

Step 1. Read the “Overview of conversion”

The section “Overview of conversion,” starting on page 327, contains information on a number of topics that you need to understand before performing a conversion. Be sure to read this section carefully.

Step 2. Check for additional documentation

Before performing a conversion, check for the Distributor’s Technical Reference (DTR), any Installation Addenda, and any updated customer documentation on your regional Symposium Express Call Center technical web site. Refer to the web site at http://www.nortelnetworks.com (for end customers), or http://www.nortelnetworks.com/prd/picinfo/ (for distributors). These documents may contain important information regarding conversion or migration that is not in this guide.

Step 3. Make sure you have the required Windows 2000 knowledge and documentation

You must be prepared to install and configure the Windows 2000 Server or Windows 2000 Advanced Server operating system during conversion. This guide provides guidelines and tips for this activity, but it does not provide step-by-step instructions for all procedures. To ensure that you are prepared, review Section A: “Configuring the operating system” on page 99. Make sure you are able to perform the installation and configuration steps listed there, and make sure you have the relevant Microsoft documentation.

Step 4. Gather the materials required for conversion

You must have the following materials available before starting the conversion process:

Item	Purpose and details
two blank preformatted disks	You need one disk to create a Platform Recovery Disk that contains the original server’s setup record and database configuration. If your original server has the Voice Services feature, you need a second disk to create a Voice Services database and configuration backup.
Symposium Express Call Center software for Release 4.2	You must install the Release 4.2 version of Symposium Express Call Center software on the new server. This includes the following installation disks: ■ Server Application CD-ROM containing the Symposium Express Call Center server installation software and the Platform Compliance Check utility ■ Client Application CD-ROM containing the Symposium Express Call Center client installation software ■ Server Supplementary CD-ROM containing any additional software components required for Symposium Express Call Center to operate, such as Service Update packs and Performance Enhancement Packages (PEPs) ■ pcAnywhere Release 10.5 Host-Only CD-ROM (NTJK08AA)

Item	Purpose and details
Windows 2000 operating system	If your new server does not have the Windows 2000 Server or Windows 2000 Advanced Server operating system installed, or if you are converting within the same server, you must do a fresh installation of the operating system. Make sure you have the documentation provided by Microsoft available onsite when you are configuring the operating system.

Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database

Before attempting a conversion to Release 4.2, you must ensure that certain settings for the historical statistics stored in the server's database are set to the default values. If someone has increased these values at some point prior to the conversion date, space in the server's database that is normally free might be filled with historical data. This free space is required for database conversion. Without it, you might not be able to configure your Release 4.2 server after you restore the database, and the conversion will fail.

To avoid this, you must check these settings in the Historical Statistics window in Advanced Functions. Then, if the values have been increased from the default values, you must

- change them back to the default values
- allow the daily maintenance routines to purge the surplus data from the database

Note: Release 4.2 of Symposium Express Call Center allows you to expand your database to increase the storage space. Therefore, you can adjust the settings for historical statistics after you convert the server to Release 4.2, if required.

For example, the default value for the number of days that the system stores interval statistics is 15 days. If this value in the Historical Statistics window is set to 40 days, you must change it back to 15 days. At midnight, the daily maintenance routine will delete all interval statistics older than 15 days. This recovers the free space in the database required for conversion. The following sections provide detailed procedures.

ATTENTION

The following procedure can involve making changes to the historical statistics configuration on the server. This will cause historical data to be permanently deleted from the database. Make sure you do the following before making changes to the settings for historical statistics:

1 Review with the customer the data that will be permanently deleted from the database.
2 Ensure the customer has run any necessary reports on this data so it can be archived for future reference.
3 Perform a full backup of the server.

To check the settings for historical statistics and purge any surplus data

1 Log on to the client using the system administrator user ID.

2 In the Administration window, from the System Administration drop-down menu, choose Advanced Functions.

3 Navigate to Reports & Displays → Statistics Configuration → Historical Statistics.

Result: The Historical Statistics window appears.

4 Click the Parameters tab.

5 For each parameter listed, check whether the value matches the one shown in the following table. If it does not match, adjust the configured value to match.

Note: You may not be able to return the values to those shown below. In this case, set them as close as possible to these values.

Parameter name	Default value
Active Agents	40*
Agent Positions (phoneset)	40*
Skillsets	104

Parameter name	Default value
Calls per Hour	5000
DNISs	500
CDNs	75
IVR ACD-DNs	10
Activity Codes	5000
Agent Events per Day	32
Routes	128
RAN Routes	25
Music Routes	25
Trunks	750
Applications	136
Nodes	30
IVR Ports	50

* These values depend on the number of agents purchased. You do not need to change them.

6 Next, click the Duration tab.

7 For each duration listed, check whether the value matches the one shown in the following table. If it does not match, adjust it to match:

Statistic	Duration
Interval	15 days
Daily:	7 days
Weekly:	12 weeks
Monthly:	12 months

Statistic	Duration
IVR Voice Port login:	3 days
Agent login and logout:	3 days
First business day of the week:	(not applicable)
Length of business day:	(not applicable)
Business week contains:	(not applicable)
Call by call:	(not applicable)

8 Once you have completed these checks and adjustments, click Save.

9 Close the Historical Statistics window.

10 If you made changes to any of the values in either the Parameters or Duration tabs, do one of the following:

- Wait overnight to allow the daily maintenance routine to run and purge the surplus data from the database.
- If you do not want to wait, you can force the data consolidation to occur by doing the following:

  a. Disconnect the server from the switch.

  b. Shut down the services on the server.

  c. Change the time on the server to a time after midnight.

  d. Start up the services on the server.

  Result: The daily maintenance routine runs and purges the surplus data from the database. This takes approximately 20 to 30 minutes.

  Note: If you disconnected the server from the switch, be sure to set the time back to the current time before restoring the connection.

Checking the success of the database purge

When the daily maintenance routine is complete, examine the HDM log file to ensure the process started and completed as expected. You can find this file on the server at D:\Nortel\iccm\data\sdm\stats\log\HDMLog.txt.

The following table shows an example of this log file and what to check for:

What to check for	Examples of entries in the HDMlog.txt file
a. Check for an entry indicating that the daily maintenance process started.	`[Trace] Started Daily Maintenance : TimeKey   : 04/22/2003 00:00:00 Start Time: 04/23/2003 00:05:32 [.\NIHDM_clMtceMgr.cpp-789]`
	`[Trace] Purging Agent Login/Logout Event Stats : TimeKey : 04/21/2003 00:00:00 [.\NIHDM_clEventStatsMtceServer.cpp-219]`
	`[Trace] Purging IVRPort Login/Logout Event Stats : TimeKey : 04/21/2003 00:00:00 [.\NIHDM_clEventStatsMtceServer.cpp-234]`
	`[Trace] Purging Call by Call Event Stats : TimeKey : 04/21/2003 00:00:00 [.\NIHDM_clEventStatsMtceServer.cpp-249]`
	`[Trace] CBCStatsServer :: purging CBC Stat : 04/21/2003 00:00:00 [.\NIHDM_clCBCStatsServer.cpp-242]`
b. Check for entries indicating that interval data has been purged.	`[Trace] Purging Interval Stats : TimeKey : 04/09/2003 00:00:00 [.\NIHDM_clIntvlStatsMtceServer.cpp-312]`
	`[Trace] Purging Daily Stats : TimeKey : 04/17/2003 00:00:00 [.\NIHDM_clDailyStatsMtceServer.cpp-317]`
	`[Trace] Consolidating Daily Stats : TimeKey : 04/22/2003 00:00:00 [.\NIHDM_clMtceMgr.cpp-802]`
	`[Trace] Consolidating Weekly Stats : TimeKey : 04/20/2003 00:00:00 [.\NIHDM_clMtceMgr.cpp-817]`

What to check for	Examples of entries in the HDMlog.txt file
	`[Trace] Consolidating Monthly Stats : TimeKey : 04/01/2003 00:00:00 [.\NIHDM_clMtceMgr.cpp-825]`
c. Check for an entry indicating that the daily maintenance process finished.	`[Trace] Finished Daily Maintenance : Finish Time: 04/23/2003 00:07:23 [.\NIHDM_clMtceMgr.cpp-840]`

Once you have completed the steps in this section, you can proceed with the conversion as per the “Conversion checklist” on page 321.

Collecting information from the original server

Introduction

The new server uses some of the same base configuration information as the original server. This section shows you how to obtain the required information from the original server before starting the conversion process.

The following summary lists the procedures that you must complete in this section:

- Step 6. Apply the latest Service Update pack and any required PEPs on the original server.
- Step 7. Install the pre-conversion patch on the original server.
- Step 8. Update your Release 3.0 scripts (for Release 3.0 servers only).
- Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only).
- Step 10. Export client data from the existing coresident client.
- Step 11. Perform a database integrity check on the original server.
- Step 12. Create a Platform Recovery Disk on the original server.
- Step 13. Create a Voice Services backup disk on the original server (for Release 3.0 servers only)
- Step 14. Back up the original server’s database to a remote directory on a network computer.
- Step 15. Check the RAM size on the original server.

Step 6. Apply the latest Service Update pack and any required PEPs on the original server

Ensure that the latest Service Update pack and any required PEPs are applied to the original server. These may include enhancements that you require to perform conversion and migration procedures.

You should first check which PEPs and Service Update packs are already installed on the Release 2.0 or Release 3.0 server, and then record them in the "PEP level worksheet" on page 377. Then go to the web site for the Meridian PEP Library to see if there is a more recent Service Update pack or any required PEPs for the release of Symposium Express Call Center software that you are running on your original server. If so, install them on your original server.

For more detailed instructions on viewing and installing PEPs and Service Update packs, refer to one of the following guides, depending on the release of the software that your original server is running:

- *Nortel Networks Symposium Express Call Center Planning, Installation, and Administration Guide* for Release 2.0
- *Nortel Networks Symposium Express Call Center Planning, Installation, and Administration Guide* for Release 3.0

Step 7. Install the pre-conversion patch on the original server

You must install a pre-conversion patch on your Release 2.0 or Release 3.0 server that adds the following features required for conversion:

- the Platform Migration Utility, which allows you to
  - create a Platform Recovery Disk
  - perform a Database Integrity Check
- a remote backup utility, which allows you to back up your database to a remote directory on a network computer
- For Release 3.0 servers only, the pre-conversion patch also adds
  - a Voice Services backup function (to be used if the Release 3.0 server uses the Voice Services feature)
  - the TFE Syntax Checker Utility, which allows you to check the syntax of your scripts and make any necessary updates prior to conversion

This patch does not affect the operation of your Release 2.0 or Release 3.0 server. Therefore, if you run into problems during the conversion, you can continue to use your original server.

This pre-conversion patch is packaged and installed differently for Release 2.0 servers and Release 3.0 servers.

For Release 2.0 servers	Packaged as a self-extracting zip file. For installation instructions, see “To install the pre-conversion patch on a Release 2.0 server” below.
For Release 3.0 servers	Packaged as a server PEP. For installation instructions, see “To install the pre-conversion patch on a Release 3.0 server” on page 349.

To install the pre-conversion patch on a Release 2.0 server

For Release 2.0 servers, the pre-conversion patch is packaged in a self-extracting zip file (migR2R42.exe) that automatically installs the required files in the correct directory on your Release 2.0 server (D:\Nortel\Mig42). You can obtain this zip file from the Meridian PEP Library web site at

- https://www21.nortelnetworks.com/MPL (Europe)
- https://www43.nortelnetworks.com/MPL (North America)

To register for either of these web sites, follow the instructions provided at http://nortelnetworks.com/register.

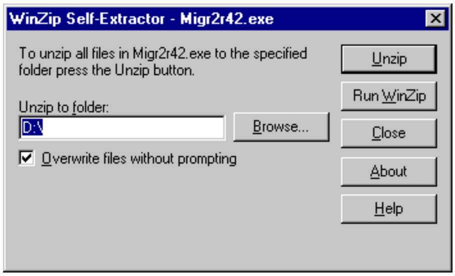
Once you have located the self-extracting zip file, follow the instructions below.

Note: You do not have to shut down the server’s services to install the patch.

1 Obtain the self-extracting zip file (migR2R42.exe) and copy it onto the Release 2.0 server.

2 Navigate to where you copied the file, and then double-click it.

Result: The WinZip Self-Extractor window appears.



Note: Do not make changes to the settings in this window; the executable extracts the files to the correct directory on your server (D:\Nortel\Mig42).

3 Click Unzip.

Result: The executable extracts the files to the directory D:\Nortel\Mig42 on your server.

4 Click OK on the confirmation window.

5 Click Close to close the WinZip Self-Extractor window.

Result: The patch is installed. Instructions for using the features installed with the patch are provided in separate steps later in the conversion procedure.

To install the pre-conversion patch on a Release 3.0 server

For Release 3.0 servers, the pre-conversion patch is packaged in a Product Enhancement Package (PEP). You can obtain this PEP from the Meridian PEP Library web site at

- https://www21.nortelnetworks.com/MPL (Europe)
- https://www43.nortelnetworks.com/MPL (North America)

To register for either of these web sites, follow the instructions provided at http://nortelnetworks.com/register.

Install this PEP the same way you would install any other server PEP. Instructions for using the features installed with the PEP are provided in separate steps later in the conversion procedure.

Step 8. Update your Release 3.0 scripts (for Release 3.0 servers only)

Note: If you have a Release 2.0 server, skip to the next step in the Conversion Checklist.

Certain script syntax rules for Release 4.2 are different from those used in Release 3.0. You must ensure that you update your Release 3.0 scripts before you convert to Release 4.2. Use the TFE Syntax Checker Utility to check your Release 3.0 scripts. This utility is included in the pre-conversion patch, which you installed on your server in an earlier previous step. The utility determines whether your scripts adhere to the syntax rules used in Release 4.2. For instructions on using the TFE Syntax Checker Utility, see the readme file included in the pre-conversion patch.

ATTENTION

If you do not check your script syntax before converting your server, and if the syntax of one or more of your scripts does not adhere to the new rules, the TFE service will not come up after conversion. If this happens, you must view the scripts, find the syntax errors, correct them, and validate and activate the scripts. The TFE only comes up when all scripts comply with the new rules.

Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only)

Note: If you have a Release 3.0 server, skip to the next step in the Conversion Checklist.

If you have a Release 2.0 server, you must install a script upgrade utility and then use it to download all the Release 2.0 scripts to a .upg file and store them in a safe location before converting the server to Release 4.2. This utility is included in client PEP NE025003P015C. Later in the conversion procedure, you must retrieve and upload the scripts to the new system.

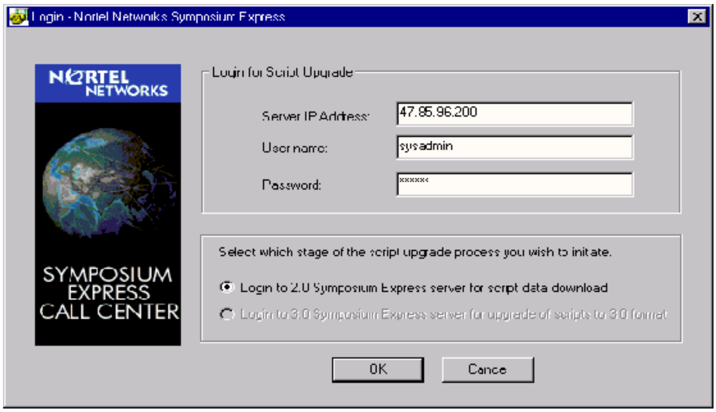
To run the script upgrade utility on the Release 2.0 coresident client

1 Install PEP NE025003P015C on the coresident client on your Release 2.0 server.

2 In the Release 2.0 coresident client, navigate to c:\Nortel\Client\en\bin.

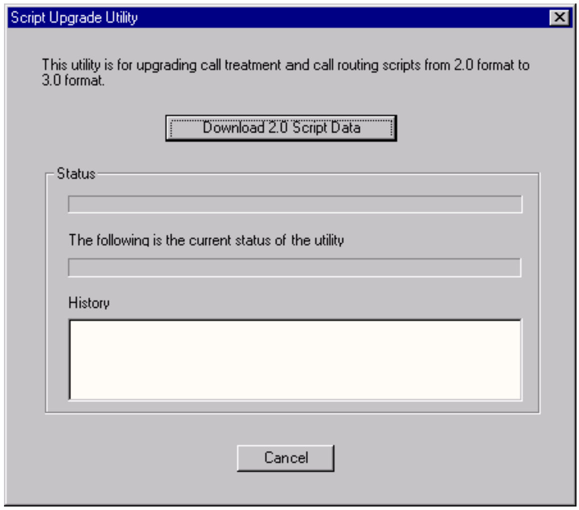
3 Double-click nicgcsupgr.exe.

Result: The Login - Nortel Networks Symposium Express window appears.



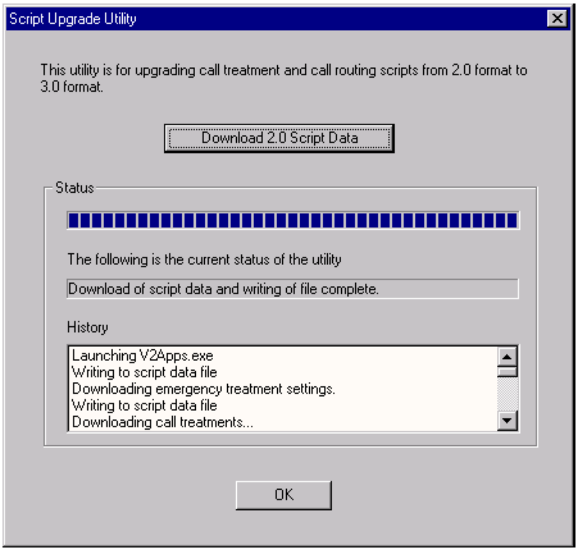
4 Enter the Server IP Address, the User name, and the Password, and then click OK.

Result: The Script Upgrade Utility dialog box appears.



5 Click Download 2.0 Script Data.

Result: The utility creates the directory D:\ExpressCDN (if it does not already exist), and puts a storage file called ScriptUpgradeData.upg in the directory. All the call routing and call treatment scripts are stored in this file. When all the data has been saved to the file, the Script Upgrade Utility dialog box looks as follows:



6 The V2Apps application then automatically launches, and you must accept the values in the column as the list of CDNs in the database. The utility then writes out the data to a file.

7 Back up the files in the directory D:\ExpressCDN to a safe location, such as a remote computer or floppy disk. Later in the conversion procedure, you must restore these files to your new or reconfigured server.

ATTENTION

If you are performing a conversion within the same server, you must be sure to back up the files in another location, because you will overwrite the D:\ExpressCDN directory when reformatting the server.

8 Click OK to close the dialog box.

Step 10. Export client data from the existing coresident client

Note: This step is required only if there are user-created or user-defined reports stored on your coresident client that you want to restore following the server conversion. If not, you can skip to the next step in the Conversion Checklist.

You must export the existing customized client data on a coresident client to a safe location before converting your server to Release 4.2. To do this, use the Data Migration Utility, which is included on the Symposium Express Call Center Release 4.2 Client CD.

The Data Migration Utility allows you to export data (user-created and user-defined reports and, for Release 3.0 and Release 4.2 clients, SMI Workbench icons) from the existing client to a safe location. You can then use the utility to import that data to the new client when you have installed it.

Reports location management

It is important to understand how the Data Migration Utility manages the location of your user-created and user-defined reports.

When exporting client data, the Data Migration Utility asks you to select a location to store the client data. This must be a safe location that will still exist when you are ready to install the new client software. Nortel Networks recommends you use a mapped network shared location.

At the location you specify, the Data Migration Utility creates a subdirectory (client\en\rpt\UserCreated), and exports the data there. It also creates a file (UserCreatedReports.txt) and locates this file in the root directory of the export location you specified. This UserCreatedReports.txt file contains the location of all user-created and user-defined reports on the original client.

Later, after you have installed the new client software, you use the Data Migration Utility to import the data from the export location you specified onto the client. You must then copy all the user-created and user-defined reports to the exact location where they were located on the original client. Refer to the file UserCreatedReports.txt for the location.

To export client data

1 Ensure that no SMI workbench sessions are running on the client application before you start the exporting process.

ATTENTION

Ensure that all user-created and user-defined Crystal Reports have a unique name. If they do not have a unique name, they are overwritten during the exporting process and cannot function properly.

2 Decide where you want to store the exported client data. This must be a safe location that will still exist when you are ready to install the new client software.

3 Log on to the PC on which the client software is installed. If applicable, use the local administrator account.

4 Run the Data Migration Utility, which is located on the Symposium Express Call Center Release 4.2 Client CD.

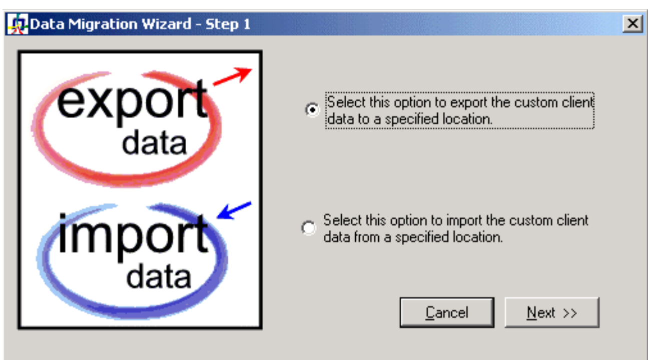
To run the utility, follow these steps:

a. Insert the CD into the CD-ROM drive.

Note: The setup program starts automatically and loads the installation wizard. As you will not be performing an install, click Cancel to exit the wizard.

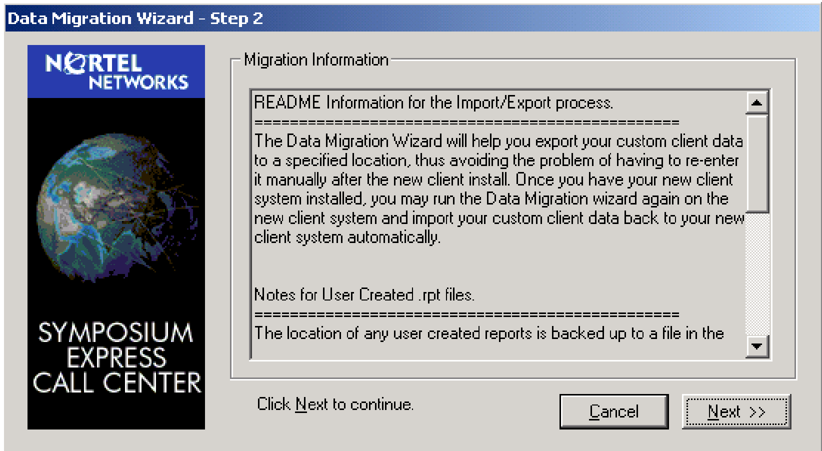
b. From the Start menu, select Run → Browse, and Datamgr.exe from the root directory of the CD. Click OK to run.

Result: The Data Migration Wizard window appears.



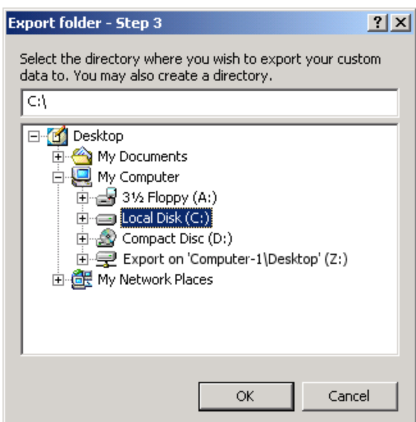
5 Ensure the export option button is selected, and then click Next.

Result: The next Data Migration Wizard window appears with general information concerning the import/export process.



6 Read the text, and then press Next to continue.

Result: The Export folder - Step 3 window appears.



7 Select the folder where you want to save your exported data.

ATTENTION

Ensure that the folder you select is in a safe location that will still exist when you are ready to install the new client software. Nortel Networks recommends you use a mapped network shared location.

a. In this folder, the Data Migration Utility creates a subdirectory: client\en\rpt\UserCreated.

b. The Data Migration Utility also creates a file called UserCreatedReports.txt, which is located in the root directory that you selected.

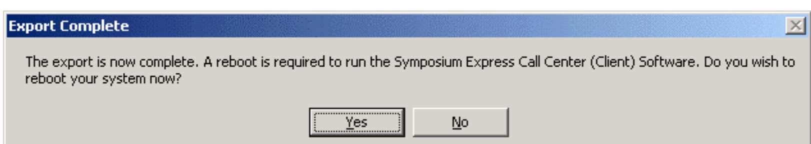
For example, if you selected z:\Export as the location for your exported data, the Data Migration Utility creates the subdirectory in z:\Export\client\en\rpt\UserCreated.
It also creates the file UserCreatedReports.txt in z:\Export.

8 Click OK.

Result: A dialog box appears stating that the data export may take a few minutes, and to wait until you are prompted to restart the computer.

9 Click OK.

Result: At this point, you may need to wait while the program completes its tasks. The system informs you when the export is complete and asks you to restart the computer.



10 Click Yes.

Step 11. Perform a database integrity check on the original server

To ensure the integrity of the databases on the original server, Nortel Networks recommends that you perform a database integrity check before creating a backup of your database. This step is highly recommended to capture any database consistency problems. To perform this check, use the Platform Migration Utility, which you installed on your server in a previous step.

ATTENTION

Before performing the database integrity check, make sure there are no active Symposium Express Call Center client connections to the server on which you are performing the check. If client PCs connect to the server while the check is running, errors may result and you may need to perform the check again.

A database integrity check can take from 1 to 3 hours, and the server must be offline for the duration of the check. You can perform the check ahead of time, but make it as close as possible to the time of the database backup.

To perform a database integrity check on the original server

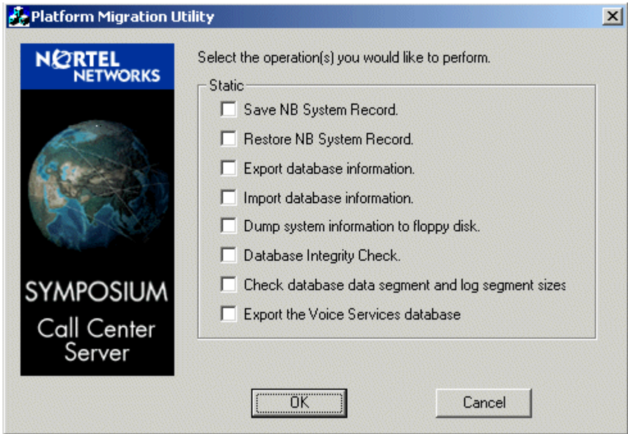
1 Log on to the server as **NGenSys**.

2 To launch the Platform Migration Utility, do one of the following:

- For a Release 2.0 server, navigate to D:\Nortel\iccm\bin, and then double-click the file sysrecres.exe.

- For a Release 3.0 server, from the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

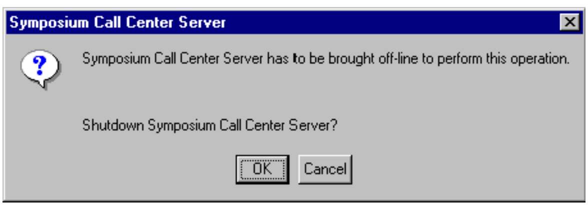
Result: The Platform Migration Utility dialog box appears.



Note: For Release 2.0 servers, the last check box, Export the Voice Services database, does not appear.

3 Select the Database Integrity Check option, and then click OK.

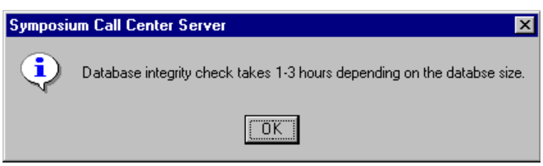
Result: The following dialog box appears:



4 Click OK.

Result: The system displays messages as it checks the status of each service running on the server.

5 Wait until the following dialog box appears:



6 Click OK to start the database integrity check.

Result: A DOS window appears on the screen. Do not close this window.

Note: Since the database integrity check takes some time to complete, you may not see any activity on the screen. However, you should notice continuous disk activity.

7 Wait until the following dialog box appears:

8 Click OK to exit the utility.

9 Check the log file (C:\DbChk.log) for errors. To do so, open the log file in a text editor (such as Notepad).

When checking the log file, search for key words such as ERROR or MSG. Contact your Nortel Networks customer support representative for any detected database error. *Do not* put the server into service with any detected database errors, even though it may seem to be functioning normally.

10 Restart the server.

Step 12. Create a Platform Recovery Disk on the original server

You create a Platform Recovery Disk to gather certain required information from your original server, such as its setup record and database configuration. The Platform Recovery Disk contains the file MigInfo.txt, which includes important details about how the original server is configured. To perform this check, use the Platform Migration Utility, which you installed on your server in a previous step.

Even if you have an existing Platform Recovery Disk available, make sure you create a new one after installing the latest PEPs and SUs.

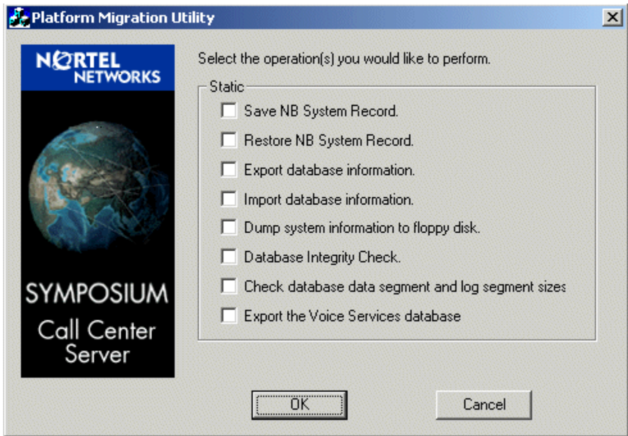
To create a Platform Recovery Disk

1 Log on to the server as **NGenSys**.

2 To launch the Platform Migration Utility, do one of the following:

- For a Release 2.0 server, navigate to D:\Nortel\iccm\bin, and then double-click the file sysrecres.exe.
- For a Release 3.0 server, from the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility dialog box appears.



Note: For Release 2.0 servers, the last check box, Export the Voice Services database, does not appear.

3 Select the Export database information function. The Dump system information to floppy disk function is automatically selected. Click OK.

Result: The system prompts you to insert a floppy disk.

4 Insert a blank preformatted disk into drive A, and then click OK.

Result: Files containing the original server's setup record and database configuration are exported to the disk. This may take a few minutes.

Note: The system also checks for database segmentation problems. If it finds any problems, it displays a message indicating the type of problem.

- If the system finds a database *data* segmentation overlapping problem, then it advises you to contact Nortel Networks Support before proceeding with the conversion procedure. After Support fixes the problem, you must create a new Platform Recovery Disk before proceeding with the conversion.
- If the system finds a database *log* segmentation overlapping problem, then you can still use the Platform Recovery Disk that you have just created. The system prompts you to shut down the Symposium Express

Call Center services so it can fix the problem. Follow the on-screen prompt to shut down the services.

5 If the system displays messages confirming that the information has been dumped and saved successfully, click OK on each message.

6 When the export is complete, the following dialog box appears:

7 Remove the disk from drive A, label it “Platform Recovery Disk,” and click OK to exit the Platform Migration Utility.

8 Keep the Platform Recovery Disk in a safe place.

Contents of the Platform Recovery Disk

The Platform Recovery Disk contains a number of support files, including the file MigInfo.txt. This file contains the following information about the original server:

- keycode
- Meridian 1/CSE 1000 serial number
- installed computer name
- current computer name
- site name
- Meridian 1/CSE 1000 Switch name
- Meridian 1/CSE 1000 Switch IP address
- Meridian 1/CSE 1000 Switch customer group number
- Meridian 1/CSE 1000 Switch type
- Server ELAN IP address
- Server CLAN IP address (optional)
- Server TCP/IP hostname
- Server TCP/IP protocol setup (that is, gateway, subnet mask, and so on)
- Voice Connectivity

- Server software version

Step 13. Create a Voice Services backup disk on the original server (for Release 3.0 servers only)

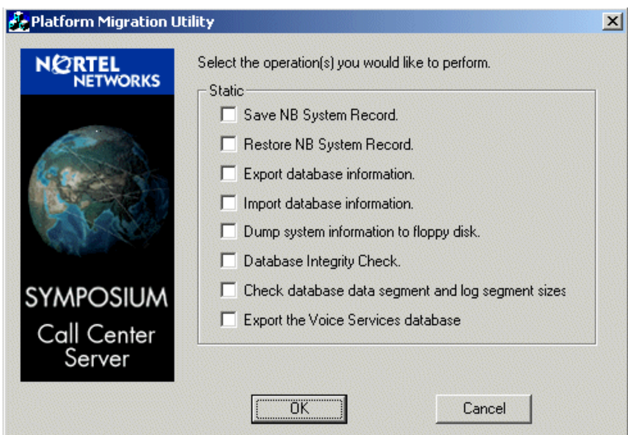
Note: This step applies only to Release 3.0 servers that have the Voice Services feature. It does not apply to Release 2.0 servers, or to Release 3.0 servers without the Voice Services feature. If the step does not apply, skip to the next step in the Conversion Checklist.

You create a Voice Services backup disk to back up the Voice Services database and configuration information. This includes Voice Services treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on).

To create a Voice Services backup disk

1. Log on to the original server as **NGenSys**.
2. From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

   Result: The Platform Migration Utility dialog box appears.



3. Select the Export the Voice Services database function. Click OK.

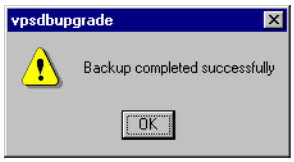
   Result: The system prompts you to insert a floppy disk.

4 Insert a blank preformatted disk into drive A, and then click OK.

Result: Files containing the original server's Voice Services database and configuration data are exported to the disk. This may take a few minutes.

5 If the system displays messages confirming that the information has been dumped and saved successfully, click OK on each message.

6 When the backup is complete, the following dialog box appears:



7 Remove the disk from drive A, label it "Voice Services backup disk," and click OK to exit the Migration Utility.

8 Keep the disk in a safe place.

Step 14. Back up the original server's database to a remote directory on a network computer

You must create a backup of the entire database of the original server so you can restore it on the new server. You must back up the database to a remote directory on a network computer, rather than to a tape.

ATTENTION Tape backups are not supported for conversion to Release 4.2 due to compatibility problems with tape drives and driver software.

The remote backup utility is included in the pre-conversion patch that you installed in a previous step. Use this remote backup utility only for the purpose of backing up your database prior to conversion to Release 4.2. Do not use it for regular database backups on your Release 2.0 or Release 3.0 server because you will be unable to restore the database backup from the remote directory to your Release 2.0 or Release 3.0 server.

What to do if you have only one network interface card (ELAN)

If your server has both CLAN and ELAN network interface cards, use the CLAN connection for the remote backup and restore. This way, the server can remain online during the backup. If your server has only an ELAN card, consider the following options for obtaining a temporary network connection during the backup and restore:

- Reconfigure the ELAN card with a CLAN IP address to connect the server to the customer network.
- Disconnect the ELAN card from the switch and connect it to a temporary server via a hub, creating a local LAN.

If you use the ELAN card, your call center must be shut down for the duration of the backup, since it must be disconnected from the switch.

Considerations for the database backup

If you use the CLAN card for the remote backup, the original server can remain online while the database is backed up. However, you should consider the following information before you proceed with the backup:

- An online backup adds an additional load to the server and reduces overall call center performance. Nortel Networks recommends that you perform online backups during non-peak traffic hours. Do not change any call center configuration or user setup information during the database backup operation.
- An online backup causes some call statistics and data pegging to be missing from the backup files. If it is important that all call statistics and data pegging be migrated to the new server, take the original server offline immediately following the database backup. Ensure that the original server remains offline until all data has been successfully migrated to

the new server. You must collect all call statistics and data pegging before the original server is removed from service.

ATTENTION

If you are migrating to a *different* server, you can postpone the database backup until just before you restore the database on the new server. This allows the original server to remain online longer during the conversion process, and reduces the amount of down-time for the call center. To understand the timing of the database restore step on the new or reconfigured server, see the “Conversion checklist” on page 321.

Notes:

- To help calculate the speed of database backups before a conversion, it is a good idea to perform a trial run of the backup at least several days before the conversion. Keep in mind that the time required to do a database backup can vary between the trial run and the actual backup day due to several factors.
- For a listing of the variables that can affect the speed of your backup and restore, see “Variables affecting backup and restore speed” on page 664.

Setting up the database backup to a remote directory

You must back up your database to a remote directory on a network computer. To do this, you must identify the computer onto which you are going to back up the database. You must then complete a series of steps to set up the connection between the server in Symposium Express Call Center and the remote directory.

The following section explains the requirements for the remote computer and network.

Remote computer requirements

The remote computer for your database backup can be either a server or a workstation that meets the following requirements:

- The operating system must be Windows NT 4.0, Windows 2000 Server, Windows 2000 Professional, or Windows XP.
- The drive partition for the remote directory must be NTFS.

- The directory you use for the backup must have enough space available to hold the backup files.

Network requirements

- The remote computer must be in the same network as the server in Symposium Express Call Center.
- Ensure that there is low network traffic during the scheduled time for the database backup. If you run the backup when traffic is high, the database backup may take longer than planned.

Files created during remote directory backup

The remote backup process creates three files:

blue.dmp	Contains the contents of the Blue database
cbc.dmp	Contains the contents of the CBC database
master.dmp	Contains the contents of the Master database

Worksheet for setting up a remote directory backup

You must set up an account, password, and a shared directory on your network computer in preparation for a remote directory backup. Create names for these items ahead of time and record them in the table below.

Item	**Fill in the required information**
User Name You must create a name and assign it to two user accounts—one on the network computer and the other on your Release 2.0 or 3.0 server. The name must be identical on both computers.	
User account password You must create a password and assign it to the two accounts described above. The password must be identical on both computers.	

Item	Fill in the required information
Computer Name of the network computer Obtain and record this name so you have it available when you enter the command to back up the database.	
Share Name for the remote directory You must create and assign a share name to the directory on the remote computer. The share name can be the directory name (this is the default in Windows) or a different name. The name of the remote directory must *not* contain any spaces. Spaces in the remote directory name will cause errors.	

Preparing the network computer for remote directory backup

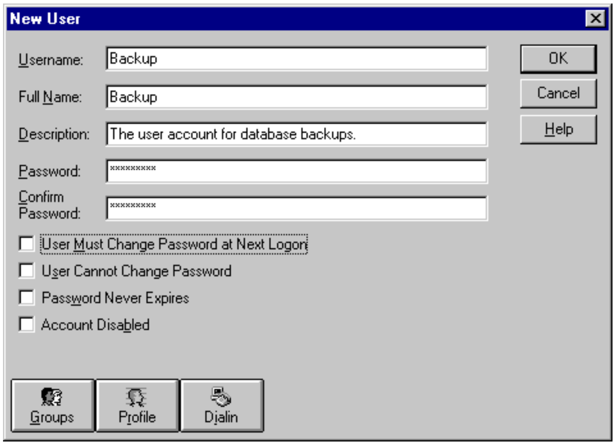
Once you determine which network computer to use for the remote directory backup, you must create a local Windows user account on it and then create a shared directory to contain the remote backup. Use the basic steps below, along with the documentation that came with the operating system, to correctly set up the user account and shared directory.

Note: The following procedures do not provide detailed steps, since they differ depending on the operating system on your network computer.

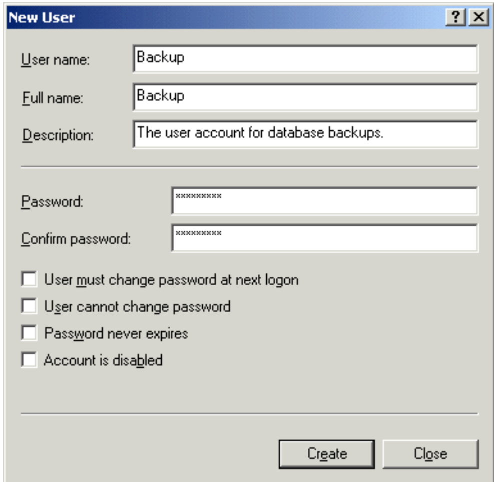
To create the local Windows user account on the network computer

1 Create a new user account in Windows using the User Name and password that you recorded in the worksheet you filled out.

- In Windows NT, you create the new user in Programs → Administrative Tools → User Manager. Then, from the User menu, select New User. Type the user account details in the New User window.



- In Windows 2000, you create the new user in Programs → Administrative Tools → Computer Management. Right-click Local Users and Groups, and then select New User from the resulting pop-up menu. Type the user account details in the New User window.



CAUTION

Risk of database backup failure

When you are creating the new user account in Windows, you must deselect the check box for “User must change password at next logon.” If this check box is selected, the Symposium Express Call Center server may not be able to connect to the remote computer.

2 Make the user account a member of the Administrators group.

To create and share the remote directory on the network computer

1 On the network computer, create a directory (folder) to contain the database backup. You can use the Share Name you recorded in the worksheet.

Note: The name of the remote directory must *not* contain any spaces. Spaces in the remote directory name cause errors.

2 Make sure file sharing is enabled on your computer.

3 Make the directory shared, and assign the Share Name you recorded in the worksheet that you filled out.

4 For the shared directory permissions, grant Full Control access rights to the user account that you created in the previous procedure.

Result: The network computer is now set up for remote directory backups. You must now prepare the Symposium Express Call Center server using the procedures below.

5 Make sure you have recorded the computer name of the network computer in the worksheet.

Preparing the server in Symposium Express Call Center for remote directory backup

On your Release 2.0 or Release 3.0 Symposium Express Call Center server, you must create a local Windows user account that is identical to the one you created on the network computer. You then add the account to the policy “Log on as a service.” Detailed procedures are provided below.

To set up the local Windows user account on the server

1 Log on to the Release 2.0 or 3.0 server as **NGenSys**.

2 From the Start menu, choose Programs → Administrative Tools (Common) → User Manager For Domains.

Result: The User Manager window appears.

3 From the User menu, click New User.

Result: The New User window appears.

4 In the Username box, type the name you recorded in the worksheet you filled out. This must be the same user name you assigned to the account on the network computer.

5 In the Password box, type the password you recorded in the worksheet you filled out. This must be the same password you assigned to the account on the network computer.

6 In the Confirm Password box, type the password again.

7 Make sure the check box for User Must Change Password at Next Logon is *not* checked.

Note: If this check box is checked, the remote backup may fail because the server in Symposium Express Call Center may not be able to access the network computer.

8 Check the check box for Password Never Expires.

9 Click Groups.

Result: The Group Memberships window appears.

10 From the Not member of box, click Administrators. Then click Add to move Administrators to the Member of box.

11 Click OK.

12 On the New User window, click Add.

13 If you are prompted to confirm that you do not want the password to expire, click OK.

14 Click Close to close the New User window and return to the User Manager window.

To set up the local security settings for the user account

Note: This procedure is a continuation of the previous procedure. It starts from the User Manager window.

15 From the Policies menu on the User Manager window, click User Rights.

16 Check the check box for Show Advanced User Rights.

17 From the Right box, choose Log on as a Service.

18 Click Add.

Result: The Add Users and Groups window appears.

19 In the List Names From box, select the name for the local server.

20 Click Show Users.

21 From the Names list, click the user account you created in the previous procedure.

22 Click Add.

Result: The computer name and user account appear in the list at the bottom of the window.

23 Click OK.

24 Click OK to close the User Rights Policy window.

25 Close the remaining open windows you used in this procedure.

To perform a database backup on the original server

ATTENTION

Before backing up your database to a remote directory, recheck your remote folder configuration by following the guidelines listed in the section “Testing the remote directory backup and restore configuration” on page 688.

1 Make sure the services on the server are up.

Note: A database backup uses the HDM service. If this service is not up, the database backup cannot start.

2 Open a Command Prompt window on the Release 2.0 or 3.0 server.

3 Change to the directory D:\Nortel\Mig42, which is where the remote backup utility is installed. You installed this utility when you installed the pre-conversion patch earlier in the conversion procedures.

4 Once you have changed to the right directory, use the four pieces of data you filled out in the worksheet to type the following command line:

backuptor42 *computername\sharename username useraccountpassword*

Example: backuptor42 computer1\backupfiles dbbackup abc123

5 Press Enter.

Result: The Command Prompt window displays the following text:

Now backing up the databases to *computername\sharename*

The remote backup process begins. This can take from 30 minutes to 3 hours to complete, depending on the size of your database, the speed of your computer, and network traffic. Leave the Command Prompt window open so you can see the backup completion message.

6 Wait until the following message appears in the Command Prompt window:

```
----------------------------------

Database backup is complete.

----------------------------------

The backup log for your backup is located here.

d:\Nortel\Mig42\backup.log.txt

Please examine it for errors.
```

7 Navigate to the directory D:\Nortel\Mig42.

8 Open the file backup.log.txt. If your database backup was successful, the log contains the following lines of text:

```
[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database cbc).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database blue).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database master).

This database backup log does not have any errors or
warnings.
```

9 Do one of the following:

- If your database backup log contains the text in the example above, your backup was successful. Continue to the next step in the Conversion Checklist.
- If your database backup log contained any messages or errors, this could indicate a problem with the backup. Navigate to the folder D:\Sybase\install and open the file backup.log.txt. This file may indicate the source of the problem. Retry the backup and check the backup log again. If there are still messages or errors, contact Nortel Networks product support.

Note: If you begin a second database backup before the first backup is finished, the system may not function properly. In this case, you must terminate both backup processes.

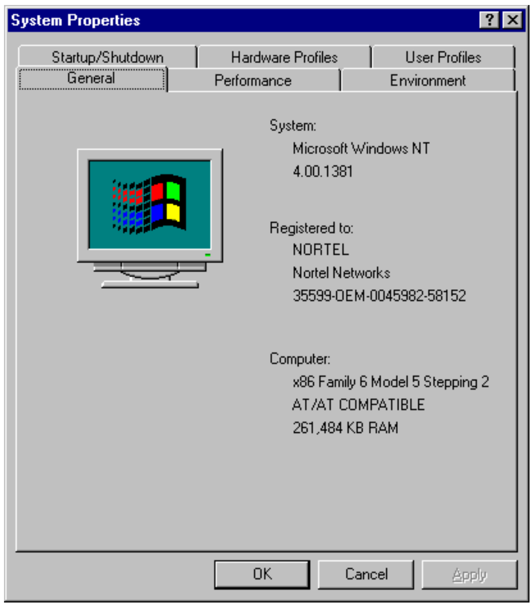
Step 15. Check the RAM size on the original server

The total physical RAM of the new server must meet the requirements for a PVI server, and it must be at least as large as the RAM on the original server.

To check the RAM size on the original server

1 From the Windows Start menu, choose Settings → Control Panel, and then double-click the System icon.

Result: The System Properties property sheet appears, with the General tab displayed.



2 Record the RAM size on the “RAM size worksheet” on page 377.

3 Do one of the following:

- If you are migrating to a new server, make sure the RAM on the new server is at least as large as the RAM on the original server.
- If you are converting within the same server, make sure that the RAM meets the requirements for a PVI server as described in “Minimum hardware specifications for the server PC” on page 30.

Worksheets for collecting original server information

Introduction

Make a photocopy of the following worksheet page, and use it to record original server information for conversion.

RAM size worksheet

Item	Fill in the required information
RAM size	

PEP level worksheet

Item	Fill in the required information
PEP Product Name	
PEP Version	
PEP Type	
PEP Product Name	
PEP Version	
PEP Type	
PEP Product Name	
PEP Version	
PEP Type	
PEP Product Name	
PEP Version	
PEP Type	
PEP Product Name	
PEP Version	
PEP Type	

Preparing the new server (or reconfiguring the existing server)

Introduction

You must complete the base configuration of your new server, or reconfigure your existing server, before you can install Release 4.2 of Symposium Express Call Center and restore your database.

This process can take from 3 to 5 hours to complete.

Note: Make sure that you are using the "Conversion checklist" on page 321 to keep on track during this stage of the conversion.

Step 16. Configure the operating system and drives on the new or reconfigured server

This process involves installing the Windows 2000 operating system and partitioning the disks on the server, prior to installing the Release 4.2 software and restoring data from the original server.

The process for preparing the server is different depending on whether you are

- reconfiguring the existing Release 2.0 or Release 3.0 server as a Release 4.2 PVI server for a conversion within the same server
- migrating to a different Release 4.2 PVI server

For each of these two scenarios, a separate procedure is provided below. Choose one of the following:

- "To reconfigure the existing server (for conversions within the same server)" on page 379
- "To configure the new server (when migrating to a different server)" on page 380

To reconfigure the existing server (for conversions within the same server)

1 Review the list of requirements for a Release 4.2 PVI server, and ensure that the server can meet each requirement. For details, see “Minimum hardware specifications for the server PC” on page 30.

2 If you have not already shut down your Symposium Express Call Center services, do so now. From the Windows Start menu, choose Programs → Symposium Express Call Center → Shutdown, and then follow the on-screen instructions.

Note: If your original server is equipped with RAID drives and you chose to split the drives before installing the latest Service Update packs and PEPs, then proceed to step 4. If you have not split your RAID drives yet, then continue with the following step.

3 If your original server is equipped with RAID, split the RAID drives. This breaks the mirrored image of the primary hard drives and disables their redundant hard drives. The changes you must make to the primary hard drives to convert to Release 4.2 will not affect the redundant drives; your original server configuration remains on those drives. Therefore, if the conversion fails, you can restore the redundant drives and continue to operate the original server until you are ready to try again.

Note: If there are extra RAID drives available, you can also create a RAID backup before continuing with the conversion. This can take several hours to complete.

4 Follow the instructions in Section A: “Configuring the operating system” on page 99 to install and configure the operating system correctly for Symposium Express Call Center. Use the Windows 2000 setup utility to

- delete all existing partitions
- create a new drive C partition on which to install the Windows 2000 operating system
- configure the ELAN and, if required, the CLAN network cards with the same network IP configuration (for example, IP address, subnet mask, default gateway, and so on) as on the original server. Refer to the

TCP/IP parameter information in the MigInfo.txt file on the Platform Recovery Disk.

Note: On the new server, you can use a different computer name and different IP addresses than on the original server. However, Nortel Networks recommends that you use the original server's computer name and IP addresses (CLAN and ELAN) on your new server.

5 Partition the remaining disks using the guidelines in "Drive partitioning for the server PC" on page 32.

6 If your server is equipped with RAID, ensure that the new drives are installed with the correct RAID administration utility. The RAID software is platform-specific and is installed differently for each platform.

7 Restart the new server to activate all the changes.

To configure the new server (when migrating to a different server)

1 Review the list of requirements for a Release 4.2 PVI server, and ensure that the new server can meet each requirement. For detailed requirements, see "Minimum hardware specifications for the server PC" on page 30.

2 Ensure that the new platform is disconnected from the network of the original platform (both ELAN and CLAN). The new platform should remain disconnected until the conversion procedure is completed.

3 Follow the instructions in Section A: "Configuring the operating system" on page 99 to install and configure the operating system correctly for Symposium Express Call Center. Use the Windows 2000 setup utility to

- delete all existing partitions (if there are any existing partitions on your new server)
- create a new drive C partition on which to install the Windows 2000 operating system
- configure the LAN network cards with the same network IP configuration (for example, IP address, subnet mask, default gateway, and so on) as on the original server. Refer to the TCP/IP parameter information in the MigInfo.txt file on the Platform Recovery Disk.

Note: It is important that you disconnect the new platform from the network of the original platform (both ELAN and CLAN) before making the IP configuration change; otherwise, a duplicate IP error can occur and stop the original platform from normal operation. On the new server, you can use a different computer name and different IP addresses than on the original server. However, Nortel Networks recommends that you use the original server's computer name and IP addresses (CLAN and ELAN) on your new server. Refer to the information in the MigInfo.txt file on the Platform Recovery Disk.

4 Partition the remaining disks using the guidelines in "Drive partitioning for the server PC" on page 32.

5 If your server is equipped with RAID, ensure that the new drives are installed with the correct RAID administration utility. The RAID software is platform-specific and is installed differently for each platform.

6 Restart the new server to activate all the changes.

Note: It is normal for the Windows operating system to disable the network card if it is disconnected from the network. Ignore any warnings and continue with the conversion procedure.

Completing the conversion

Introduction

When the base configuration of your new server is ready, you can perform all the steps to complete the conversion to Release 4.2 of Symposium Express Call Center.

The following summary lists the procedures that you must complete to prepare the new or reconfigured server for service:

- Step 17. Perform a platform compliance check on the new server.
- Step 18. Install the Symposium Express Call Center server software on the new server.
- Step 19. Apply the latest Install-time PEPs on the new server.
- Step 20. Import database information from the Platform Recovery Disk.
- Step 21. Install the Symposium Express Call Center database software on the new server.
- Step 22. Restore the original server’s database to the new server
- Step 23. Perform a database integrity check on the new server.
- Step 24. Configure the new server’s software and database.
- Step 25. Apply the latest Service Update pack and any required PEPs to the new server.
- Step 26. Restore the Voice Services database and configuration data (for Release 3.0 servers only).
- Step 27. Install pcAnywhere on the new server.
- Step 28. Connect the new server to the network.
- Step 29. Upgrade the coresident client software to Release 4.2.
- Step 30. Run the script upgrade utility to upload the Release 2.0 scripts (for Release 2.0 servers only).
- Step 31. Back up data on your new server.
- Step 32. Determine whether you need to expand your database.

Note: Make sure that you are using the “Conversion checklist” on page 321 to keep on track during this final stage of the conversion.

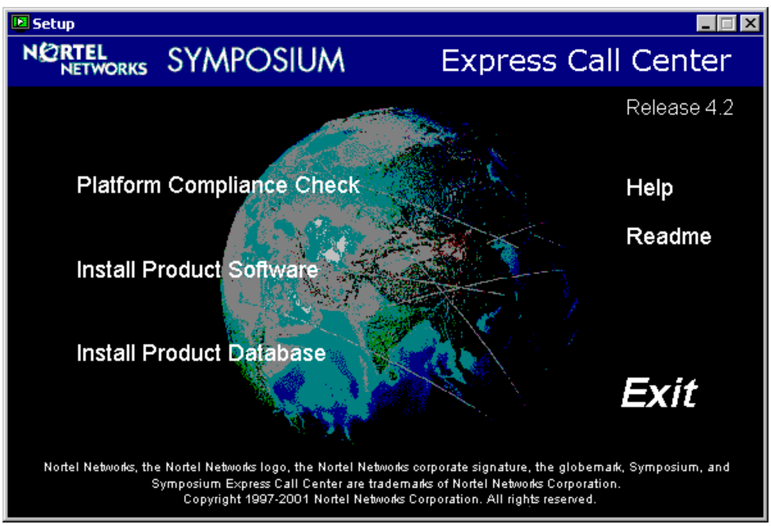
Step 17. Perform a platform compliance check on the new server

Before installing the Symposium Express Call Center software, you must ensure that your server meets the requirements for a Platform Vendor Independence (PVI) server. The Server Application CD includes a program that you can run to check your server’s basic compliance and identify any problems, such as the wrong operating system or incorrect disk partitioning. *Not all requirements for Platform Vendor Independence are checked.*

To perform a platform compliance check

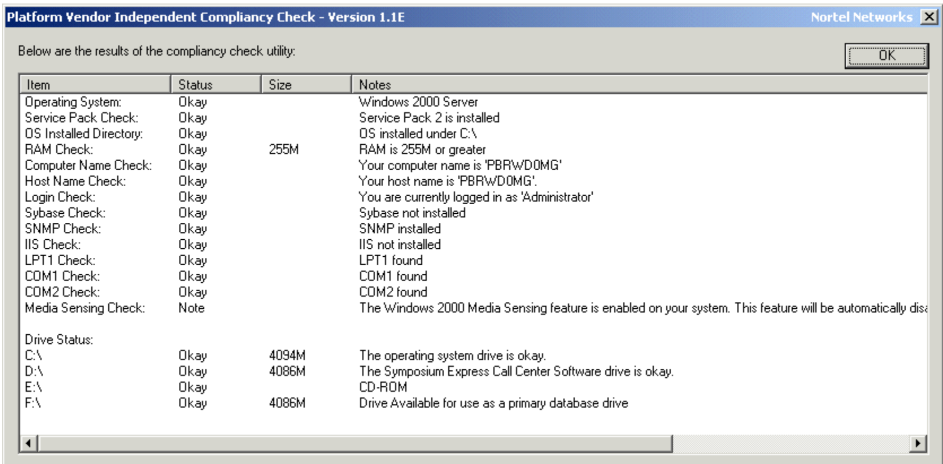
1. Log on to the server as **Administrator**.
2. Insert the Server Application CD and wait for it to autorun.

   Result: The Setup main menu appears.



3 Click Platform Compliance Check.

Result: The system checks your server to ensure it meets certain requirements for a PVI server. The results appear in a window similar to the one shown below. If your server is compliant, the Status column shows Okay beside all items listed. For any non-compliant items, the Status column shows Error, and the Notes column provides information about the PVI requirement.



4 Do one of the following:

- If all items show the Okay status, your system has passed the compliance check. Click OK to exit from the Platform Vendor Independent Compliancy Check dialog box.

  Result: The platform compliance check has completed successfully.

- If any items show the Error status:

  a. Take note of the non-compliant items and the related information in the Notes column.

  b. Click OK to exit from the Platform Vendor Independence Compliancy Check dialog box.

  c. Correct the problems so that the server is compliant. For more information on PVI requirements, see “Minimum hardware specifications for the server PC” on page 30.

d. Rerun the platform compliance check. If you had to restart the server to correct a non-compliance, go back to step 1. If you did not have to restart, go back to step 3.

Note: If your server does not have a COM2 port configured, the utility shows the following text in the Notes column for COM2 Check:

```
COM2 not found. When your server is fully installed
and configured, please manually stop and disable the
MAS LinkHandler Port #2 service from the Services
applet.
```

In this case, once you have completed the installation, you must follow the procedure “To disable the MAS LinkHandler service” on page 651.

Step 18. Install the Symposium Express Call Center server software on the new server

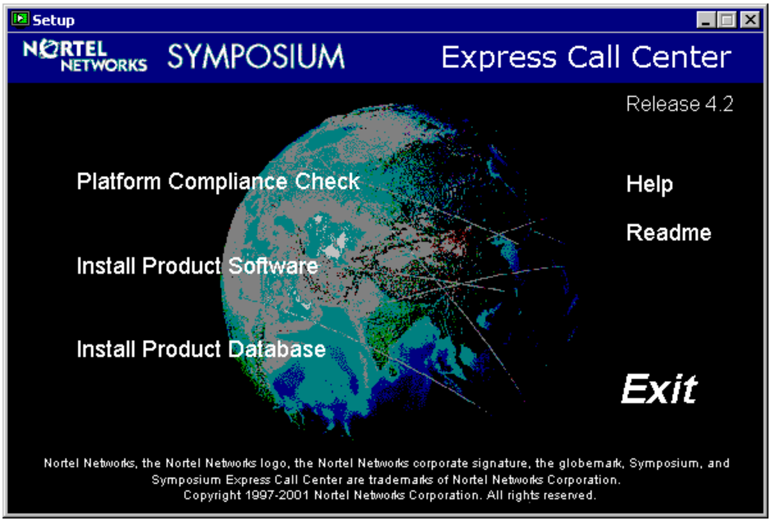
This procedure installs all Symposium Express Call Center server features and components on the server.

To install the product software

1 Log on to the server as **Administrator**.

2 If the Server Application CD is not already running, insert the CD and wait for it to autorun.

Result: The Setup main menu appears.

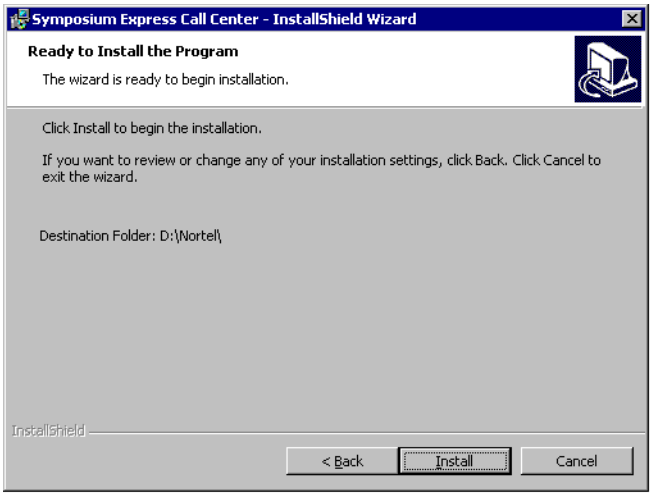


3 Click Install Product Software.

Result: The welcome window for Symposium Express Call Center - InstallShield Wizard appears.

4 Click Next.

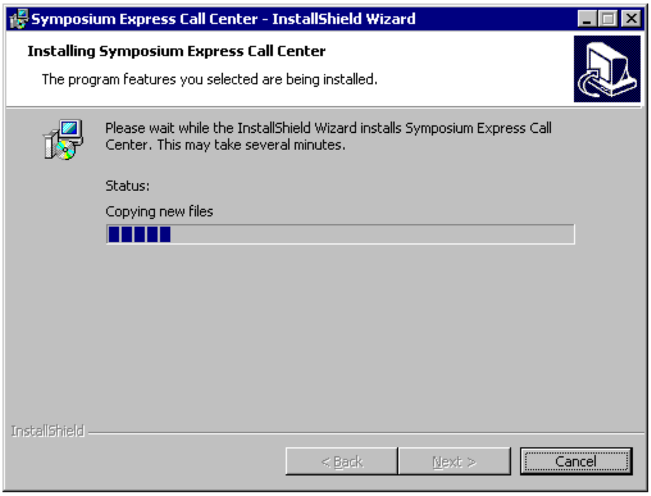
Result: The Ready to Install the Program window appears.



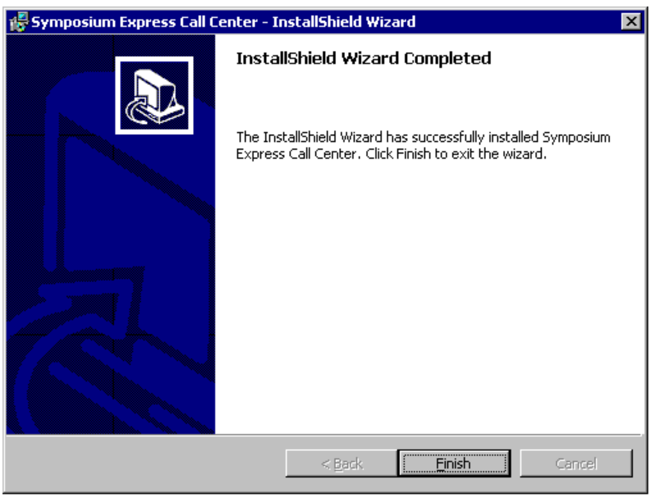
Note: If you click Cancel at any time during the product software installation, the InstallShield Wizard Completed window appears. The text on this window warns you that the software was not successfully installed.

5 Click Install.

Result: The system installs the Symposium Express Call Center software on the server's drive D. This takes several minutes.



6 Wait until the following window appears:



7 Click Finish.

Result: The product software is installed.

Step 19. Apply the latest Install-time PEPs on the new server

Apply the latest Install-time PEP. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue through the next steps.

Note: The latest Install-time PEP is critical for installation and conversion.

The latest Install-time PEP is available on the Supplementary CD-ROM and from the Meridian PEP Library web site.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

For instructions on installing PEPs, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Step 20. Import database information from the Platform Recovery Disk

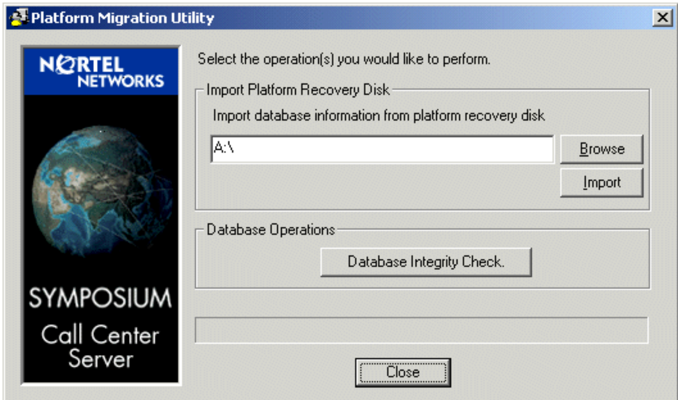
Once the server software is installed, you must import database information from the Platform Recovery Disk that you created from the original server.

To import database information from the Platform Recovery Disk

1. Log on to the server as **Administrator** or **NGenSys**.
2. Do one of the following:
   a. If your Platform Recovery Disk is on a floppy disk, insert it into drive A.
   b. If your Platform Recovery Disk is in a directory on a remote computer, map a network drive to that directory.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility window appears.



4 In the Import database information from platform recovery disk section, do one of the following:

- If your Platform Recovery Disk is on a floppy disk:

  a. Make sure the drive shown is A:\.

  b. Insert the floppy disk into the drive.

- If your Platform Recovery Disk is on a remote directory:

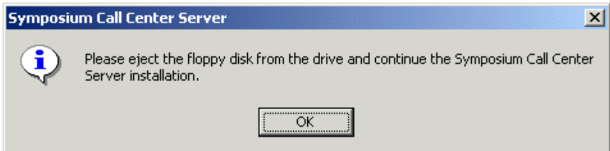
  a. Click Browse and navigate to the mapped drive for the remote directory.

  b. Click the drive, and then click OK.

  c. Make sure the mapped drive appears in the Platform Migration Utility window.

5 Click Import.

Result: The system imports the files from your Platform Recovery Disk. A DOS window appears during the import with the text `Importing database information.` When the import is done, the DOS window displays the following confirmation message:



6 Click OK.

7 Close the Platform Migration Utility window.

8 If you used a floppy disk, remove it from the drive.

Step 21. Install the Symposium Express Call Center database software on the new server

This procedure installs the Sybase ASE 12.0 software, and then creates and initializes the database for the Symposium Express Call Center server.

During the database installation, do not close any windows that appear unless the on-screen instructions tell you to do so.

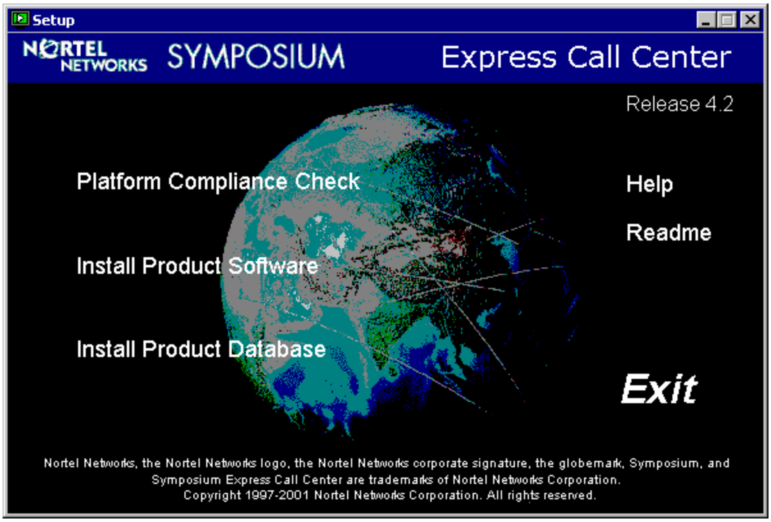
Note: The server restarts automatically several times during this procedure, and you must log back on to the server as **Administrator**. At this time, the next window of the installation program appears, but the Windows desktop does not appear in the background. This is normal. The Windows desktop reappears when the next window of the installation program appears.

To install the product database

1 Log on to the server as **Administrator**.

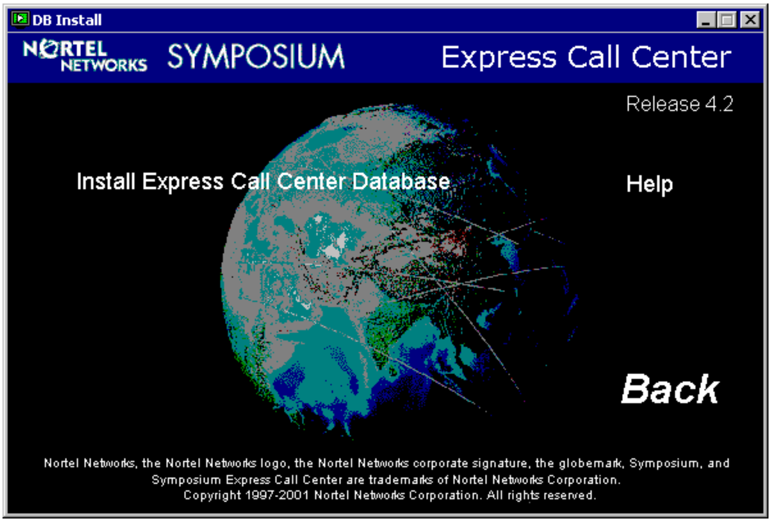
2 If the Server Application CD is not already running, insert the CD and wait for it to autorun.

Result: The Setup main menu appears.



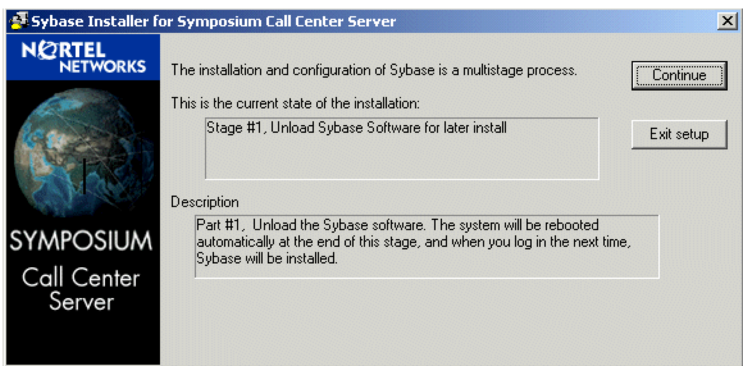
3 Click Install Product Database.

Result: The following window appears:



4 Select Install Express Call Center Database.

Result: The Sybase Installer window appears.



This window shows the status of the installation in stages and parts. There are six stages to the database installation and configuration; some stages are broken into parts. Stages appear in the top status box, and parts appear in the Description box.

ATTENTION

Before you proceed to the next step, ensure that the Symposium Express Call Center Server Application CD is in the CD-ROM drive. The installation CD must be in the CD-ROM drive during the entire database installation process. Do not create a shortcut to the installation CD. To access the Symposium Express Call Center setup wizard if autorun does not launch, from Windows Explorer, double-click Setup.exe under the CD-ROM directory.

5 Click Continue.

Note: When the installation begins, you can view the progress of each stage in a progress bar that appears at the bottom of the window.

Result: The system proceeds with Stage 1, Part 1. When Part 1 is complete, the server automatically restarts.

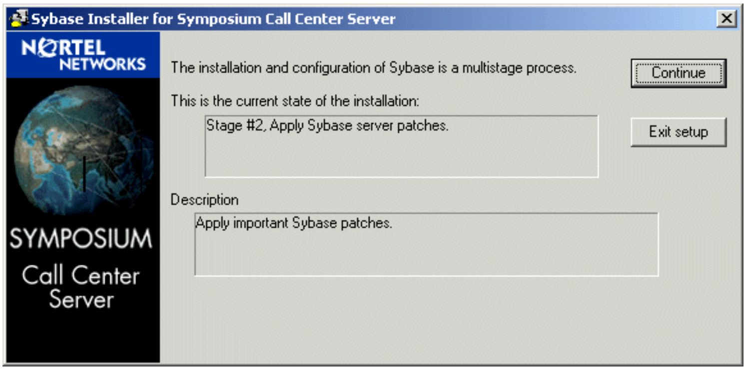
6 Log on as **Administrator**.

Result: The Sybase Installer window reappears, showing the status as Stage 1, Part 2.

Note: In rare cases, an MS-DOS window appears, instead of the Sybase Installer window. When this happens, the database installation still continues. Wait until the MS-DOS window completes its processes (do not close it), and the Sybase Installer window reappears, as shown in the Result following step 7. When this window appears, proceed to step 8.

7 Click Continue.

Result: Stage 1, Part 2 proceeds to completion. When it is finished, the desktop reappears, followed by the next installation window, as shown:



8 Click Continue.

Result: The installation proceeds through Stage 2, and Stage 3, Part 1. When Part 1 is complete, the server automatically restarts.

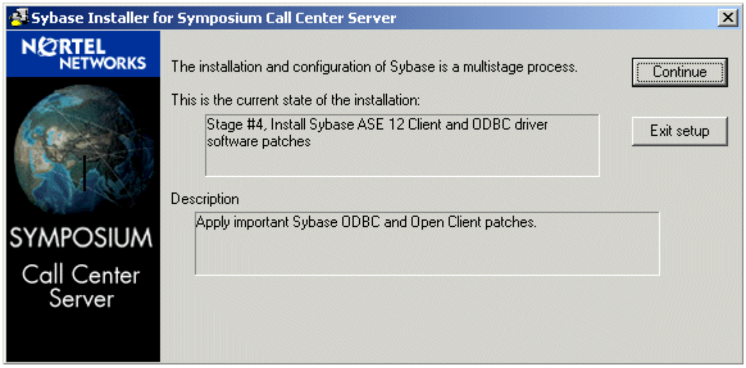
9 Log on as **Administrator**.

Result: The Sybase Installer window reappears, showing the status as Stage 3, Part 2.

Note: In rare cases, an MS-DOS window appears, instead of the Sybase Installer window. When this happens, the database installation still continues. Wait until the MS-DOS window completes its processes (do not close it), and the Sybase Installer window reappears, as shown in the Result following step 10. When this window appears, proceed to step 11.

10 Click Continue.

Result: Stage 3, Part 2 proceeds to completion. When it is finished, the desktop reappears, followed by the next installation window, as shown:

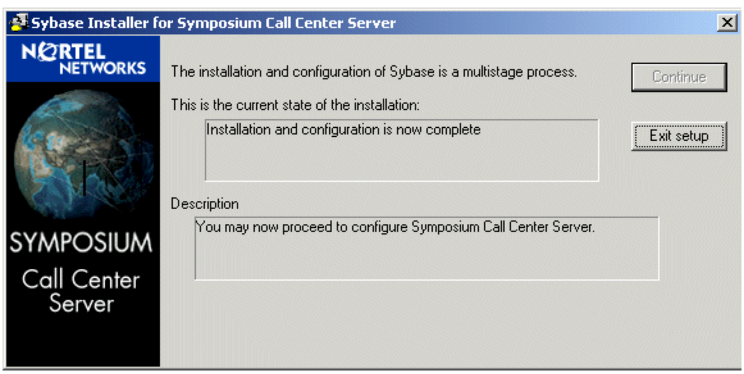


11 Click Continue.

Result: The installation proceeds through Stages 4, 5, and 6.

Note: These stages can take from 1 to 3 hours to complete, depending on your CPU speed, and the size and number of database partitions that you have.

12 Wait until the following window appears:



13 Click Exit setup. Do not restart the server.

14 Remove the CD from the drive.

Result: The database is installed.

Note: If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.

Step 22. Restore the original server’s database to the new server

Use the database backup you created on the remote directory earlier in this chapter to restore the database to the new server. There are a series of steps you must perform to prepare the new server, as described in the next section.

Note: Normally, a database restore takes at least 1 to 3 hours, depending on the speed of your server and the amount of data in the database. For a listing of the variables that can affect the speed of your backup and restore, see “Variables affecting backup and restore speed” on page 664.

Preparing the Symposium Express Call Center server to restore the database from a remote directory

On your Release 4.2 server, you must create a local Windows user account that is identical to the one you created on the network computer. You then add the account to the policy “Log on as a service.” To complete preparation of the server, you enter the account information and the path of the remote directory in Symposium Express Call Center and turn off the tape backup option.

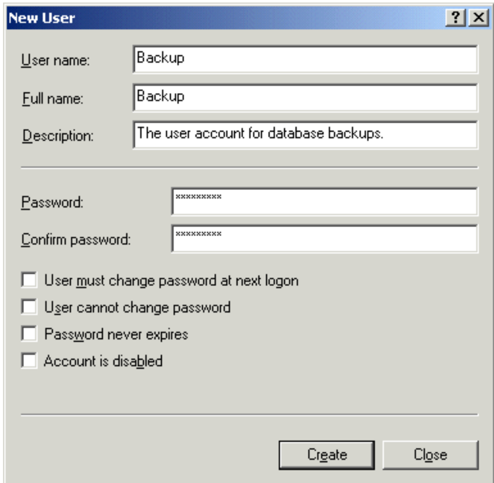
To set up the local Windows user account on the new server

1. Log on to the server as **NGenSys**.
2. From the Start menu, choose Programs → Administrative Tools → Computer Management.

   Result: The Computer Management dialog box appears.
3. In the left panel, navigate to Local Users and Groups → Users.

4 Right-click the Users folder, and then select New User.

Result: The New User dialog box appears.



5 In the User name box, type the name you recorded in the worksheet that you filled out. This must be the same user name you assigned to the account on the network computer.

6 In the Password box, type the password you recorded in the worksheet that you filled out. This must be the same password you assigned to the account on the network computer.

7 In the Confirm password box, type the password again.

8 Uncheck the check box for User must change password at next logon.

Note: If you do not remove this check mark, the database backup or restore may fail because the Symposium Express Call Center server may not be able to access the network computer.

9 Click Create.

10 Click Close.

11 In the left panel of the Computer Management window, click the Users folder to display its contents in the right panel.

12 In the right panel, right-click the new user you just created, and then select Properties.

Result: The Properties dialog box for the user appears.

13 Click the Member Of tab.

14 Click Add.

Result: The Select Groups dialog box appears.

15 In the Name column, click Administrators, and then click Add.

Result: The group appears in the bottom list box.

16 Click OK.

17 When the Member Of tab reappears, click Apply, and then click Close.

18 Close all windows that remain open.

To set up the local security settings

1 On the server, select Start → Programs → Administrative Tools → Local Security Policy.

Result: The Local Security Settings dialog box appears.

2 In the left panel, navigate to Local Policies → User Rights Assignment. Click User Rights Assignment to view its contents in the right panel.

3 From the right panel, double-click Log on as a service.

Result: The Local Security Policy Setting dialog box appears.

4 Click Add.

Result: The Select Users or Groups dialog box appears.

5 In the Name column, select the user account that you just created, and then click Add.

Result: The account appears in the bottom list box.

6 Click OK.

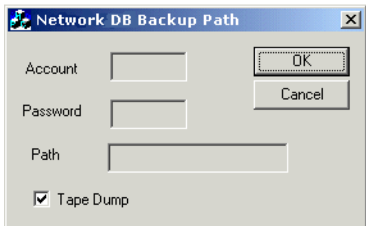
7 Click OK to close the Local Security Policy Setting dialog box.

8 Close the Local Security Settings dialog box.

To complete the remote directory settings on the new server

1 On the server, select Start → Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears.



2 Uncheck the Tape Dump check box.

3 In the Account box, type the User Name you recorded in the worksheet that you filled out. This must be the same User Name you assigned to the account on both the network computer and the server.

4 In the Password box, type the password you recorded in the worksheet that you filled out. This must be the same password you assigned to the account on both the network computer and the server.

5 In the Path box, type the network path for the shared directory that you created on the network computer. Use the following format:

- computername\sharename

Refer to the computer name and share name that you recorded in the worksheet that you filled out.

6 Click OK to save your settings and exit.

Result: Symposium Express Call Center is now set to restore the database from the remote directory on the network computer.

To restore the database from a remote directory

On the new server in Symposium Express Call Center, establish a network connection to the network computer containing the database backup files in the remote directory.

Note: Keep the following in mind if you are migrating to a new hardware platform: Since both the original server and the new server have the same TCP/IP configuration, you cannot have both servers connected to the network at the same time. This can cause a duplicate IP error to occur and stop the original server from normal operation. To avoid this, you have the following options for obtaining a network connection on the new server to restore the database:

1. If you are using the CLAN as your network connection for the remote directory backup and restore

- you can bring down the services on the original server, and then disconnect the CLAN from the network. Then connect the CLAN on the new server to the network for the database restore. This means that the original server will be out of service for the remainder of the conversion.
- to keep both the original and new server online, you can temporarily change the computer name and the IP configuration for the CLAN on the new server so that you can temporarily connect to the network. This way, the original server can remain online and operational during the database restore. When the restore is complete, disconnect the new server from the network, and change the computer name and IP configuration for the CLAN back to the correct settings.

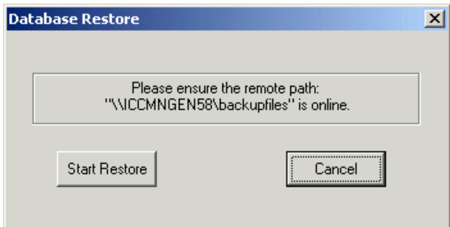
2. If you are using the ELAN as your network connection for the remote directory backup and restore, you can reconfigure the ELAN card on the new server with a CLAN IP address to connect the server to the customer network.

Once you have a network connection established, continue with the following procedure to restore the database.

1 Make sure you are logged on to the server.

2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears, showing the path for the remote directory containing the database files, as in the following example:

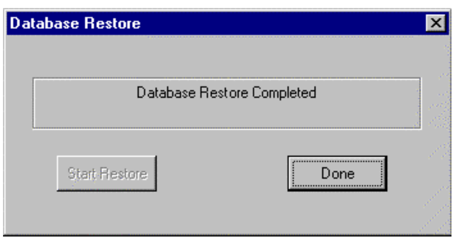


3 Check that the path is correct.

4 Click Start Restore to begin the database restore process.

Result: The database restore process begins. This can take 1 to 3 hours, depending on the amount of data, network traffic, and the CPU speed of the server. During this time, the Database Restore window remains in view and displays numerous status messages about the progress of the restore.

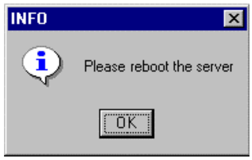
5 Wait until the following dialog box appears, indicating that the restore is complete:



Note: A log file with the following path name is created after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

6 Click Done.

Result: The following dialog box appears:



7 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem as if there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel Networks recommends that you do not restart the server at this time. (You do not need to restart the server until after you configure the server software and database.) Instead, continue to the next procedure according to the checklist you are following.

Step 23. Perform a database integrity check on the new server

To ensure the integrity of the databases after you restore them to the new server, Nortel Networks recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems.

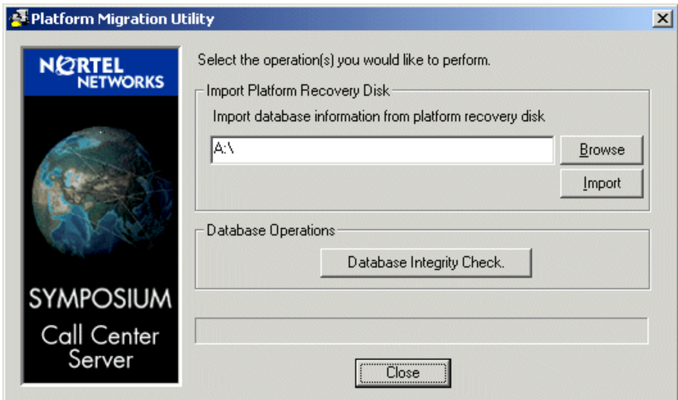
Remember that a database integrity check can take from 30 minutes to 3 hours.

To perform a database integrity check

1 Log on the server as **Administrator**.

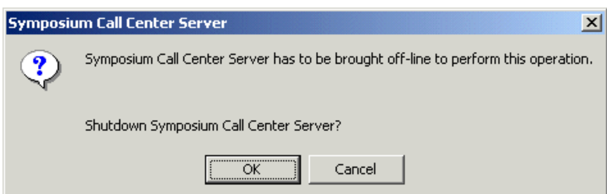
2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility dialog box appears.



3 Click Database Integrity Check.

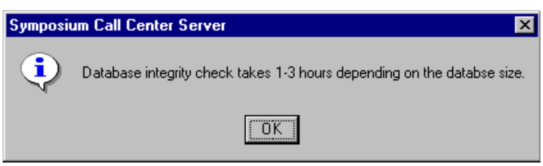
Result: The following dialog box appears:



4 Click OK.

Result: The system displays messages as it checks the status of each service running on the server.

5 Wait until the following dialog box appears:



6 Click OK to start the database integrity check.

Result: A DOS window appears on the screen. Do not close this window. The database integrity check takes from 1 to 3 hours to complete. You may not see any activity on the screen, but you should notice continuous disk activity.

7 Wait until the following dialog box appears:

8 Click OK.

9 Click Close to close the Platform Migration Utility dialog box.

10 Check the database check log (C:\DbChk.log) for database errors. To do this, use a text editor (such as Notepad).

When checking the log file, search for key words such as ERROR or MSG. Contact your Nortel Networks customer support representative for any detected database error. *Do not* put the server into service with any detected database errors, even though it may seem to be functioning normally.

Note: If you do not plan to reuse the remote directory backup on your Release 4.2 server for future backups (if you are planning to use tape backups), you may want to delete the user account you created for this purpose. You may also want to unshare the directory on the network computer.

Step 24. Configure the new server's software and database

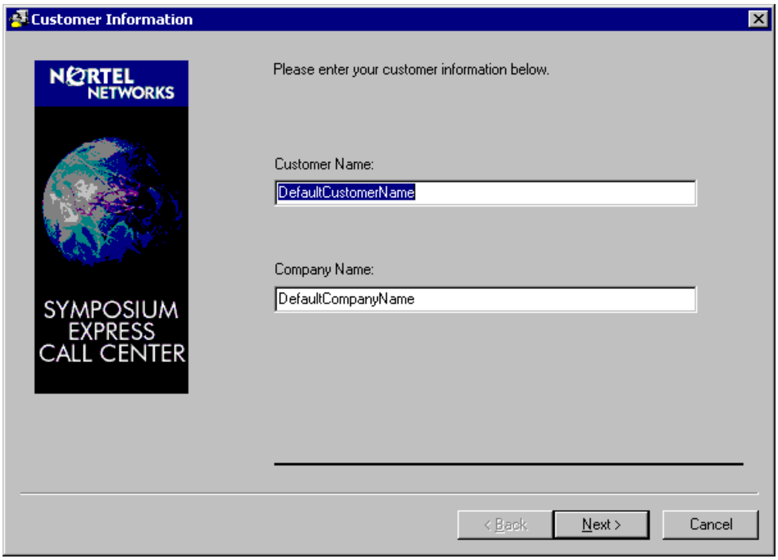
To configure your new server's software and database, you need to enter data about the server through a series of windows. This data includes your new Release 4.2 keycode and some configuration information in the MigInfo.txt file on your original server's Platform Recovery Disk. You may want to print a copy of this file for reference during this procedure.

To configure the new server’s software and database

1 Log on to the server as **Administrator**.

2 From the Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

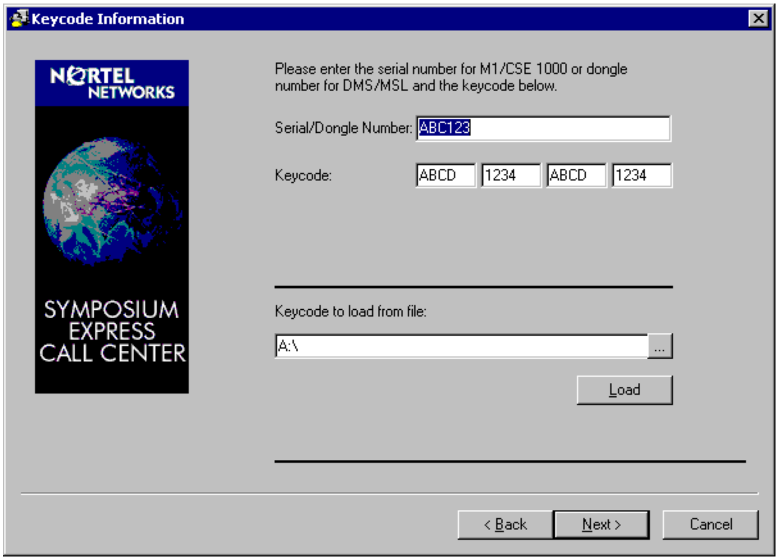
Result: The Customer Information dialog box of the configuration utility appears.



3 Enter the customer and company names.

4 Click Next.

Result: The Keycode Information dialog box appears.



5 Type your serial number for the switch and the keycode in the appropriate boxes.

Note: The serial number is used in the generation of the keycode. Make sure you enter the correct keycode for the serial number that you have.

6 Click Next.

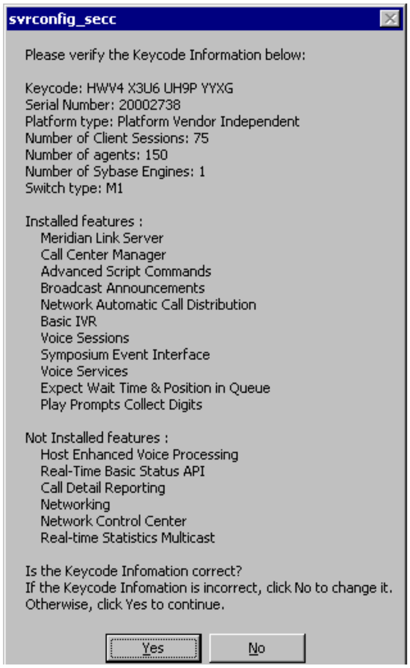
Note: If the system cannot validate your entries, it displays an error message. Do the following:

a. Click OK on the error message(s).

b. Check your entries in the Keycode Information dialog box, and make any corrections.

c. Click Next.

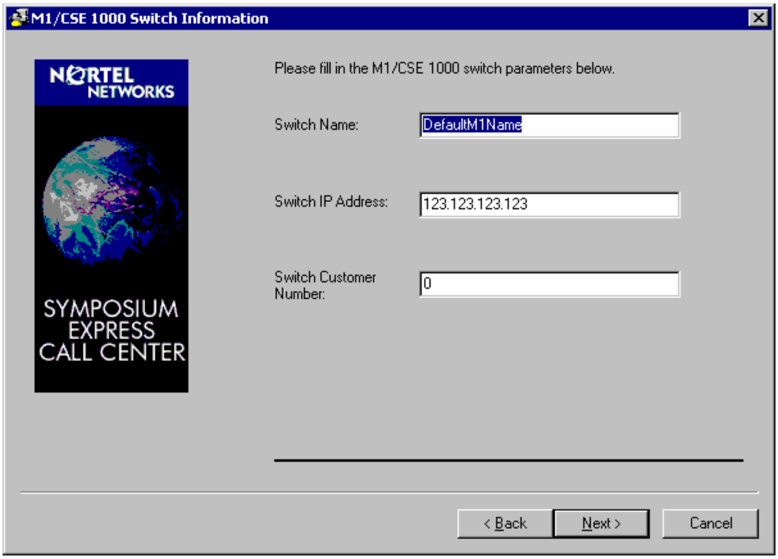
Result: If you entered a valid keycode and serial number, the system displays a dialog box similar to the following:



7 Check that the features listed match the product you purchased, and then do one of the following:

- If the information is not correct, you may have entered the keycode and serial number incorrectly. Click No and go back to step 5.
- If the information is correct, click Yes to continue.

Result: The M1/CSE 1000 Switch Information dialog box appears.



8 Enter the appropriate information for your switch.

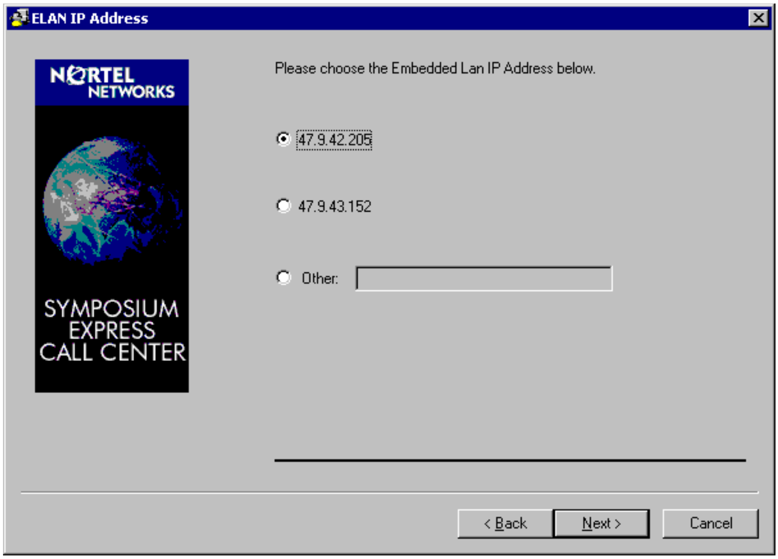
Note: The following restrictions apply to switch names:

- Valid characters for switch names are A–Z, a–z, 0–9, _ (underscore), and . (period).
- Switch names must begin with an alphabetic character and cannot contain spaces.
- The last character must not be an underscore or a period.
- Switch names must not exceed 80 characters in length.

Tip: If you are unsure of the correct information or if you make a mistake, you can change the switch information after you finish the installation. For more information, see “Feature Report” on page 594.

9 Click Next.

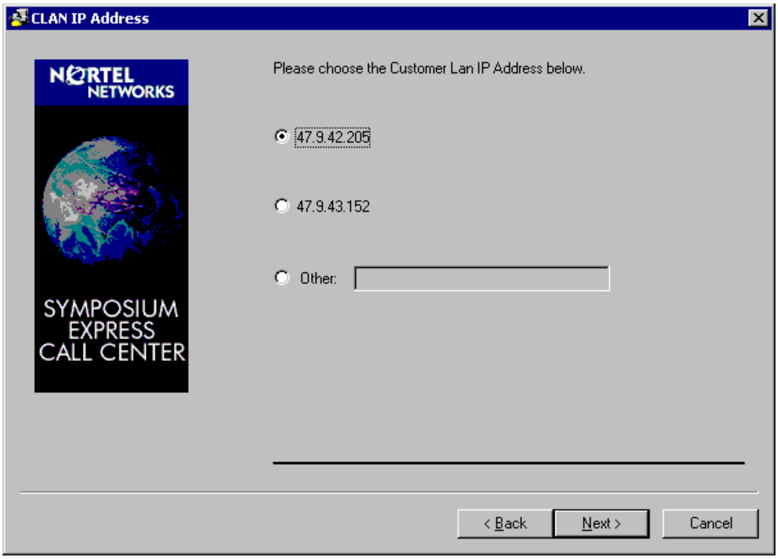
Result: The ELAN IP Address dialog box appears.



10 Click the radio button beside the correct IP address for your ELAN. If none of the addresses are correct, click Other, and then type the IP address.

11 Click Next.

Result: The CLAN IP Address dialog box appears.

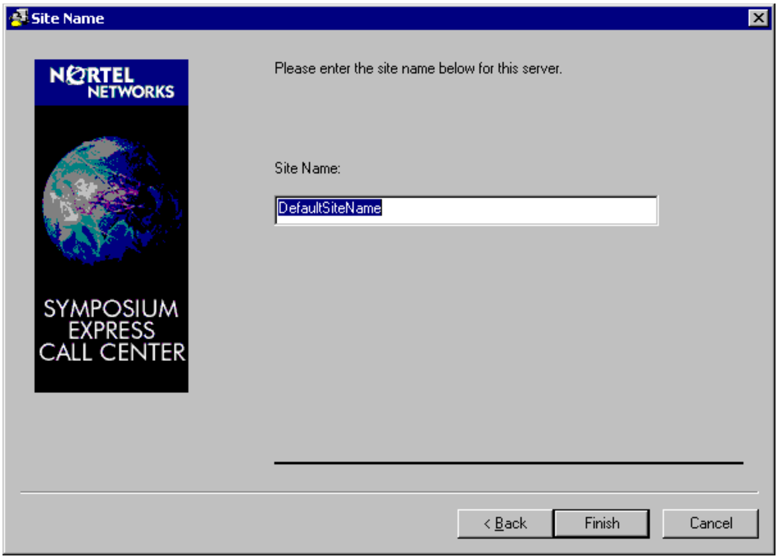


12 Click the radio button beside the correct IP address for your CLAN. If none of the addresses are correct, click Other, and then type the IP address.

Note: If your server does not have a CLAN network interface card, select the radio button beside the IP address that you assigned to the ELAN. Do not enter a dummy IP address in the Other field.

13 Click Next.

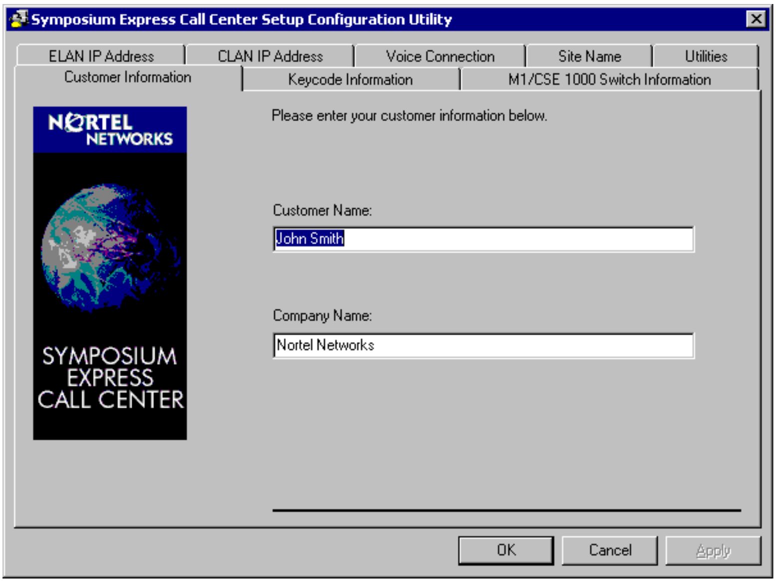
Result: The Site Name dialog box appears.



14 Enter a site name for the server, and then click Finish.

Tip: The site name must be unique and can consist of any combination of up to 15 characters. Do not use spaces or the backslash (\) character.

Result: The Symposium Express Call Center Setup Configuration Utility window appears. It contains a tab for each of the dialog boxes in which you entered information during the configuration. (It also contains a Utilities tab, which you can use to import and export configuration data and to create a Platform Recovery Disk.)



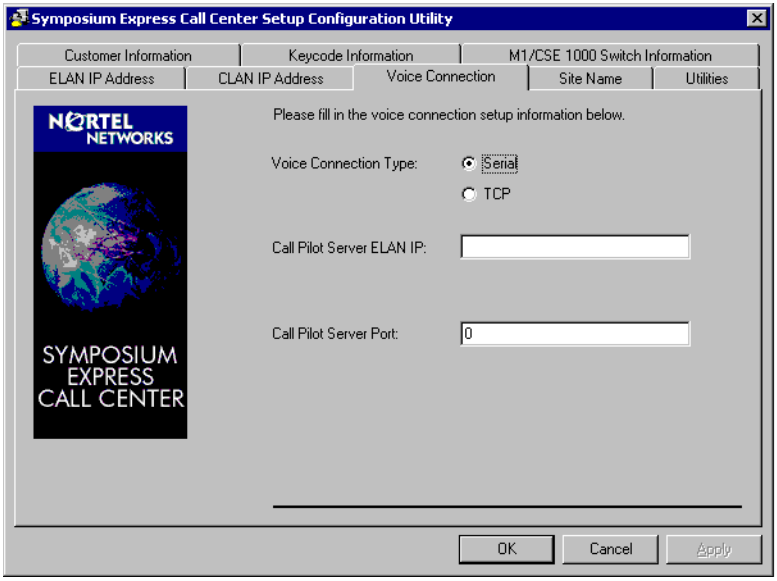
15 Click each tab and check that the information is correct. Make any necessary corrections.

16 For the Voice Connection tab, do one of the following:

- If you are not using CallPilot for voice processing services, continue to the next step.
- If you are using CallPilot for voice processing services, do the following:

a. Click the Voice Connection tab.

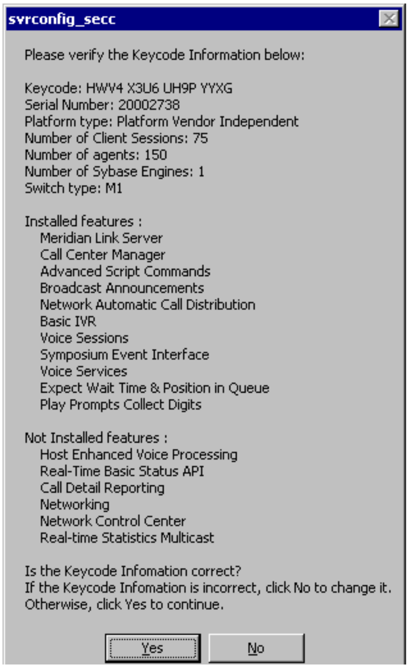
Result: The Voice Connection window appears.



b. Complete the voice connection setup information, and then click OK.

17 On the Symposium Express Call Center Setup Configuration Utility window, click OK to save your changes.

Result: A dialog box appears, similar to the one shown below, asking you to verify your keycode information again:



18 Click Yes.

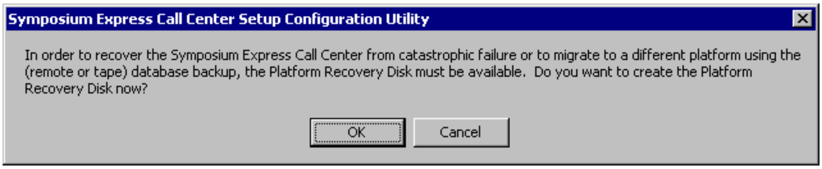
Result: The Server Configuration Utility configures your server using the data you entered. It displays a status of each stage that the configuration passes through.

Note: This process can take 20 to 30 minutes to complete, depending on your server's CPU and database size. Do not close any windows during the configuration.

19 Wait until you see the following message:

20 Click OK.

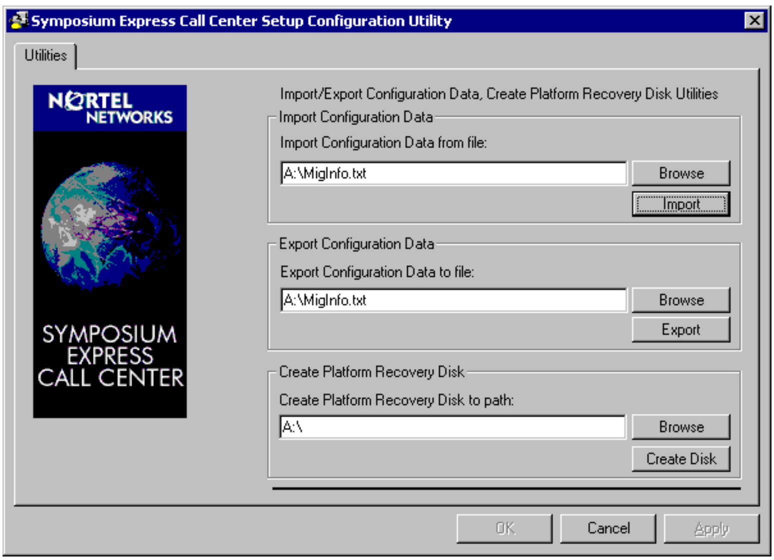
Result: The following message appears:



21 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in step 27.

Result: The Utilities tab appears.



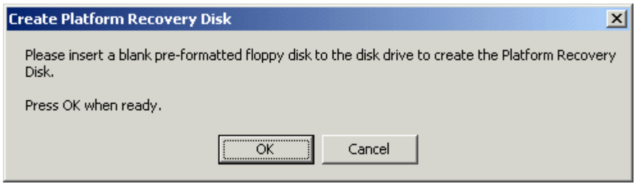
22 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:

  a. Insert a blank floppy disk in drive A.

  b. Click Create Disk.

  Result: The following message appears:



c. Click OK.

- To save the Platform Recovery Disk to a remote directory:

  a. Map a network drive to the remote directory.

  Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

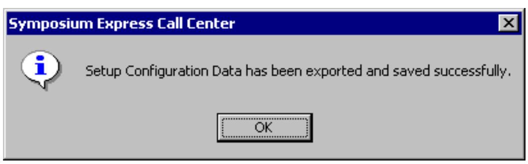
  b. Click Browse, and then navigate to the mapped network drive.

  c. Select the drive, and then click OK.

  d. Click Create Disk.

  Result: The system creates the Platform Recovery Disk.

23 Wait until the following message appears:



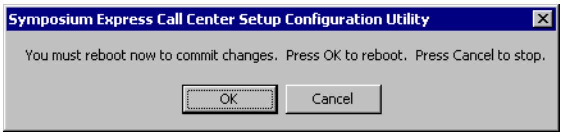
24 Click OK. The following message appears:

25 Click OK.

26 If you used a floppy disk, remove it from the drive. Make sure the Platform Recovery Disk is labeled appropriately and stored in a safe place.

27 Click OK to close the Symposium Express Call Center Setup Configuration Utility dialog box.

Result: The following message appears:



28 Click OK.

Result: The server automatically restarts.

29 Log on as **NGenSys**.

ATTENTION

You must log on as NGenSys to perform many server management functions, such as installing PEPs. If you log on to the server as Administrator to perform Windows management functions, when you finish, always remember to log off and log on again as NGenSys.

Note: It may take several minutes for the desktop to appear.

Result: The MAS Trace Window appears. The server and database configuration is complete, and the Symposium Express Call Center software is ready for use.

Step 25. Apply the latest Service Update pack and any required PEPs to the new server

Ensure that the latest Service Update pack and any required PEPs are applied to the new server. Check both the Server Supplementary CD supplied with Release 4.2 software and Nortel Network's Meridian PEP Library web site.

For information on installing Service Update packs or PEPs, see "Installing server PEPs and SUs" on page 278.

Step 26. Restore the Voice Services database and configuration data (for Release 3.0 servers only)

Note: This step applies only if your original server is a Release 3.0 server that has the Voice Services feature. It does not apply if the original server is a Release 2.0 server, or a Release 3.0 server without the Voice Services feature. If the step does not apply, skip to the next step in the Conversion Checklist.

If your Release 3.0 server has the Voice Services feature, you must restore the Voice Services database and configuration data to the new server using Voice Services backup disk you created on the original server.

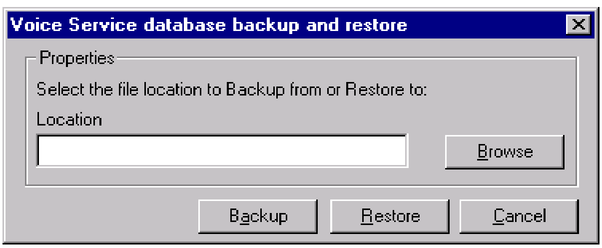
To restore the Voice Services database and configuration data

1 Log on to the server as **Administrator**.

2 Insert the floppy disk that contains the Voice Services database and configuration backup file.

3 From the Windows Start menu, choose VS Database Backup-Restore.

Result: The Voice Service database backup and restore dialog box appears.



4 Click Browse to locate the previously backed up .csv file, and then click Restore.

5 When the system indicates the restore is successful, remove the disk from the drive, and then close the Voice Service database backup and restore dialog box.

Step 27. Install pcAnywhere on the new server

Install pcAnywhere using the instructions in “Installing and configuring pcAnywhere” on page 171.

Step 28. Connect the new server to the network

The procedures for connecting the new server to the network are different depending on whether you are converting within the same server or migrating to a different server.

1 Do one of the following:

- If your conversion is within the same server:

a. Reconnect the server, if it is not already connected to the network.

b. Restart the server to begin using the Release 4.2 Symposium Express Call Center software.

- If you have migrated to a different server:

a. Shut down the call center operation and services on the original server. Disconnect the original server from the network.

b. Connect the new server to the network.

c. Restart the server to begin using the Release 4.2 Symposium Express Call Center software.

2 Verify the proper operation of the Release 4.2 software on the new server.

Step 29. Upgrade the coresident client software to Release 4.2

Upgrade the coresident client software to Release 4.2. For instructions, see "Upgrading a coresident client" on page 221.

ATTENTION

Make sure you install the latest client Service Update pack and PEPs to the upgraded coresident client before you proceed to the next step. Then, if your original client was installed with Release 3.0 software, ensure that you run the Call Routing Wizard on the coresident client to determine if your scripts are up-to-date. If they are not up-to-date, follow instructions in the readme file included with the latest Service Update pack to update them.

Step 30. Run the script upgrade utility to upload the Release 2.0 scripts (for Release 2.0 servers only)

If your original server was a Release 2.0 server, you must upload the scripts that you downloaded to a safe location in an earlier conversion step.

Before you run the utility, do the following:

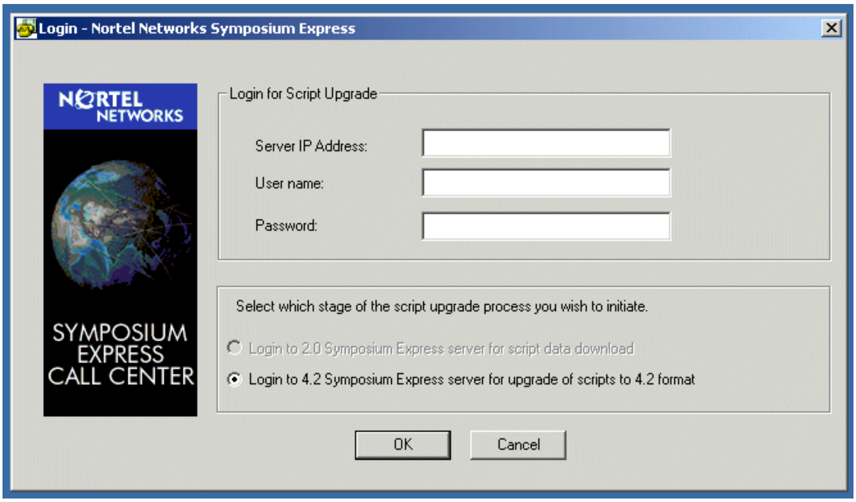
1. Launch a client session and log on as **sysadmin** to accept the end user licence agreement. When you log on for the first time, you are prompted to change the password. That new password is the one you use to run the upgrade utility.
2. Create a new folder on your server called D:\ExpressCDN.
3. Locate the files you stored in a safe location in "Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only)" on page 350.
4. Copy these files to the folder you created in step 2 above.

To upload the Release 2.0 scripts to the Release 4.2 system

1 On the partition where the Release 4.2 coresident client is installed, navigate to ..\Client\en\bin.

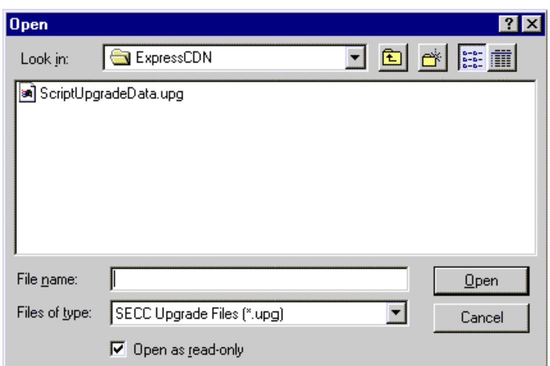
2 Double-click nicgcsupgr.exe.

Result: The Login - Nortel Networks Symposium Express dialog box appears.



3 Enter the Server IP Address, the User name, and the Password, and then click OK.

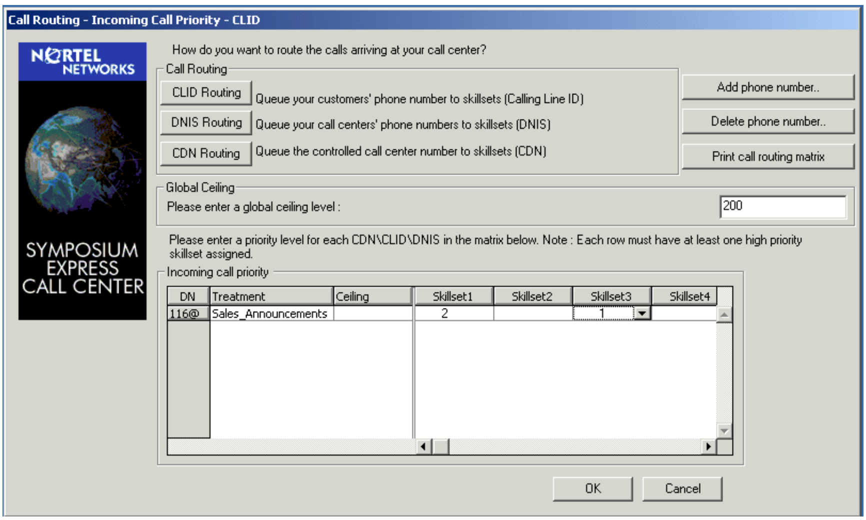
Result: The Open dialog box appears.



4 Navigate to D:\ExpressCDN and open the file ScriptUpgradeData.upg. This is the file that you created in “Step 9. Run the script upgrade utility on the Release 2.0 coresident client to download scripts (for Release 2.0 servers only)” on page 350.

Note: If you choose an invalid file or if the file has been corrupted, then the upload is discontinued and a message box appears. The failure is logged in D:\ExpressCDN\s2tos3upgrade.log.

Result: All the Release 2.0 skillsets, music\RAN routes, and treatments are added to the Release 4.2 server. The progress of each addition and any problems encountered are shown in the progress bar, and they are recorded in D:\ExpressCDN\s2tos3upgrade.log. Once all the upload is complete, a simplified Call Routing dialog box appears.



In Symposium Express Call Center Release 2.0, you can choose only priorities of 1 and 2 (1 being high priority and 2 being low priority). In Symposium Express Call Center Release 4.2, you can choose between three high priority skillsets and three low priority skillsets. In this upgrade utility, the priorities are converted as follows:

Release 2.0	Release 4.2
1	2 (high priority)
2	2 (low priority)

5 If necessary, change the priorities assigned, change the treatments assigned, and add a global call ceiling and call ceilings for CLIDs, DNISs, or CDNs. For more information on adding or changing these properties, refer to the *Call Center Management Guide*. However, in this dialog box

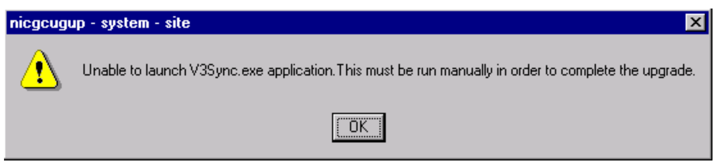
- you cannot add CLIDs, DNISs, or CDNs. You must do this through Call Routing in the Administration window.
- you cannot delete CLIDs, DNISs, or CDNs. You must do this through Call Routing in the Administration window.

6 Click OK.

Result: All the scripts are written to the Symposium Express Call Center Release 4.2 server.

A progress bar appears that informs you of the progress. When this is complete, the V3SYNC.exe application runs automatically to synchronize all application IDs.

If the server is unable to run this executable, the following dialog box appears:



7 If you get this dialog box, click OK, and run V3SYNC.exe manually.

Logging information

All operations when you run the upgrade utility are logged in the file S2tos3upgrade.log that resides in the D:\ExpressCDN directory. If any errors occur while running the upgrade utility, check this log file for more details.

Limitations to the upgrade utility

- If the treatment already exists in Release 4.2, then the one from Release 2.0 will not be added.
- Release 2.0 RAN/Music Routes/Emergency RANs with routes 0 or 999 will fail to activate because these numbers are not allowed in Release 4.2. This is shown in both the progress bar and in the log file. If this occurs, you must modify the call treatment in Release 4.2 so that it uses a valid music/ RAN route.

To modify a call treatment in Release 4.2 to use valid music/RAN route

1 When running the upgrade utility, click Cancel when the system displays the Call Routing dialog box.

2 In the Administration window, from the Call Administration drop-down menu, choose Call Treatment to display the Call Treatments window. For more information, refer to the *Call Center Management Guide*.

3 Open any treatment that has failed to activate.

4 Assign a correct route between 1 and 511.

5 Click OK.

Result: The treatment validates.

6 Rerun the upgrade utility. The newly saved treatments are not overwritten.

7 To ensure that all scripts are activated correctly, do the following:

a. In the Administration window, from the System Administration drop-down menu, choose Advanced Functions.

b. Click Call Flow Administration.

c. Double-click Scripts.

d. Ensure that the Status of each script is Active.

Step 31. Back up data on your new server

When the conversion is complete, you must make several kinds of backups to ensure you can recover your new server in case you encounter problems.

1 Create a Platform Recovery Disk for the new server if you bypassed this step during the configuration. Without this disk, the server cannot be restored if there is a system failure. See “Creating a server Platform Recovery Disk” on page 716.

2 Back up the new server’s database. See “Performing database backups” on page 694.

Note: Nortel Networks recommends that you perform a database backup on the new server before putting the server into full service.

3 If your original server was a Release 3.0 server, and if it had the Voice Services feature, create a Voice Services database and configuration backup disk on your new Release 4.2 server. See “Performing Voice Services backups” on page 710.

Note: If your server is equipped with RAID, rebuild your RAID drives when you are satisfied with the operation of the new release of Symposium Express Call Center.

Step 32. Determine whether you need to expand your database

Determine whether you need to perform database expansion to increase the amount of available space on your new server for database use. If you want to make use of additional space for your database, you must use the Database Expansion utility in either of the following scenarios:

- Your new server has more than one database partition.

  All Release 4.2 servers must have at least one database partition, F. If you have created additional database partitions, for example, G and H, you must use the Database Expansion utility to make use of the additional partitions.
- You want to take advantage of additional space on the F partition of your new server.

  On your original server, the D partition contains the database, which is a fixed size of 2 Gbytes. If you want to use the additional space on your new server’s F partition, you must use the Database Expansion utility to make use of the extra space.

For information on performing a database expansion, see “Database Expansion utility” on page 584.

ATTENTION

If you expand your database, then you must create a new Platform Recovery Disk afterward. For details, see “Creating a server Platform Recovery Disk” on page 716.

Chapter 10

Upgrading to Symposium Call Center Server 4.2

In this chapter

Using this chapter

Introduction

This chapter explains how to upgrade from Release 4.2 of Symposium Express Call Center to Release 4.2 of Symposium Call Center Server. The upgrade process involves running a configuration utility on your Symposium Express Call Center server, during which you enter a keycode for Symposium Call Center Server.

CAUTION

Risk of upgrade failure. Use the Upgrade checklist.

To complete an upgrade correctly, you must follow the Upgrade checklist that is included in this chapter (see "Upgrade checklist" on page 429). It provides an overview of each step that you must perform, and the order in which you must perform the steps. Some of the procedures you must complete are referenced from other chapters in this guide, and the checklist provides the correct page references.

Important: Make a photocopy of the checklist and review it thoroughly before you start. During the upgrade procedure, check off each item in the checklist as you complete it to ensure that you stay on track.

This chapter references the following chapters in this guide:

- Chapter 5, "Coresident client software"
- Chapter 15, "Backing up data"
- Chapter 16, "Restoring data"

This chapter also references the following additional guide:

- *Release 4.2 Symposium Call Center Server Installation and Maintenance Guide*

Upgrade checklist

Introduction

Use the following checklist throughout this procedure to ensure that you perform all the required steps for the upgrade. Make a photocopy of the checklist and keep it with you while you work.

How to use the checklist

Here are some important points to keep in mind when using this checklist:

- The checklist contains each main step you must perform to prepare for and complete an upgrade. The order in which you complete certain steps is critical, so do not change the order of the steps unless the instructions in this chapter provide you with that option.
- Each step in the checklist provides a page reference to the procedure you need to complete that step. Most of these procedures are in this chapter, and they appear in chronological order according to the checklist. However, a few of the procedures are in other chapters in this guide.

  Important: When you complete a procedure that is documented in another chapter, return to the checklist to check off the item and determine the next step in the upgrade process.

Step	✔
Step 1. Read the “Overview of the upgrade procedure” See “Overview of the upgrade procedure” starting on page 432 of this chapter.	
Step 2. Check for additional documentation. For instructions, see page 435.	
Step 3. Gather the materials required for the upgrade. For instructions, see page 436.	
Step 4. Install the latest Service Update pack and any required PEPs on the server. For instructions, see page 437.	
Step 5. Create a Platform Recovery Disk. For instructions, see page 437.	
Step 6. Create a Voice Services backup disk (if required). For instructions, see page 440.	
Step 7. Back up the server’s database. For instructions, see page 440.	
Step 8. Install the upgrade PEP on the server. For instructions, see page 440.	
Step 9. Uninstall the coresident client software from the server. For instructions, see page 441.	
Step 10. Perform a platform compliance check on the server. For instructions, see page 441.	
Step 11. Run the configuration utility and enter the keycode for Symposium Call Center Server. For instructions, see page 444.	

Step 12. Apply the latest Service Update pack and any required PEPs to the new server. For instructions, see page 450.	
Step 13. Install the client software for Symposium Call Center Server on a stand-alone PC. For instructions, see page 451.	
Step 14. Back up data on the upgraded server. For instructions, see page 453.	
Step 15. Perform any post-upgrade configuration for new features. For instructions, see page 454.	

Overview of the upgrade procedure

Introduction

An upgrade from Symposium Express Call Center to Symposium Call Center Server allows you to take advantage of many additional features suitable for larger call centers. For example, Symposium Call Center Server allows for

- increased call center capacity (for example, up to 1500 agents)
- networking between call centers, and network skill-based routing
- ability to write custom scripts
- use of a web-based client (Symposium Web Client)
- use of third-party interfaces, such as Host Data Exchange (HDX)

To upgrade your server, you must purchase a keycode for Symposium Call Center Server. The upgrade process is straightforward; it involves running a configuration utility on the existing Symposium Express Call Center server and entering the keycode for Symposium Call Center Server. When the configuration process completes, the server is upgraded.

Features not supported by Symposium Call Center Server

If your Symposium Express Call Center has the Voice Services feature using the Voice Services card installed in the switch, it will not be available when you perform the upgrade to Symposium Call Center Server.

Upgrade paths supported

You must be running Release 4.2 of Symposium Express Call Center to upgrade to Release 4.2 of Symposium Call Center Server. If you are running an earlier release of Symposium Express Call Center, you must first convert the server to Release 4.2.

It is important to note that the upgrade cannot be reversed once you run the configuration utility and enter the Symposium Call Center Server keycode. If for some reason you want to go back to Symposium Express Call Center after the upgrade, you must reinstall the Symposium Express Call Center software and restore all the data you backed up (that is, database, Voice Services database, Platform Recovery Disk contents, and client data). For detailed procedures, see Chapter 16, “Restoring data.”

Server requirements for upgrading to Symposium Call Center Server

Before you begin the upgrade procedure, consider the platform requirements for Release 4.2 of Symposium Call Center Server, and make sure your existing Symposium Express Call Center hardware platform can meet those requirements. Release 4.2 of Symposium Call Center Server has the same *minimum* requirements for a Platform Vendor Independence (PVI) platform as Symposium Express Call Center. However, if you are increasing your call center’s capacity as part of this upgrade (for example, increasing the number of agents or calls per hour), you may require more than the minimum requirements for your new call center. You may want more memory, more disk space, or faster processors. For detailed information on specific requirements for your call center following the upgrade to Symposium Call Center Server, refer to the Release 4.2 *Symposium Call Center Server Planning and Engineering Guide*.

If your existing platform does not meet your requirements, you can still continue with the upgrade procedure. However, before putting your new Release 4.2 Symposium Call Center Server into service, you must perform a platform migration to the enhanced hardware platform. For details, refer to the Release 4.2 *Symposium Call Center Server Platform Migration Guide*.

Client requirements for Symposium Call Center Server

Once you upgrade the server, you must install the Symposium Call Center Server Release 4.0 client software on a separate PC to administer the server. Symposium Call Center Server does not support coresident clients. For information about requirements for this client PC, refer to the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

Note: You cannot use a Symposium Express Call Center client to administer a server in Symposium Call Center Server.

Keycode requirements for upgrading to Symposium Call Center Server

You must obtain a keycode for Release 4.2 of Symposium Call Center Server. You cannot reuse the keycode from Symposium Express Call Center.

Upgrading the server

Introduction

Complete the following steps to upgrade from Release 4.2 of Symposium Express Call Center to Release 4.2 of Symposium Call Center Server. The steps below are also listed in the "Upgrade checklist" on page 429. Use this checklist to check off each step as you complete it.

Step 1. Read the "Overview of the upgrade procedure"

The section "Overview of the upgrade procedure," starting on page 432, contains information on a number of topics that you must understand before performing an upgrade. Be sure to read this section carefully.

Step 2. Check for additional documentation

Before performing an upgrade, check for the Distributor's Technical Reference (DTR), any Installation Addenda, and any updated customer documentation on your regional Symposium Express Call Center technical web site. Refer to the web site at http://www.nortelnetworks.com (for end customers), or http://www.nortelnetworks.com/prd/picinfo/ (for distributors). These documents may contain important information regarding upgrades that is not included in this guide.

Step 3. Gather the materials required for the upgrade

You must have the following materials available before starting the upgrade procedures:

Item	Purpose and details
two blank preformatted disks	You need one disk to create a Platform Recovery Disk that contains the original server's setup record and database configuration. If your original server has the Voice Services feature using the Voice Services card, and you want to keep a Voice Services database and configuration backup, you need a second disk for this purpose. **Note:** The Voice Services feature using the Voice Services card is not available with Symposium Call Center Server 4.2. The Voice Services backup disk is for backup purposes only.
Symposium Call Center Server software for Release 4.2	The upgrade to Symposium Call Center Server does not require that you install software using CD-ROMs; during the upgrade, you use the Server Application CD-ROM only to run the Platform Compliance Check utility. However, you should have the complete set of Release 4.2 Symposium Call Center Server CD-ROMs for disaster recovery, and to reference the documentation. This set includes ■ Release 4.2 Server Application CD-ROM containing the Symposium Call Center Server installation software and the Platform Compliance Check utility ■ Release 4.2 Server Supplementary CD-ROM containing any additional software components required for Symposium Call Center Server to operate, such as Service Update packs and Performance Enhancement Packages (PEPs) ■ Release 4.2 Platform Support CD-ROM ■ Release 4.0 Client Application CD-ROM containing the Symposium Call Center Server client installation software ■ Release 4.2 Documentation CD-ROM ■ Release 10.5 pcAnywhere Host-Only CD-ROM (NTJK08AA)

Step 4. Install the latest Service Update pack and any required PEPs on the server

Ensure that the latest Service Update pack and any required PEPs are applied to the Symposium Express Call Center server. These may include enhancements that you require to perform these upgrade procedures.

1 Use the PEP Viewer utility on the server to see which PEPs and Service Update packs are already installed. (From the Windows Start menu, choose Programs → Symposium Express Call Center → PEP Viewer.)

2 Go to the web site for the Meridian PEP Library to see if there is a more recent Service Update pack or any required PEPs for your server. If so, install them.

For detailed instructions on using the PEP Viewer, and installing Service Update packs and PEPs, see “Installing server PEPs and SUs” on page 278.

Step 5. Create a Platform Recovery Disk

Create a Platform Recovery Disk to back up important information from your original server, such as its setup record and database configuration. The Platform Recovery Disk contains the file MigInfo.txt, which includes important details about how the original server is configured. You need this disk in case the upgrade fails and you need to restore your Symposium Express Call Center server.

You can create a Platform Recovery Disk on either a floppy disk or a remote directory on a network computer.

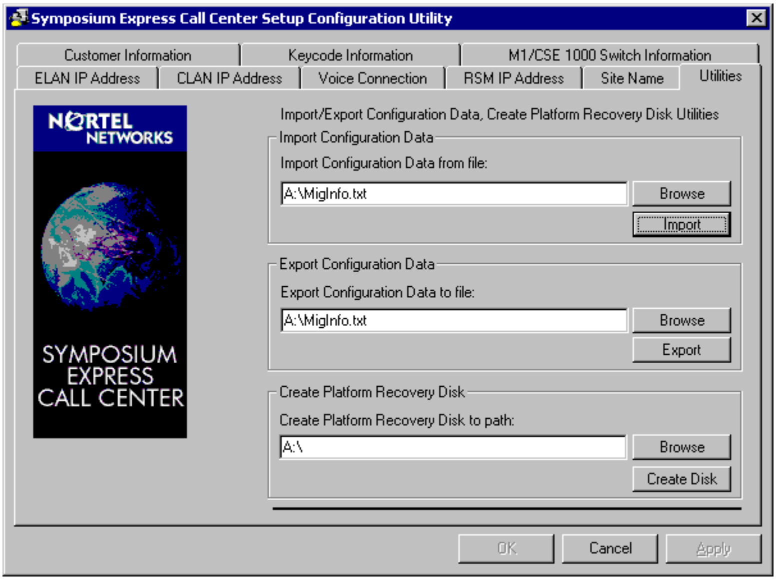
To create a Platform Recovery Disk

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Symposium Express Call Center Setup Configuration Utility dialog box appears.

3 Click the Utilities tab to display the following:



4 In the Create Platform Recovery Disk section, do one of the following:

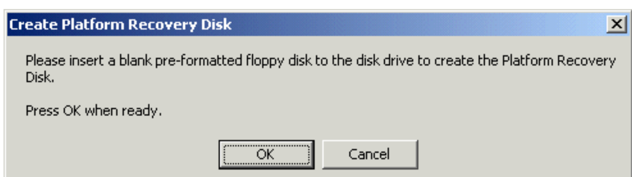
- If you want to create a Platform Recovery Disk on a floppy disk:

  a. Make sure the path shows A:\.

  b. Insert a blank floppy disk in drive A.

  c. Click Create Disk.

  Result: The following message appears:



  d. Click OK.

- If you want to create a Platform Recovery Disk in a directory on a network computer:

  a. Make sure you have mapped a network drive to the remote directory in which you want to save the Platform Recovery Disk.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

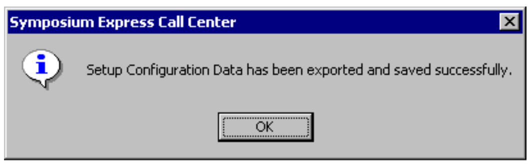
b. Click Browse and navigate to the mapped drive.

c. Select the directory, and then click OK.

Result: The drive you selected appears to the left of the Browse button.

d. Click Create Disk.

Result: The system exports files containing the server's setup record and database configuration to the disk or remote directory. When the process is complete, the following dialog box appears:



Note: The system also checks for database segmentation problems. If it finds any problems, it displays a message indicating the type of problem.

- If the system finds a database *data* segmentation overlapping problem, then it advises you to contact Nortel Networks customer support before proceeding. After customer support fixes the problem, you must create a new Platform Recovery Disk before proceeding.
- If the system finds a database *log* segmentation overlapping problem, then you can still use the Platform Recovery Disk that you have just created. The system prompts you to shut down the Symposium Call Center Server services so it can fix the problem. Follow the on-screen prompt to shut down the services.

5 Click OK. If you used a floppy disk, remove it from the drive, and make sure it is labeled clearly.

6 Close the Symposium Express Call Center Setup Configuration Utility window.

Step 6. Create a Voice Services backup disk (if required)

If your Symposium Express Call Center server has the Voice Services feature, you should create a Voice Services backup disk to back up the Voice Services database and configuration information. This includes Voice Services treatment and switch map information. You need this disk in case the upgrade fails and you need to restore your Symposium Express Call Center server.

For instructions on creating a Voice Services backup disk, see “Performing a Voice Services database and configuration backup” on page 712.

Step 7. Back up the server’s database

Create a backup of your Symposium Express Call Center server’s database to either a tape or to a remote directory. You need this backup in case the upgrade fails and you need to restore your Symposium Express Call Center server.

For instructions, see Section B: “Performing database backups” on page 691.

Step 8. Install the upgrade PEP on the server

You must install a special PEP on the Symposium Express Call Center server that prepares the server for the upgrade. The PEP name is NS040206E002S, and it is available on the Server Supplementary CD that is included with Symposium Express Call Center Release 4.2. Install this PEP in the same way that you would install any other server PEP.

For instructions on installing PEPs, see “Installing server PEPs and SUs” on page 278.

Note: Once you have installed this PEP, the Server Setup Configuration utility on the server accepts only a keycode for Symposium Call Center Server the next time you run it. Therefore, if you decide not to continue with the upgrade after you install this PEP, you must uninstall it. This will undo any changes the PEP makes to the server.

Step 9. Uninstall the coresident client software from the server

Before you upgrade to Symposium Call Center Server, you must uninstall the coresident client from the server.

ATTENTION

If your coresident client has user-created reports that you want to use with your Symposium Call Center Server client following the upgrade, you must export this data to a safe location *before* you uninstall the coresident client software. For instructions on exporting this data, see "Exporting client data" on page 719.

If your user-created reports have been created with Crystal Reports version 9.0 or later, you cannot use these reports with Symposium Call Center Server.

For instructions on uninstalling the coresident client, see "Uninstalling a coresident client" on page 229.

Note: Symposium Call Center Server does not support coresident clients. Once you have completed the server upgrade, you must install the Symposium Call Center Server client software on a separate PC. You can then import any user-created reports to this client. These steps are covered in more detail later in this chapter.

Step 10. Perform a platform compliance check on the server

Before upgrading the server, you must ensure that your platform meets the minimum requirements for Release 4.2 of Symposium Call Center Server. To do this, use the Platform Compliance Check utility that is included on the Server Application CD for Release 4.2 of Symposium Call Center Server.

When you run this utility, it checks your server's basic compliance and identifies any problems. Not all requirements for Platform Vendor Independence are checked.

To perform a platform compliance check

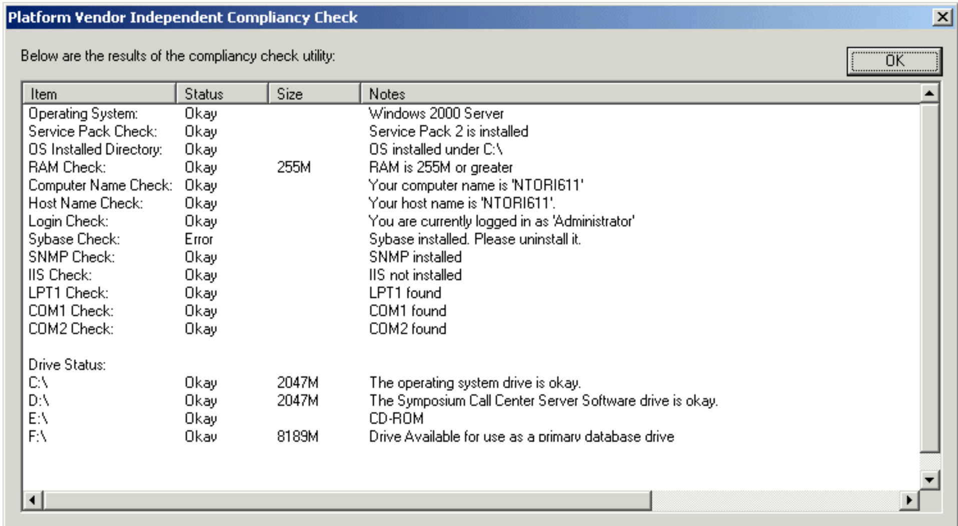
1. Log on to the server as **Administrator**.
2. Insert the Server Application CD for Release 4.2 of Symposium Call Center Server and wait for it to autorun.

   Result: The Setup main menu appears.

3. Click Platform Compliance Check.

   Result: The system checks your server to ensure it meets certain requirements for a PVI server for Release 4.2 of Symposium Call Center Server. The results appear in a window similar to the one shown below. If your server is compliant, the Status column shows Okay beside all items listed. For any non-compliant items, the Status column shows Error, and the Notes column provides information about the PVI requirement.

   Note: The Sybase Check item will show Error in the Status column because Sybase is already installed. You can ignore this.



4 Do one of the following:

- If all items show the Okay status (except Sybase Check), your system has passed the compliance check. Click OK to exit from the Platform Vendor Independent Compliancy Check dialog box.

  Result: The platform compliance check has completed successfully.

- If any items (other than Sybase Check) show the Error status:

  a. Take note of the non-compliant items and the related information in the Notes column.

  b. Click OK to exit from the Platform Vendor Independence Compliancy Check dialog box.

  c. Correct the problems so that the server is compliant. For more details about the minimum requirements for a PVI server for Symposium Call Center Server, see the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

  d. Rerun the platform compliance check. If you had to restart the server to correct a non-compliance, go back to Step 1. If you did not have to restart, go back to Step 3.

5 When you have completed the Platform Compliance Check, click exit on the Setup main menu and remove the CD from the drive.

Step 11. Run the configuration utility and enter the keycode for Symposium Call Center Server

If you have completed all the previous steps to prepare your server for the upgrade, you can now proceed with the upgrade to Symposium Call Center Server.

ATTENTION

This step makes changes to your server that cannot be reversed. If you proceed with this step and then decide to go back to Symposium Express Call Center, you must reinstall the Symposium Express Call Center software and restore all the data you backed up (that is, database, Voice Services database, Platform Recovery Disk contents, and client data.) For detailed procedures, see Chapter 16, “Restoring data.”

To upgrade the server to Symposium Call Center Server, you must run the Server Setup Configuration utility on the server and enter the keycode for Symposium Call Center Server. You can also make changes to any other configuration details for your new Symposium Call Center Server. Detailed procedures are provided below.

To run the configuration utility and upgrade the server software

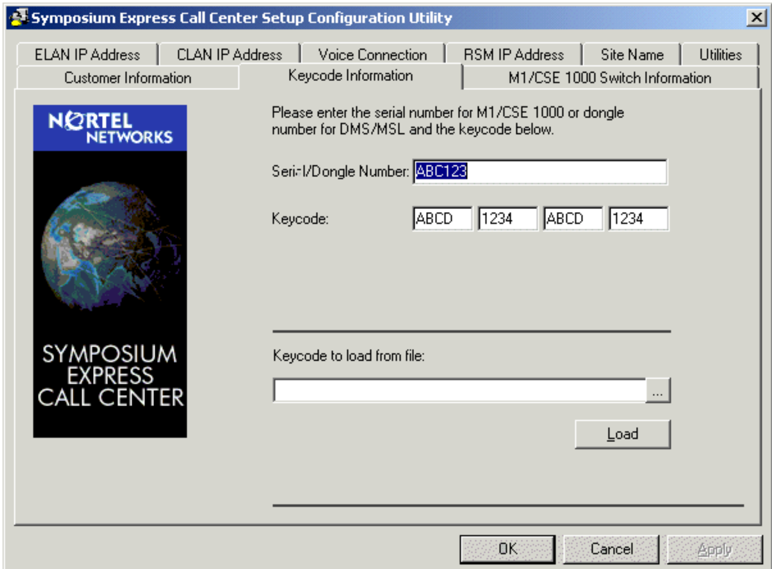
1 Make sure you are logged on to the server.

2 From the Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Symposium Express Call Center Setup Configuration Utility window appears.

3 Click on the Keycode Information tab.

Result: The following window appears, showing the serial number and keycode for your Symposium Express Call Center server:



4 In the Keycode boxes, delete the keycode shown, and then type the keycode for your new Symposium Call Center Server.

5 Click the additional tabs in the Setup Configuration Utility to ensure that the data is correct for your upgraded server. These tabs contain information from your Symposium Express Call Center server. You can make additional changes to data in any of the tabs, if they are different for your upgraded server. If you do not want to make changes now, you can run the configuration utility any time after the upgrade is complete.

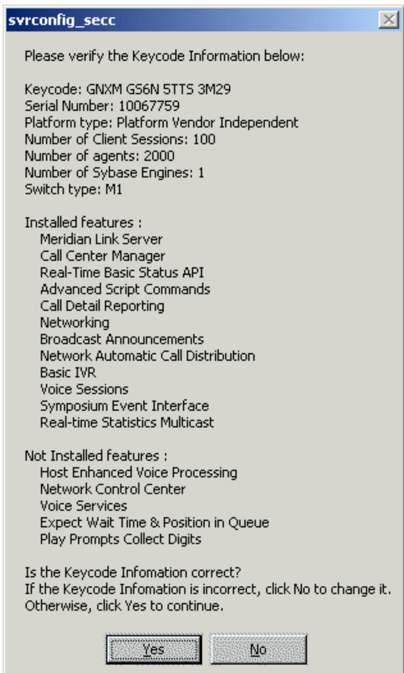
For details on the contents of these tabs, refer to the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

6 If your new server has the Real-time Statistics Multicast (RSM) feature, you must fill in the RSM IP Address tab. Enter the RSM IP address that you want to associate with the sending of real-time statistical data. This address is referenced by other applications, such as Symposium Web Client, that need access to real-time statistical data. The default RSM address is 230.0.0.1. You can use a different address, provided that it is within the range of valid RSM IP addresses. Note that the RSM IP address should not be confused with and is separate from your server's CLAN or ELAN addresses.

For more information on RSM, refer to the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

7 When you are satisfied with the data in the Setup Configuration Utility tabs, click OK.

Result: A window appears, similar to the example below, asking you to verify your keycode information.



8 Check that the features listed match the product you purchased, and then do one of the following:

- If the information is not correct, you may have entered the keycode and serial number incorrectly.

  a. Click No.

  b. Click the Keycode Information tab, and then make any necessary changes to your entries.

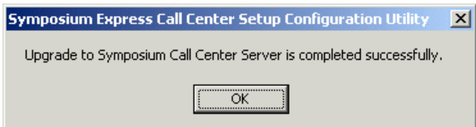
  c. Click OK, and then repeat Step 8.

- If the information is correct, click Yes to continue.

Result: The configuration utility configures your server using the data you entered. It displays a status of each stage that the configuration passes through.

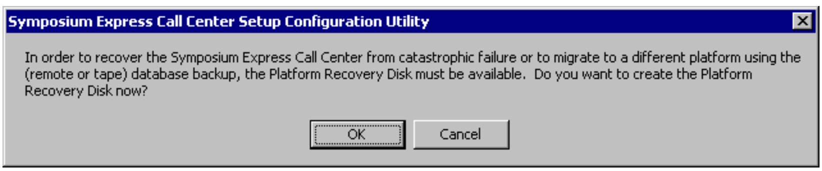
Note: This process can take 20 to 30 minutes to complete, depending on your server's CPU and database size. Do not close any windows during the configuration.

9 Wait until you see the following message:



10 Click OK.

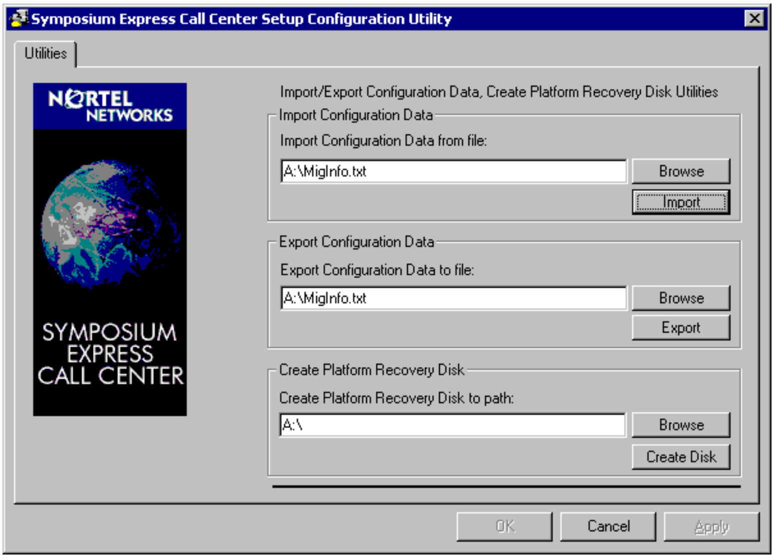
Result: The following message appears:



11 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in Step 16.

Result: The Utilities tab appears.



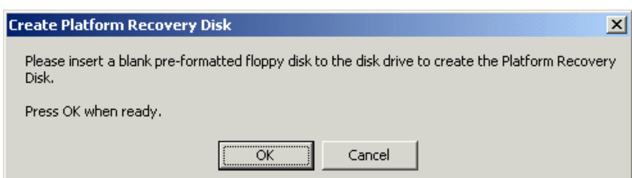
12 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:

  a. Insert a blank floppy disk in drive A.

  b. Click Create Disk.

  Result: The following message appears:



  c. Click OK.

- To save the Platform Recovery Disk to a remote directory:

a. Map a network drive to the remote directory.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

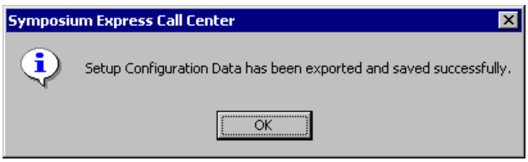
b. Click Browse, and then navigate to the mapped network drive.

c. Select the drive, and then click OK.

d. Click Create Disk.

Result: The system creates the Platform Recovery Disk.

13 Wait until the following message appears:

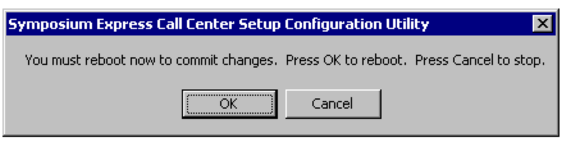


14 Click OK.

15 If you used a floppy disk, remove it from the drive. Make sure the Platform Recovery Disk is labeled appropriately and stored in a safe place.

16 Click OK to close the Symposium Express Call Center Setup Configuration Utility dialog box.

Result: The following message appears:



17 Click OK.

Result: The server automatically restarts.

18 Log on as **NGenSys**.

ATTENTION

You must log on as NGenSys to perform many server management functions, such as installing PEPs. If you log on to the server as Administrator to perform Windows management functions, when you finish, always remember to log off and log on again as NGenSys.

Note: It may take several minutes for the desktop to appear.

Result: The MAS Trace Window appears. The upgrade is complete, and the Symposium Call Center Server software is ready for use.

To check that the server services start up successfully

From the Start menu, choose Programs → Symposium Call Center Server → System Monitor.

The SMonW window appears and Symposium Call Center Server services begin the startup process. The services take approximately 15 to 20 minutes to start up.

Step 12. Apply the latest Service Update pack and any required PEPs to the new server

Ensure that the latest Service Update pack and any required PEPs for Symposium Call Center Server are applied to the new server. Check both the Server Supplementary CD supplied with the Release 4.2 Symposium Call Center Server software and Nortel Network's Meridian PEP Library web site.

If you are installing a Service Update pack on the new server, you must first uninstall the upgrade PEP (NS040206E002S) that you applied earlier in this chapter in "Step 8. Install the upgrade PEP on the server." This PEP is not recognized by the Service Update packs for Symposium Call Center Server. You do not need to reinstall the upgrade PEP afterwards; it is required only for the upgrade procedure.

For information on installing and uninstalling PEPs and Service Update packs, see the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

Step 13. Install the client software for Symposium Call Center Server on a stand-alone PC

You must install the Release 4.0 client software for Symposium Call Center Server on a PC that is separate from the server you just upgraded. Symposium Call Center Server does not support coresident client installations.

If you backed up user-created reports from your Symposium Express Call Center client, you can import these reports to the Symposium Call Center Server client once it is installed.

Note: If your user-created reports have been created with a version of Crystal Reports later than 8.0, you cannot use these reports with Symposium Call Center Server.

- For instructions on installing the client software, see the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.
- For instructions on importing user-created reports to the new client, use the following procedure.

To import the data

Follow this procedure to import your customized client data to the new Release 4.0 client, and copy the user-created custom Crystal Reports back to their original locations.

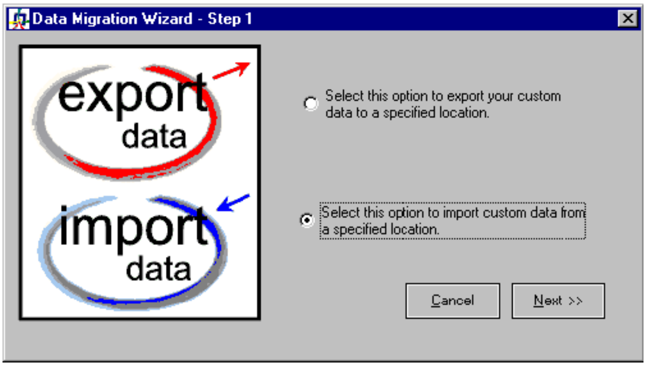
Note: If you backed up the user-created reports to a remote directory on a network computer, map a network drive to that directory before you start the following procedure.

1 Log on to the client PC.

Note: If the client PC is running Windows NT Workstation or Windows 2000 Professional, log on as **Administrator**.

2 Choose Start → Programs → Symposium Call Center Client → Data Migration Wizard.

Result: The Data Migration Wizard - Step 1 dialog box appears.

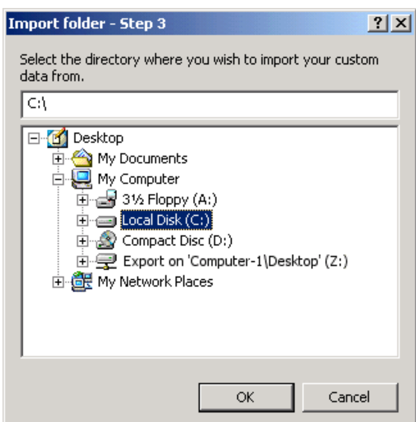


3 Select the import option button, and then click Next.

Result: The Data Migration Wizard - Step 2 window appears with general information concerning the export/import process.

4 Read the text, and then click Next to continue.

Result: The Import folder - Step 3 window appears.



5 Select the folder from which you want to import your data, and then click OK. This must be the same folder to which you previously exported your data.

Result: The data is imported. After a few seconds, the system informs you that you must restart the computer.

6 Click Yes to restart the client computer.

7 When the operating system has restarted, copy all the user-created custom Crystal Reports files from the location to which they are imported (<*install directory*>\Client\En\Rpt\UserCreated\..) to the exact location where they were located on the previous system. (<*install directory*> is the folder where you previously exported your data.) If you are unsure where you previously stored your user-created custom reports, open the UserTemplate table in the following file using Microsoft Access 97 or newer:

<*install directory*>\Client\En\Data\nicrpt.mdb

Note: You must reimport any user-created report templates to include them in future SMI Workbench reports.

Result: The data is imported from the backup location to the Release 4.0 client.

Step 14. Back up data on the upgraded server

When the upgrade is complete, you must make several kinds of backups to ensure you can recover your Symposium Call Center Server installation in case you encounter problems.

1 Create a Platform Recovery Disk for the upgraded server if you bypassed this step when you ran the Setup Configuration Utility. Without this disk, the server cannot be restored if there is a system failure.

2 Back up the new server's database.

Note: Nortel Networks recommends that you perform a database backup on the upgraded server before putting the server into full service.

For instructions, see the Release 4.2 *Symposium Call Center Server Installation and Maintenance Guide*.

Step 15. Perform any post-upgrade configuration for new features

If you are taking advantage of new features on your Symposium Call Center Server (for example, network skill-based routing, third-party interfaces), you may need to perform additional configuration steps. Refer to the documentation for Symposium Call Center Server for detailed information on configuring any new features.

Chapter 11

Performing a platform migration

In this chapter

Using this chapter

Introduction

This chapter explains how to perform a platform migration on a Release 4.2 Symposium Express Call Center server. This involves moving your setup configuration, call center configuration, and call statistics from one hardware platform to another.

CAUTION

Risk of migration failure. Use the Migration checklist.

To complete a migration correctly, you must follow the Migration checklist that is included in this chapter (see “Migration checklist” on page 457). It provides an overview of each step that you must perform and the order in which you must perform the steps.

Important: Make a photocopy of the checklist and review it thoroughly before you start. During the migration procedure, check off each item in the checklist as you complete it to ensure you stay on track.

This chapter references the following chapters in this guide:

- Chapter 1, “Getting started”
- Chapter 4, “Server software”
- Chapter 5, “Coresident client software”
- Chapter 7, “Installing and uninstalling PEPs and Service Update packs”
- Chapter 15, “Backing up data”
- Chapter 16, “Restoring data”
- Chapter 14, “Tools and troubleshooting”

Migration checklist

Introduction

Use the following checklist to ensure that you perform all the required steps for platform migration. Make a photocopy of the checklist and keep it with you while you work.

The checklist is broken into several parts; each part corresponds to a different section in this chapter:

1. Preparing for migration (perform these steps in advance of the migration date)
2. Collecting information from the original server
3. Preparing the new server or reconfiguring the existing server
4. Completing the migration

How to use the checklist

Here are some important points to keep in mind when using this checklist:

- The checklist contains each main step you must perform to prepare for and complete a migration. The order in which you complete certain steps is critical, so do not change the order of the steps unless the instructions in this chapter provide you with that option.
- Each step in the checklist provides a page reference to the procedure you need to complete that step. Most of these procedures are in this chapter, and they appear in chronological order according to the checklist. However, certain procedures are in other chapters in this guide, so ensure you have a complete copy of the guide on site.

Step	✔
Preparing for migration **Note:** Perform these steps in advance of the scheduled migration date.	
Step 1. Read the "Overview of migration" See "Overview of migration" starting on page 462 of this chapter.	
Step 2. Check for additional documentation. For instructions, see page 467.	
Step 3. Make sure you have the required Windows 2000 knowledge and documentation. For instructions, see page 467.	
Step 4. Gather the materials required for migration. For instructions, see page 468.	
Step 5. Investigate and resolve any tape drive compatibility issues. For instructions, see page 469.	
Collecting information from the original server	
Step 6. Install the latest Service Update pack and any required PEPs on the original server. For instructions, see page 471.	
Step 7. Export client data from the existing coresident client (if required). For instructions, see page 472.	
Step 8. Create a Platform Recovery Disk on the original server. For instructions, see page 472.	
Step 9. Create a Voice Services backup disk on the original server (if required). For instructions, see page 475.	

Step	✔
Step 10. Check the disk partition configuration on the original server. For instructions, see page 475.	
Step 11. Check the Windows 2000 version on the original server. For instructions, see page 477.	
Step 12. Check the RAM size on the original server. For instructions, see page 478.	
Step 13. Check the Symposium Express Call Center version on the original server. For instructions, see page 478.	
Preparing the new server	
Step 14. Configure the operating system and drives on the new server. For instructions, see page 485.	
Completing the migration	
Step 15. Perform a platform compliance check on the new server. For instructions, see page 489.	
Step 16. Install the product software on the new server. For instructions, see page 491.	
Step 17. Apply the latest Install-time PEP on the new server. For instructions, see page 491.	
Step 18. Import database information from the Platform Recovery Disk. For instructions, see page 492.	

Step	✔
Step 19. Install the product database on the new server. For instructions, see page 492. **Note:** If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.	
Step 20. Perform a database integrity check on the original server. For instructions, see page 492.	
Step 21. Back up the original server’s database. For instructions, see page 493.	
Step 22. Restore the original server’s database to the new server. For instructions, see page 497.	
Step 23. Perform a database integrity check on the new server. For instructions, see page 504.	
Step 24. Configure the new server’s software and database. For instructions, see page 504.	
Step 25. Apply the latest Service Update pack and any required PEPs to the new server. For instructions, see page 505.	
Step 26. Restore the Voice Services database and configuration data to the new server (if required). For instructions, see page 505.	
Step 27. Install pcAnywhere on the new server. For instructions, see page 506.	
Step 28. Connect the new server to the network. For instructions, see page 506.	

Step	✔
Step 29. Install the coresident client on the new server (and import client data, if required). For instructions, see page 506.	
Step 30. Back up data on the new server. For instructions, see page 507.	
Step 31. Determine whether you need to expand your database. For instructions, see page 507.	

Overview of migration

Introduction

Platform or server migration is a process whereby the data residing on a server's hard disk is copied onto a second server. The primary reasons to perform a platform migration are

- to recover data in the event of a hardware failure
- to change to a different server with increased capacity

To perform platform migration, you must back up the database information from the original server, prepare the new server so that it can operate in a manner similar to the original server, and restore the data to the new server.

This process allows you to remove a server from the network and quickly replace it with another server.

Note: This guide covers platform migration procedures only for those servers that are already running Release 4.2 of Symposium Express Call Center software. If your server is running an earlier release of Symposium Express Call Center software, see Chapter 9, "Converting from server Release 2.0 or 3.0 to Release 4.2."

Supported servers

Release 4.2 of Symposium Express Call Center supports only the Platform Vendor Independence (PVI) server platform. This can be any third-party server running the Windows 2000 Server or Windows 2000 Advanced Server operating system that meets Nortel Networks' minimum recommended hardware requirements. For information on requirements for Platform Vendor Independence, see "Customer-supplied equipment and data requirements" on page 28.

Drive partition requirements on the new server

To perform a migration, the new Platform Vendor Independence server must have either the same number of database drive partitions as the original server, or a greater number. As well, the drive partitions must be the same size as or larger than those on the original server. For more information, see "Understanding disk partitioning requirements on the new server" on page 483.

Assumptions

The platform migration process is based on the following assumptions:

- The new Symposium Express Call Center platform will run the same version of the Windows 2000 operating system as the original server.
- The new Symposium Express Call Center platform will run the same software release as the original server. It will also have the same Service Update pack and Performance Enhancement Package (PEP) levels installed.
- The new platform will be installed with the exact same configuration and setup as the original platform, including the following elements:
    - computer name (see note below)
    - keycode (see note below)
    - M1/CSE 1000 serial number
    - site name
    - network IP setup for both ELAN and CLAN (see note below)
    - switch name
    - switch IP address
    - voice connectivity
    - company name (see note below)
    - customer name (see note below)

    Note: The new server and original server do not necessarily have to have the same computer name, keycode, ELAN and CLAN IP addresses, company name, or customer name. For example, you may want to purchase a new keycode to upgrade features on the new server, or you may want to assign a different IP address to the CLAN. However, this guide assumes that these configuration details are the same on both the original and new servers.

- All drives on the new platform must be partitioned to meet the requirements for a Platform Vendor Independence server. The partitioned drive size on the new server should be approximately the same as or larger than the original server. (The new drive size can be slightly smaller than that on the original server.)
- The latest Service Update packs and Product Enhancement Packages (PEPs) for Release 4.2 of Symposium Express Call Center must be applied to both the original and new platforms. They may contain important enhancements related to platform migration.
- The database backup feature must be functioning on the original platform.
- To perform a platform migration, the installer must have advanced technical knowledge of
  - the Microsoft Windows 2000 operating system
  - hardware installation and maintenance for the hardware platforms involved
  - Symposium Express Call Center installation and maintenance

Performing a database integrity check ahead of time

Before you take a backup of the database on your original server, Nortel Networks highly recommends that you perform a database integrity check on the database. This check captures any problems with the integrity of the database before you take the backup. The utility required to perform this check is part of the Symposium Express Call Center software.

A database integrity check, however, can take from 30 minutes to 3 hours, and it requires you to bring down the services on the server for the duration of the check. Therefore, to reduce the amount of down-time for the server on a given day, you may want to perform the database integrity check ahead of time (for example, on the day before you back up the database). You should schedule the check as close as possible to the database backup time.

For step-by-step procedures, see “Performing a Database Integrity Check” on page 600.

Dealing with pegging data during platform migration

During the migration procedure, you must create a backup of your original server’s database. You can do this while the call center is in full service. However, if the call center continues to respond to calls after the database backup, then some call pegging data will be missing between the database backup of the original server and the restored database of the new server. If you must transfer pegging data to the new server, Nortel Networks recommends that you either

- take the original server out of service immediately after the database backup and keep it out of service during the entire migration procedure
- take the original server out of service after the migration is complete, back up the original database, and restore it on the new server before bringing the new server into service

Preparing for migration

Introduction

There are a number of steps you can do ahead of time to plan and prepare for migration.

The following list summarizes the procedures you must complete in this section:

- Step 1. Read the “Overview of migration”
- Step 2. Check for additional documentation
- Step 3. Make sure you have the required Windows 2000 knowledge and documentation
- Step 4. Gather the materials required for migration
- Step 5. Investigate and resolve any tape drive compatibility issues

  Note: This step is applicable only if you are using a tape drive to back up and restore your database. If you are using a remote directory, then you do not need to perform this step.

Step 1. Read the “Overview of migration”

The section “Overview of migration” on page 462 contains information on a number of topics you need to understand before performing a migration. Be sure to read this section carefully.

Step 2. Check for additional documentation

Before performing a migration, check for the Distributor’s Technical Reference (DTR), any Installation Addenda, and any updated customer documentation on your regional Symposium Express Call Center technical web site. Refer to the web site at http://www.nortelnetworks.com (for end customers), or http://www.nortelnetworks.com/prd/picinfo/ (for distributors). These documents may contain important information regarding conversion or migration that is not in this guide.

Step 3. Make sure you have the required Windows 2000 knowledge and documentation

You must be prepared to install and configure the Windows 2000 Server or Windows 2000 Advanced Server operating system during conversion. This guide provides guidelines and tips for this activity, but it does not provide step-by-step instructions for all procedures. To ensure that you are prepared, review Section A: “Configuring the operating system” on page 99. Make sure you are able to perform the installation and configuration steps listed there, and make sure you have the relevant Microsoft documentation.

Step 4. Gather the materials required for migration

You must have the following materials available before starting the migration process:

Item	Purpose and details
a tape drive and associated driver software **Note:** These items are optional. If you are using a remote directory to back up and restore your database, you do not need them.	Use these items to back up the database on the original server and restore it on the new server. **CAUTION** **Risk of database restoration error** The database backup that you make on the original server must be compatible with the tape drive subsystem on the new server (driver software, tape drive, and tape media). Otherwise, you cannot restore your database. For more information, see "Step 5. Investigate and resolve any tape drive compatibility issues" on page 469.
blank tapes or data cartridges **Note:** These items are optional. If you are using a remote directory to back up and restore your database, you do not need them.	During the platform migration, you need a blank tape to store the original server's database using the database backup procedure. The blank tape must be the correct type for the tape drive you are using on both servers; the tape capacity must be large enough to contain the database backup.
two blank preformatted disks	You need one disk to create a Platform Recovery Disk that contains the original server's setup record and database configuration. If your original server has the Voice Services feature, you need a second disk to create a Voice Services database and configuration backup.

Item	Purpose and details
Symposium Express Call Center software for Release 4.2	You must install the Release 4.2 version of Symposium Express Call Center software on the new server. This includes the following installation disks: ▪ Server Application CD-ROM containing the Symposium Express Call Center server installation software and the Platform Compliance Check utility ▪ Client Application CD-ROM containing the Symposium Express Call Center client installation software ▪ Server Supplementary CD-ROM containing any additional software components required for Symposium Express Call Center to operate, such as Service Update packs and Performance Enhancement Packages (PEPs) ▪ pcAnywhere Release 10.5 Host-Only CD-ROM (NTJK08AA)
Windows 2000 operating system	If your new server does not have the Windows 2000 Server or Windows 2000 Advanced Server operating system installed, or if you are converting within the same server, you must do a fresh installation of the operating system. Make sure you have the documentation provided by Microsoft available on site when you are configuring the operating system.

Step 5. Investigate and resolve any tape drive compatibility issues

Note: This section applies only if you are using a tape drive to back up and restore your database. If you are using a remote directory, you can skip this step.

When you perform a platform migration, you must create a database backup of your original server and restore it on the new server. If you choose to back up and restore your database using a tape drive, rather than a remote directory, be aware of potential compatibility problems. Before creating the backup, you must ensure that the tape drive and driver software on your new server can read the data on the backup tape from the original server. Otherwise, you cannot restore your database and the migration fails.

To determine whether you have compatibility problems, you must check the tape drive hardware and the driver software on both the original and new server. You may need to replace the tape drive, or upgrade the driver software, or both. Use the table below to understand the compatibility requirements and what your options are to achieve compatibility before you create the backup on the original server. Make sure you have resolved the compatibility issues before you start the migration procedures in this chapter.

<table>
<tr><th>Requirements for compatibility</th><th>Options for achieving compatibility</th></tr>
<tr><td>The driver software on the original server must be able to write a format that is readable by the driver software on the new server.</td><td>Check the drivers you plan to use on both the original and new servers and make sure they write a compatible format.

Note: If there are incompatibilities, you may receive the following message when trying to restore the database on the new server:

<code>Unable to retrieve backup name.</code></td></tr>
<tr><td>The tape drive hardware must be compatible with both the original server and the new server. In other words, the tape media you use to create the database backup on the original server must be readable in the new server’s tape drive.</td><td>If your original server and new server do not have compatible tape drives and tape media, one option is to use the same physical tape drive hardware on both the original server and the new server to perform the backup and restore.

For example, you can use the original server’s tape drive on both the original server and the new server for the duration of the migration. The tape drive replacement is temporary and required for the migration procedure only. Save the new server’s tape drive and its driver software disks for reinstallation into the new server later on.

For information on replacing a tape drive, refer to the maintenance guide for your hardware platform.</td></tr>
<tr><td>The driver software installed on the new server must be compatible with Windows 2000.</td><td>Make sure driver software that is compatible with Windows 2000 is
available for the tape drive(s) you are using to restore your database
installed on the new server</td></tr>
</table>

Collecting information from the original server

Introduction

The new server must use the same base configuration information as the original server. This section shows you how to obtain the required information from the original server before starting the platform migration process.

The following is a summary of the procedures you must complete in this section:

- Step 6. Install the latest Service Update pack and any required PEPs on the original server
- Step 7. Export client data from the existing coresident client (if required)
- Step 8. Create a Platform Recovery Disk on the original server
- Step 9. Create a Voice Services backup disk on the original server (if required)
- Step 10. Check the disk partition configuration on the original server
- Step 11. Check the Windows 2000 version on the original server
- Step 12. Check the RAM size on the original server
- Step 13. Check the Symposium Express Call Center version on the original server

Step 6. Install the latest Service Update pack and any required PEPs on the original server

Ensure that the latest Service Update pack and any required PEPs are applied to the original server. These may include enhancements that you require to perform platform migrations.

You should first check which PEPs and Service Update packs are already installed on the server, and then record them in the “Service Update pack and PEP level worksheet” on page 481. Then go to the web site for the Meridian PEP Library to see if there is a more recent Service Update pack or any required PEPs. If so, install them and add them to the worksheet.

For more detailed instructions on viewing and installing PEPs and Service Update packs, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Step 7. Export client data from the existing coresident client (if required)

If your coresident client has user-created and user-defined reports that you wish to retain after you migrate the server, you must export these reports to a safe location. For instructions, see “Exporting client data” on page 719. Later in the platform migration procedure, you must import these reports to the new coresident client on the server PC.

Step 8. Create a Platform Recovery Disk on the original server

When you create a Platform Recovery Disk, the system saves both server and database configuration data into a series of text files.

You can create a Platform Recovery Disk on either a floppy disk or a remote directory on a network computer. Remember that if you decide to create a Platform Recovery Disk on a remote directory, you must establish a network connection from the new server to the remote directory to import the information later in this procedure.

Even if you have an existing Platform Recovery Disk available, make sure you create a new one after installing the latest PEPs and SUs described in Step 6.

Note: If you want to use a network computer, you must first map the directory on the network computer to a network drive on your server.

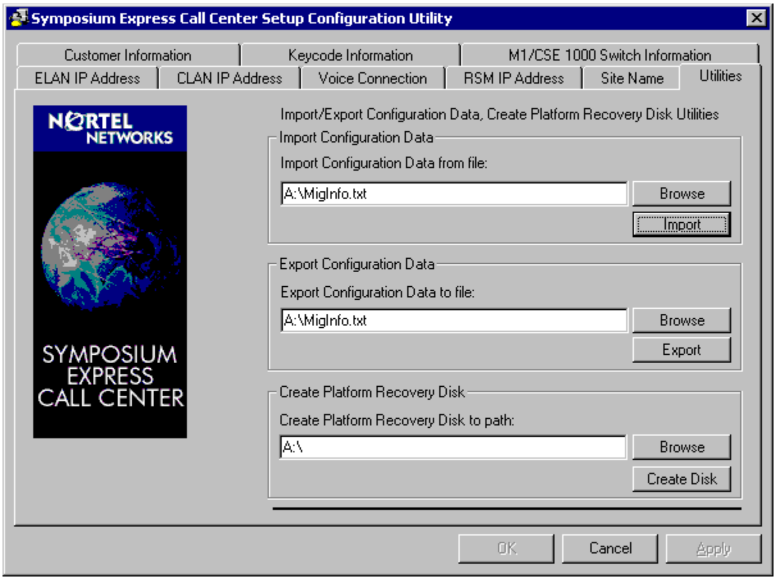
To create a Platform Recovery Disk

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Symposium Express Call Center Setup Configuration Utility dialog box appears.

3 Click the Utilities tab to display the following:



4 In the Create Platform Recovery Disk section, do one of the following:

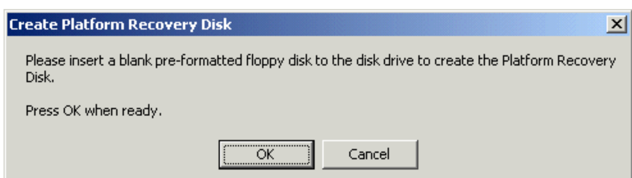
- If you want to create a Platform Recovery Disk on a floppy disk:

  a. Make sure the path shows A:\.

  b. Insert a blank floppy disk in drive A.

  c. Click Create Disk.

  Result: The following message appears:



  d. Click OK.

- If you want to create a Platform Recovery Disk in a directory on a network computer:

  a. Make sure you have mapped a network drive to the remote directory in which you want to save the Platform Recovery Disk.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

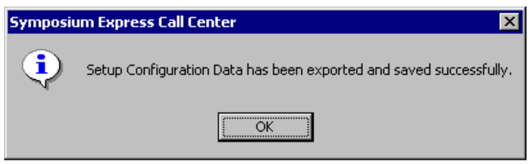
b. Click Browse and navigate to the mapped drive.

c. Select the directory, and then click OK.

Result: The drive you selected appears to the left of the Browse button.

d. Click Create Disk.

Result: The system exports files containing the server's setup record and database configuration to the disk or remote directory. When the process is complete, the following dialog box appears:



Note: The system also checks for database segmentation problems. If it finds any problems, it displays a message indicating the type of problem.

- If the system finds a database *data* segmentation overlapping problem, then it advises you to contact Nortel Networks customer support before proceeding. After customer support fixes the problem, you must create a new Platform Recovery Disk before proceeding.
- If the system finds a database *log* segmentation overlapping problem, then you can still use the Platform Recovery Disk that you have just created. The system prompts you to shut down the Symposium Call Center Server services so it can fix the problem. Follow the on-screen prompt to shut down the services.

5 Click OK. If you used a floppy disk, remove it from the drive, and make sure it is labeled clearly.

6 Close the Symposium Express Call Center Setup Configuration Utility window.

Step 9. Create a Voice Services backup disk on the original server (if required)

If your original server has the Voice Services feature, you must create a backup of the Voice Services database and configuration information on a disk. This data includes Voice Services treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on). For instructions, see "Performing a Voice Services database and configuration backup" on page 712. Later in the platform migration procedure, you must import this data to the new server.

Step 10. Check the disk partition configuration on the original server

You must record the disk partition configuration of the original server so you can use it to determine how to partition your new server.

Once you have recorded this information, make sure that your new server has adequate drive space to create the partitions you need. For information on the requirements for partitioning drives, see "Understanding disk partitioning requirements on the new server" on page 483.

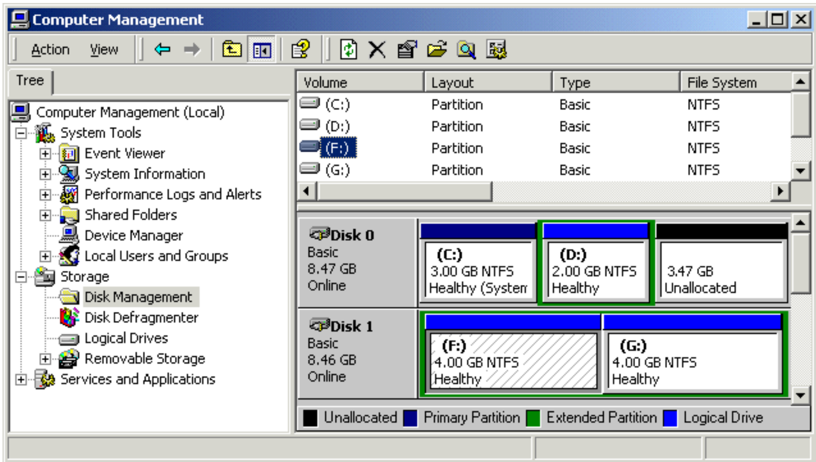
To check the disk partition configuration on the original server

1 From the Windows Start menu, choose Programs → Administrative Tools → Computer Management.

Result: The Computer Management window appears.

2 In the left pane, click Disk Management.

Result: The disk configuration appears in the right panel.



3 Record the following information on the “Disk partition configuration worksheet” on page 481:

- the displayed disk number
- the logical disk drive letter assignments
- the size of each partitioned disk

4 Close the Computer Management window.

5 Ensure that the new server has enough disk space to create the required partitions, as described in “Understanding disk partitioning requirements on the new server” on page 483.

The following table presents an example only of disk partition information and how it appears in the worksheet:

Disk number	Disk drive letter assignment	Disk partition size
Disk 0	C	3 Gbytes NTFS
Disk 0	D	2 Gbytes NTFS
CD-ROM 0	E	n/a
Disk 1	F	4 Gbytes NTFS
Disk 1	G	4 Gbytes NTFS

Step 11. Check the Windows 2000 version on the original server

Before you install the new server with Symposium Express Call Center software, the new platform must be installed with the same version of the Windows 2000 operating system as the original server. If needed, repartition all drives and reinstall the operating system again on the new server. See the maintenance guide for your hardware platform.

Notes:

- Symposium Express Call Center Release 4.2 software requires Windows 2000 Server or Windows 2000 Advanced Server. Other versions of Windows 2000, such as Windows 2000 Professional and Windows 2000 Datacenter, are not supported.
- Symposium Express Call Center requires, at a minimum, Windows 2000 Service Pack 2.
- Nortel Networks normally supports the currently available Service Pack. To find out which Service Packs have been verified for use with Symposium Express Call Center, contact your Nortel Networks customer service representative.

To check the Windows 2000 version on the original server

1 Open Windows Explorer.

2 In the Explorer window, choose Help → About Windows.

Result: The About Windows dialog box appears.

3 Record the Windows 2000 version and Service Pack version on the "Windows 2000 version worksheet" on page 482.

4 Click OK to close the window.

Step 12. Check the RAM size on the original server

The total physical RAM of the new server must meet the requirements for a Release 4.2 PVI server, and it must be at least as large as the RAM on the original server.

To check the RAM size on the original server

1 From the Windows Start menu, choose Settings → Control Panel, and then double-click the System icon.

Result: The System Properties property sheet appears, with the General tab displayed.

2 Record the RAM size on the "RAM size worksheet" on page 482.

3 Close the System Properties property sheet and any other open windows.

Step 13. Check the Symposium Express Call Center version on the original server

The new server must have the same software release version as the original server.

To check the Symposium Express Call Center software version on the original server

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Feature Report.

Result: The System tab appears.

2 Record the Symposium Express Call Center version on the “Symposium Express Call Center software version worksheet” on page 482.

Ensure that you obtain the correct version of the software CDs for installation on the new server.

Worksheets for collecting original server information

Introduction

Make photocopies of these worksheet pages, and use them to record original server information for migration.

Service Update pack and PEP level worksheet

Item	Fill in the required information
Service Update ID	
Service Update date	
Service Update version	
PEP ID	
PEP Version	
PEP Update Date and Time	
PEP ID	
PEP Version	
PEP Update Date and Time	
PEP ID	
PEP Version	
PEP Update Date and Time	

Disk partition configuration worksheet

Disk number	Disk drive letter assignment	Disk partition size

Disk number	Disk drive letter assignment	Disk partition size

Windows 2000 version worksheet

Item	Fill in the required information
Windows 2000 version	
Service Pack version	

RAM size worksheet

Item	Fill in the required information
RAM size	

Symposium Express Call Center software version worksheet

Item	Fill in the required information
Symposium Express Call Center version	

Preparing the new server

Introduction

This section explains how to prepare the base configuration of your new server before you install Release 4.2 of Symposium Express Call Center and restore your database. The base configuration includes the operating system configuration and disk partitioning.

You must complete the following procedure in this section:

- Step 14. Configure the operating system and drives on the new server

Understanding disk partitioning requirements on the new server

The following list outlines the requirements for the disk partitions on your new server:

- The new server must have the same or a greater number of drive partitions that contain the database device files as the original server.

  Note: The database files begin on drive F and can expand into additional drives (G, H, I, and so on).
- The drive partitions must be the same size as or larger than those on the original server.
- The disk partition configuration must meet the requirements for a Release 4.2 PVI server, including the minimum size requirements. For details, see “Drive partitioning for the server PC” on page 32.

Use the following example and the “Disk partition configuration worksheet” on page 481 to help you understand how your new server’s disks should be partitioned.

Disk partitioning example

The new server should have at least as many partitions as the original server. For example, if the original server has partitions C, D, F, and G, then the new server must have at least partitions C, D, F, and G. You can use additional new database partitions.

Original server's drives and partitions	New server's drives and partitions
C (operating system, coresident client software for Symposium Express Call Center, and pcAnywhere)	C (operating system, coresident client software for Symposium Express Call Center, and pcAnywhere)
D (server software for Symposium Express Call Center)	D (server software for Symposium Express Call Center)
F (database)	F (database)
G (database)	G (database)

Step 14. Configure the operating system and drives on the new server

Complete the following steps to ensure that your new server is correctly configured before proceeding with the migration. This process involves installing the same version of the Windows 2000 operating system and the same Windows 2000 Service Pack as are installed on the original server. It also involves partitioning the disks on the new server.

To configure the operating system and drives on the new server

1 Review the list of requirements for a Release 4.2 PVI server, and ensure that the new server can meet each requirement. For more information, see “Customer-supplied equipment and data requirements” on page 28.

2 If you are using a tape drive rather than a network computer to back up and restore your database, make sure the new platform is equipped with a tape drive and driver software that is compatible with that of the original server. If it is not compatible, then remove the tape drive and install a compatible drive and its driver software on the new platform.

CAUTION

Risk of database restoration failure

The database backup you make on the original server must be compatible with the tape drive subsystem on the new server (driver software, tape drive, and tape media). Otherwise, you cannot restore your database. For more information, see “Step 5. Investigate and resolve any tape drive compatibility issues” on page 469.

If you are moving the original platform’s tape drive to the new platform, ensure that the database backup of the original platform is complete before you remove the drive.

3 Ensure that the new platform is disconnected from the network of the original platform (both ELAN and CLAN). The new platform should remain disconnected until the migration procedure is completed.

Note: If your database backup is on a remote directory, you need a temporary network connection to restore the database to the new server. To understand options for this network connection, see “Remote directory considerations” on page 494.

4 Ensure that drive C on the new server is installed with the same version of the Windows 2000 operating system and service packs as the original server. Refer to your entries on the “Windows 2000 version worksheet” on page 482. Ensure that the operating system is configured correctly for Symposium Express Call Center. For details, see Section A: “Configuring the operating system” on page 99. Use the Windows 2000 setup utility to

- delete any existing partitions on your new server)
- create a new drive C partition on which to install the Windows 2000 operating system
- configure the LAN network cards with the same network IP configuration (for example, IP address, subnet mask, default gateway, and so on) as on the original server. Refer to the TCP/IP parameter information in the MigInfo.txt file on the Platform Recovery Disk.

  Note: It is important that you disconnect the new platform from the network of the original platform (both ELAN and CLAN) before making the IP configuration change; otherwise, a duplicate IP error can occur and stop the original platform from normal operation. On the new server, you can use a different computer name and different IP addresses than on the original server. However, Nortel Networks recommends that you use the original server’s computer name and IP addresses (CLAN and ELAN) on your new server. Refer to the information in the MigInfo.txt file on the Platform Recovery Disk.

- Make sure that the new computer has at least as much RAM as the original computer. Check that the Virtual Memory allocation (swap file) on the new server is RAM size times 1.5. Set both the initial and maximum size to this value. Refer to your entries in the “RAM size worksheet” on page 482.

5 Ensure that all remaining disks are installed and partitioned properly depending on the server type. Refer to the information you entered in the “Disk partition configuration worksheet” on page 481, and the examples in “Understanding disk partitioning requirements on the new server” on page 483. Correct any non-compliant disk partitioning configuration on the new server by repartitioning the disk drive, reassigning drive letters, or replacing the server with a new platform that meets the requirements.

Note: If you have RAID on your new server, follow the guidelines supplied with your system to ensure the RAID is configured correctly and that any required administration utilities are installed. The RAID software is platform-specific and is installed differently for each platform.

6 Restart the new server to activate all the changes.

Note: It is normal for the Windows operating system to disable the network card if it is disconnected from the network. Ignore this warning and continue with the migration procedure.

Completing the migration

Introduction

When the base configuration of your new server is complete, you can perform all the steps to complete the migration to the new server.

The following is a summary of the procedures you must complete in this section:

- Step 15. Perform a platform compliance check on the new server
- Step 16. Install the product software on the new server
- Step 17. Apply the latest Install-time PEP on the new server
- Step 18. Import database information from the Platform Recovery Disk
- Step 19. Install the product database on the new server
- Step 20. Perform a database integrity check on the original server
- Step 21. Back up the original server's database
- Step 22. Restore the original server's database to the new server
- Step 23. Perform a database integrity check on the new server
- Step 24. Configure the new server's software and database
- Step 25. Apply the latest Service Update pack and any required PEPs to the new server
- Step 26. Restore the Voice Services database and configuration data to the new server (if required)
- Step 27. Install pcAnywhere on the new server
- Step 28. Connect the new server to the network
- Step 29. Install the coresident client on the new server (and import client data, if required)
- Step 30. Back up data on the new server
- Step 31. Determine whether you need to expand your database

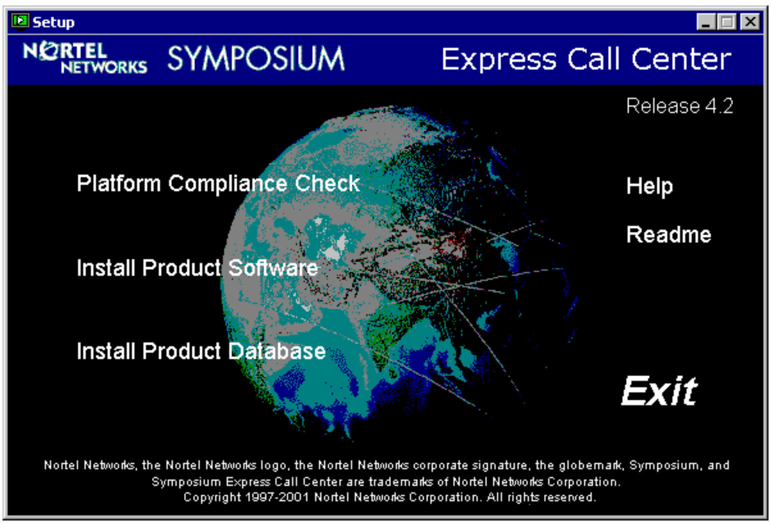
Step 15. Perform a platform compliance check on the new server

Before installing the Symposium Express Call Center software, you must ensure that your server meets the requirements for a Platform Vendor Independence (PVI) server. The Server Application CD includes a program that you can run to check your server's basic compliance and identify any problems, such as the wrong operating system or incorrect disk partitioning. *Not all requirements for Platform Vendor Independence are checked.*

To perform a platform compliance check

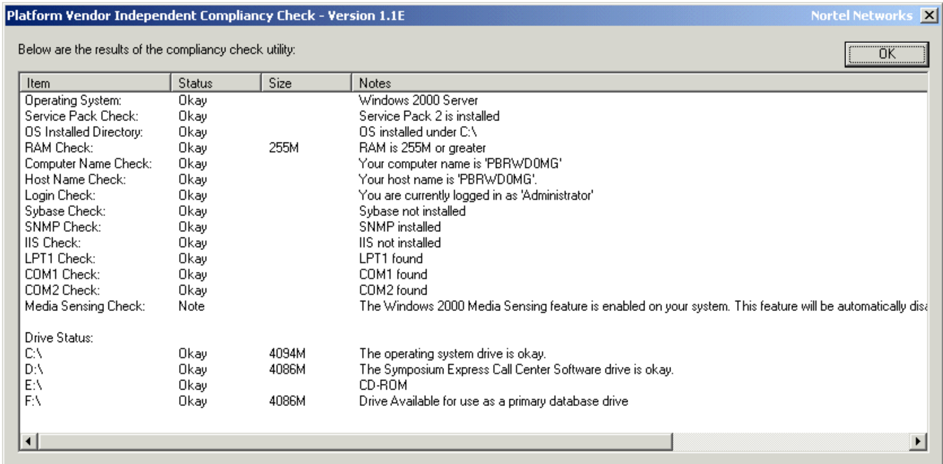
1. Log on to the server as **Administrator**.
2. Insert the Server Application CD and wait for it to autorun.

   Result: The Setup main menu appears.



3. Click Platform Compliance Check.

   Result: The system checks your server to ensure it meets certain requirements for a PVI server. The results appear in a window similar to the one shown below. If your server is compliant, the Status column shows Okay beside all items listed. For any non-compliant items, the Status column shows Error, and the Notes column provides information about the PVI requirement.



4 Do one of the following:

- If all items show the Okay status, your system has passed the compliance check. Click OK to exit from the Platform Vendor Independent Compliancy Check dialog box.

  Result: The platform compliance check has completed successfully.

- If any items show the Error status:

  a. Take note of the non-compliant items and the related information in the Notes column.

  b. Click OK to exit from the Platform Vendor Independence Compliancy Check dialog box.

  c. Correct the problems so that the server is compliant. For more information on PVI requirements, see “Minimum hardware specifications for the server PC” on page 30.

  d. Rerun the platform compliance check. If you had to restart the server to correct a non-compliance, go back to step 1. If you did not have to restart, go back to step 3.

Note: If your server does not have a COM2 port configured, the utility shows the following text in the Notes column for COM2 Check:

```
COM2 not found. When your server is fully installed
and configured, please manually stop and disable the
MAS LinkHandler Port #2 service from the Services
applet.
```

In this case, once you have completed the installation, you must follow the procedure “To disable the MAS LinkHandler service” on page 651.

Step 16. Install the product software on the new server

Once you have verified the base configuration of your system, you can proceed to install the Symposium Express Call Center server software. Follow the procedure in “Installing the product software (phase 1)” on page 147 in Chapter 4, “Server software.”

Note: When you have installed the software, do not continue to the next procedure in the referenced chapter. Instead, return to this chapter and continue to the following procedure.

Step 17. Apply the latest Install-time PEP on the new server

Apply the latest Install-time PEP. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue through the next steps.

Note: The latest Install-time PEP is critical for installation and conversion.

The latest Install-time PEP is available on the Supplementary CD-ROM and from the Meridian PEP Library web site.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

For instructions on installing PEPs, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Then continue to the following procedure.

Step 18. Import database information from the Platform Recovery Disk

Once the server software is installed, you must import database information from the original system from a current Platform Recovery Disk.

For instructions, see “Importing database information from a Platform Recovery Disk” on page 765. Then continue to the following procedure.

Step 19. Install the product database on the new server

Before you can restore the database on your system, you must first install and initialize the database software. Follow the procedure in “Installing the product database (phase 2)” on page 150 in Chapter 4, “Server software.”

When you have installed the product database, do not continue to the next procedure in the referenced chapter. Instead, return to this chapter and continue to the following procedure.

Note: If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.

Step 20. Perform a database integrity check on the original server

ATTENTION

Before performing the database integrity check, make sure there are no active Symposium Express Call Center client connections to the server on which you are performing the check. If client PCs connect to the server while the check is running, errors may result and you may need to perform the check again.

To ensure the integrity of the databases on the original server, Nortel Networks recommends that you perform a database integrity check before creating a backup of your database. This step is highly recommended to capture any database consistency problems that may halt migration.

Remember that a database integrity check can take from 30 minutes to 3 hours, and it requires you to bring the services down on the original server during the duration of the check. You can perform the check ahead of time, but make it as close as possible to the time of the database backup.

For instructions, see “Performing a Database Integrity Check” on page 600. Then continue to the following procedure.

Step 21. Back up the original server’s database

You must take a backup of the database of the original server so that you can restore it on the new server.

The original server remains online while the database is backed up. However, you should consider the following information before you proceed with the backup:

- An online backup adds an additional load to the server and reduces overall call center performance. Nortel Networks recommends that you perform backups during non-peak traffic hours. Do not change any call center configuration or user setup information during the database backup operation.
- If your server continues to receive calls after the backup, some call statistics and data pegging will be missing from the backup. If it is important that all call statistic and data pegging be migrated to the new server, take the original server offline immediately following the database backup. Ensure that the original server remains offline until all data has been successfully migrated to the new server. You must collect all call statistics and data pegging before the original server is removed from service.

For a listing of the variables that can affect the speed of your backup and restore, see “Variables affecting backup and restore speed” on page 664.

Options for database backup and restore

You can back up and restore your database using either a tape or a remote directory on a network computer. Consider the following information before you choose your backup option:

Remote directory considerations	You need a network connection from both your original server and your new server to back up and restore your database from a remote directory. If your servers have both CLAN and ELAN network interface cards, use the CLAN connection for the remote backup and restore. This way, the original server can remain online during the backup. If your servers have only an ELAN card, consider the following options for obtaining a temporary network connection during the backup and restore: ■ Reconfigure the ELAN card with a CLAN IP address to connect the server to the customer network. ■ Disconnect the ELAN card from the switch and connect it to a temporary server via a hub, creating a local LAN. If you use the ELAN card to back up your original server, your call center must be shut down for the duration of the backup, since it must be disconnected from the switch.

Remote directory considerations (continued)	To restore the database from a remote directory to the new server, you must establish a network connection between the new server and the network computer containing the remote directory. Since both the original server and the new server have the same TCP/IP configuration, you cannot have both servers connected to the network at the same time. This can cause a duplicate IP error to occur and stop the original server from normal operation. To avoid this, you have the following options for obtaining a network connection on the new server to restore the database: 1. If you are using the CLAN as your network connection to restore the database: ■ you can bring down the services on the original server, and then disconnect the CLAN from the network. Then connect the CLAN on the new server to the network for the database restore. This means that the original server will be out of service for the remainder of the conversion. ■ to keep both the original and new server online, you can temporarily change the computer name and the IP configuration for the CLAN on the new server so that you can temporarily connect to the network. This way, the original server can remain online and operational during the database restore. When the restore is complete, disconnect the new server from the network, and change the computer name and IP configuration for the CLAN back to the correct settings. 2. If you are using the ELAN as your network connection to restore the database, you can reconfigure the ELAN card on the new server with a CLAN IP address to connect the server to the customer network.
Tape drive considerations	If you are backing up your database to a tape, the database backup that you make on the original server must be compatible with the tape drive subsystem on the new server (driver software, tape drive, and tape media). Otherwise, you cannot restore your database. For more information, see “Step 5. Investigate and resolve any tape drive compatibility issues” on page 469.

Decide whether to back up and restore your database using tape or a remote directory. Then follow the relevant procedure below.

To back up the database to tape

1 Make sure the services on the server are up.

Note: A database backup uses the HDM service. If this service is down, the database backup cannot start.

2 Insert a blank tape into the original server's tape drive.

3 From a Symposium Express client, log on to the original server as a Symposium Express Call Center administrator.

4 Perform a database backup on the original server. Follow the instructions in "Performing database backups" on page 694.

5 Once the database backup is complete on the original server, remove the backup tape and save it for the restore of the original server's database on the new server.

6 Check if any events were recorded in the event log on the client PC from which you scheduled the backup. If there are any errors, check the database backup log files on the original server. These files are located at the following paths: C:\Winnt\System32\backup.log and D:\Sybase\ASE-12_0\install\backup.log.

To back up the database to a remote directory

1 Make sure that the original server is connected to the network.

2 Make sure that the remote directory backup option is set up properly on your original server. This involves configuring both the original server and the network computer containing the remote directory to establish a connection between these two computers. For detailed procedures, see "Setting up database backups to a remote directory" on page 679.

ATTENTION

Once you have the setup complete, be sure to check your remote folder configuration by following the guidelines listed in the section "Testing the remote directory backup and restore configuration" on page 688.

3 Perform a database backup on the original server. Follow the instructions in "Performing database backups" on page 694.

4 If your Platform Recovery Disk was created *before* you set up your remote directory backup, create a new one now. This ensures that information on your remote directory settings is included in the Platform Recovery Disk so it can be restored to your computer. For instructions, see “To create a Platform Recovery Disk” on page 472.

Step 22. Restore the original server’s database to the new server

Once you have taken a backup of the original server’s database, you must restore it to the new server. You can restore the database either from a tape or from a remote directory, depending on which of these options you used to create the database backup.

Choose one of the following procedures:

- “To restore the database from a tape backup” below
- “To restore the database from a remote directory backup” on page 499

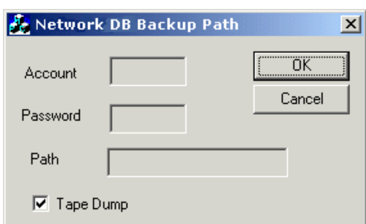
To restore the database from a tape backup

1 Make sure that you are logged on to the new server as **NGenSys**.

2 Make sure that the server is set to restore the database from a tape by doing the following:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

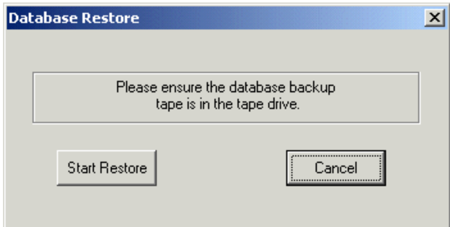
Result: The Network DB Backup Path dialog box appears.



b. Make sure Tape Dump is checked, and then click OK.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears.

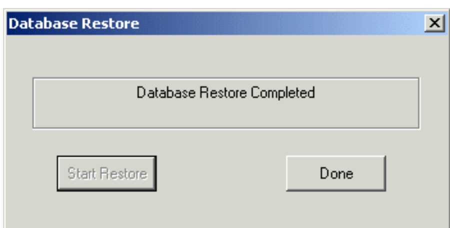


4 Insert the tape containing the database backup.

5 When the tape in the drive stops moving, click Start Restore to begin the database restore process.

Result: The system first shuts down the Symposium Express Call Center services that you have installed. Then the database restore process begins. This can take at least 1 to 3 hours, depending on the amount of data. During this time, the Database Restore window remains visible and displays numerous status messages about the progress of the restore.

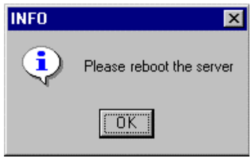
6 Wait until the following message appears:



Note: A log file is created with the following path name after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

7 Click Done.

Result: The following dialog box appears:



8 Eject the backup tape from the tape drive.

9 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem like there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel Networks recommends that you do not restart the server at this time. (You do not need to restart the server until after you configure the server software and database.) Instead, continue to the next procedure according to the checklist you are following.

To restore the database from a remote directory backup

There are a series of procedures you must complete to restore your database from the remote directory you created on the network computer. These are included in the following subsections:

To establish a network connection from the new server to the network computer

Use one of the options in “Remote directory considerations” on page 494 to establish a network connection between your new server and the network computer.

Preparing the Symposium Express Call Center to restore the database from a remote directory

On your new server, you must create a local Windows user account that is identical to the one you created on the network computer. You then add the account to the policy “Log on as a service.” Detailed steps are provided below.

Note: Make sure you have the completed worksheet titled "Worksheet for setting up a remote directory backup" on page 681 available before you continue. You completed this worksheet when you set up the remote directory backup, as per the instructions in the section "Setting up database backups to a remote directory" on page 679. This worksheet contains information about the remote directory that you need during setup of the database restore.

To set up the local Windows user account on the new server

1 Log on to the server as **NGenSys**.

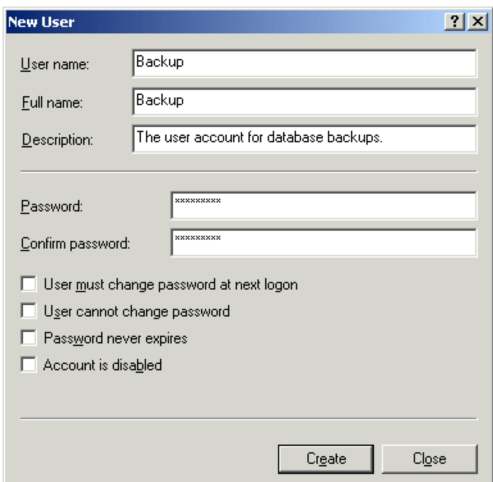
2 From the Start menu, choose Programs → Administrative Tools → Computer Management.

Result: The Computer Management dialog box appears.

3 In the left panel, navigate to Local Users and Groups → Users.

4 Right-click on the Users folder, and then select New User.

Result: The New User dialog box appears.



5 In the User name box, type the name you recorded in the worksheet you filled out. This must be the same user name you assigned to the account on the network computer.

6 In the Password box, type the password you recorded in the worksheet you filled out. This must be the same password you assigned to the account on the network computer.

7 In the Confirm password box, type the password again.

8 Uncheck the check box for User must change password at next logon.

Note: If you do not remove this check mark, the database backup or restore may fail because the server in Symposium Express Call Center may not be able to access the network computer.

9 Click Create.

10 Click Close.

11 In the left panel of the Computer Management window, click the Users folder to display its contents in the right panel.

12 In the right panel, right-click the new user you just created, and then select Properties.

Result: The Properties dialog box for the user appears.

13 Click the Member Of tab.

14 Click Add.

Result: The Select Groups dialog box appears.

15 In the Name column, click Administrators, and then click Add.

Result: The group appears in the bottom list box.

16 Click OK.

17 When the Member Of tab reappears, click Apply, and then click Close.

18 Close all windows that remain open.

To set up the local security settings

1 On the server, select Start → Programs → Administrative Tools → Local Security Policy.

Result: The Local Security Settings dialog box appears.

2 In the left panel, navigate to Local Policies → User Rights Assignment. Click User Rights Assignment to view its contents in the right panel.

3 From the right panel, double-click Log on as a service.

Result: The Local Security Policy Setting dialog box appears.

4 Click Add.

Result: The Select Users or Groups dialog box appears.

5 In the Name column, select the user account that you just created, and then click Add.

Result: The account appears in the bottom list box.

6 Click OK.

7 Click OK to close the Local Security Policy Setting dialog box.

8 Close the Local Security Settings dialog box.

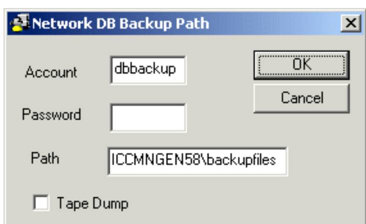
To restore the database from the remote directory

1 Log on to the server as **NGenSys**.

2 Check to ensure that your remote directory settings are correct on your new server. Your remote directory setup from your original server is included in your Platform Recovery Disk and was applied to the new server when you imported the data in an earlier procedure. To check that the import was successful, do the following:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears, containing your remote directory setup information (the information in the boxes below is for example only).



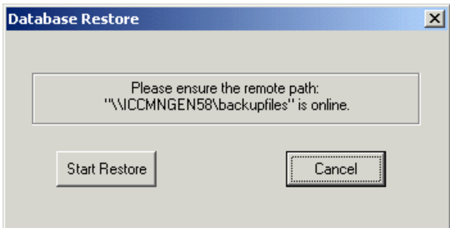
b. Ensure that Tape Dump is unchecked, and check that the boxes in the dialog box are correct for the directory on the network computer containing the database backup files.

Note: For security reasons, you cannot see the password.

c. Click Cancel to close the window.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears, showing the path for the remote directory containing the database files, as in the following example:

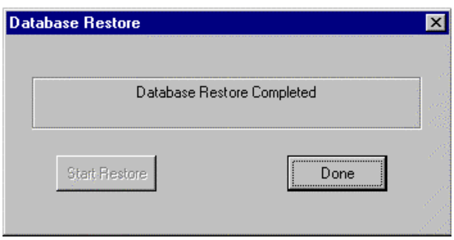


4 Check that the path is correct.

5 Click Start Restore to begin the database restore process.

Result: The database restore process begins. This can take 1 to 3 hours, depending on the amount of data, network traffic, and the CPU speed of the server. During this time, the Database Restore window remains in view and displays numerous status messages about the progress of the restore.

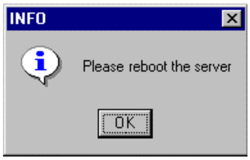
6 Wait until the following dialog box appears, indicating that the restore is complete:



Note: A log file with the following path name is created after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

7 Click Done.

Result: The following dialog box appears:



8 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem as if there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel Networks recommends that you do not restart the server at this time. (You do not need to restart the server until after you configure the server software and database.) Instead, continue to the next procedure according to the checklist you are following.

Step 23. Perform a database integrity check on the new server

To ensure the integrity of the databases after you restore them to the new server, Nortel Networks recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems. Remember that a database integrity check can take from 30 minutes to 3 hours.

For instructions, see “Performing a Database Integrity Check” on page 600. Then continue to the following procedure.

Step 24. Configure the new server’s software and database

Once you have restored the original server’s database on the new server, you must configure the new server’s software and database. You can do this by importing configuration data on the original server’s Platform Recovery Disk into the Server Setup Configuration Utility on the new server. This way, you do not have to enter the data manually. After you import the data, you have the opportunity to make any necessary changes before running the configuration utility. Follow the procedure in “Configuring your server’s software and database by importing configuration data from the Platform Recovery Disk” on page 772 in Chapter 16, “Restoring data.”

Note: When you have completed this configuration procedure, do not continue to the next procedure in the referenced chapter. Instead, return to this chapter and continue to the following procedure.

Step 25. Apply the latest Service Update pack and any required PEPs to the new server

Ensure that the latest Service Update pack and any required PEPs are applied to the new server. Check both the Server Supplementary CD supplied with Release 4.2 software and Nortel Network's Meridian PEP Library web site.

For information on installing Service Update packs or PEPs, see "Installing server PEPs and SUs" on page 278.

Step 26. Restore the Voice Services database and configuration data to the new server (if required)

If your original server has the Voice Services feature, you must restore the Voice Services database and configuration data to the new server using Voice Services backup disk you created on the original server.

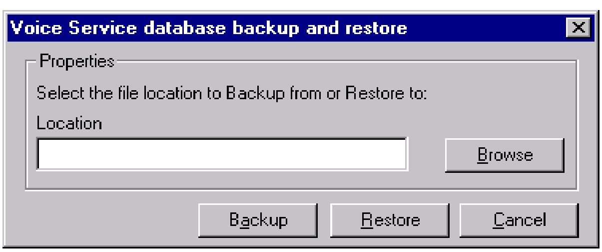
To restore the Voice Services database and configuration data

1 Log on to the server as **Administrator**.

2 Insert the floppy disk that contains the Voice Services database and configuration backup file.

3 From the Windows Start menu, choose VS Database Backup-Restore.

Result: The Voice Service database backup and restore dialog box appears.



4 Click Browse to locate the previously backed up .csv file, and then click Restore.

5 When the system indicates the restore is successful, remove the disk from the drive, and then close the Voice Service database backup and restore dialog box.

Step 27. Install pcAnywhere on the new server

Install pcAnywhere using the instructions in “Installing and configuring pcAnywhere” on page 171.

Step 28. Connect the new server to the network

Connect the new server to the network as follows:

1 Shut down the call center operation and services on the original server. Disconnect the original server from the network.

2 Connect the new server to the network.

3 Restart the new server to begin using the Release 4.2 Symposium Express Call Center software.

4 Verify the proper operation of the Release 4.2 software on the new server.

Step 29. Install the coresident client on the new server (and import client data, if required)

You must install a copy of the client software on the new server in order to administer the server. Follow the instructions in Section A: “Installing a coresident client” on page 209.

If the coresident client on your original server had user-created or user-defined reports, and you completed “Step 7. Export client data from the existing coresident client (if required)” earlier in the migration procedure, you must import those reports to the new coresident client. Follow the instructions in “Restoring client data” on page 761.

Step 30. Back up data on the new server

When the migration is complete, you must make several kinds of backups to ensure you can recover your new server in case you encounter problems.

1. Create a Platform Recovery Disk for the new server if you bypassed this step during the configuration. Without this disk, the server cannot be restored if there is a system failure. See “Creating a server Platform Recovery Disk” on page 716.
2. Back up the new server’s database. See “Performing database backups” on page 694.

   Note: Nortel Networks recommends that you perform a database backup on the new server before putting the server into full service.
3. If you have the Voice Services feature, create a Voice Services database and configuration backup disk on your new Release 4.2 server. See “Performing Voice Services backups” on page 710.

Note: If your server is equipped with RAID, rebuild your RAID drives when you are satisfied with the operation of the new release of Symposium Express Call Center.

Step 31. Determine whether you need to expand your database

Determine whether you need to perform database expansion to increase the amount of available space on your new server for database use. If you have created additional or larger database partitions on your new server, you must use the Database Expansion utility to make use of the extra space.

For information on performing a database expansion, see “Database Expansion utility” on page 584.

ATTENTION

If you expand your database, then you must create a new Platform Recovery Disk afterward. For details, see “Creating a server Platform Recovery Disk” on page 716.

Chapter 12

Using the configuration utilities

In this chapter

Overview

Introduction

In addition to providing descriptions of the types of users in Symposium Express Call Center, this chapter provides the procedures to do the following tasks:

- Log on and log off the system.
- Use the Meridian 1 switch configuration parser to automatically configure Symposium Express Call Center with data from the switch.
- Import switch data to Symposium Express Call Center using the Import Utility.
- Run the Voice Services Configuration utility to import Voice Services card information into Symposium Express Call Center.
- Configure call center users, skillsets, agent assignments, and call presentation classes while offsite using offline mode.
- Import configuration data using the Import Utility.

Section A: Accessing the system

In this section

User types in Symposium Express Call Center

Introduction

This section describes the types of users in the system and their access levels. Symposium Express Call Center requires that users log on by supplying their user ID and password. Each type of user has different system access levels. These access levels are set and cannot be changed.

User access model

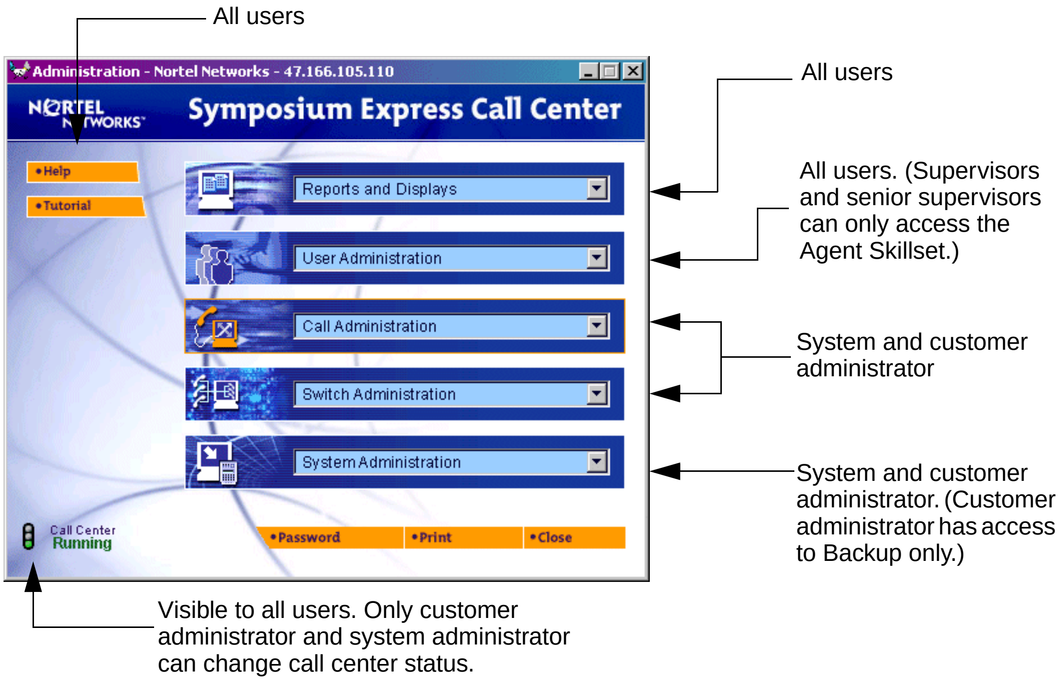
Four types of users are supported on Symposium Express Call Center:

- system administrator (user ID sysadmin)
- customer administrator (user ID custadmin)
- supervisors
- senior supervisors

Note: Agents do not have PC user IDs. They can only log on to their phonesets.

When you install Symposium Express Call Center, the system administrator and customer administrator are created automatically. You must add supervisors and senior supervisors individually.

The following illustration shows the functions that are available to each of these types of users:



Note: Only the menus and menu commands that are available to the logged-on user appear.

System administrator

When you install Symposium Express Call Center, only the system administrator (sysadmin) can log on. This logon ID is intended for the distributor only.

The system administrator has access to every part of the Symposium Express Call Center system, including the Import Utility and Advanced Functions.

Note: The Advanced Functions menu command accesses the system tree.

Customer administrator

The customer administrator (custadmin) has access to all functions except the the Import Utility and Advanced Functions (on the System Administration menu).

Supervisors

Reports and Displays

Supervisors can access all of the functions on the Reports and Displays menu:

- run any report
- use real-time displays to view agents assigned to them

User Administration

Supervisors can view and change properties of agents assigned to them.

Other menus

Supervisors do not have access to the remaining menus, and cannot stop or start the call center.

Senior supervisors

Senior supervisors have access to all of the functions available to a supervisor. In addition, they can

- view real-time displays for agents assigned to other supervisors
- view and change properties for agents assigned to other supervisors

Logging on and off the client

Introduction

You must have a user ID and password to log on to Symposium Express Call Center. To perform the tasks outlined in this guide, you must use the system administrator user ID and password.

The first time you log on to Symposium Express Call Center using a particular user ID, you must change the password for that user ID.

To log on to Symposium Express Call Center client

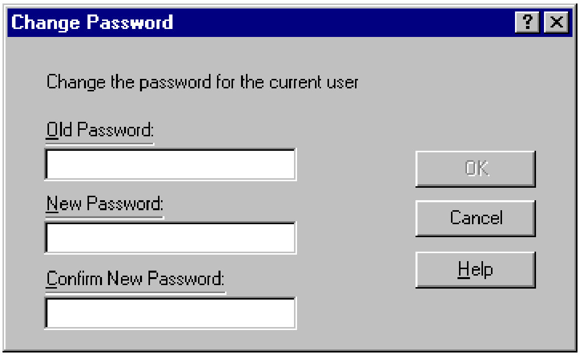
1. From the Start menu, choose Programs → SMI Workbench, and then double-click the server icon in the SMI Workbench folder (or double-click the desktop shortcut, if one is available).
2. In the User ID box, type the user ID assigned to you.

   Note: Your user ID must correspond to the level of configuration you want to perform.
3. In the Password box, type the password assigned to you.
4. Click OK.

   Result: If this is the first time you have used this user ID, the Password Expiry dialog box appears. Otherwise, the Administration window appears.

5 Click Change Password.

Result: The Change Password dialog box appears.



6 For Old Password, enter the password that you used in step 3.

7 For New Password and Confirm New Password, enter the new password for the user ID, and then click OK.

Result: The Symposium Express Call Center Administration window appears.

To log off Symposium Express Call Center client

In the Administration window, click Close, and then click Yes.

Result: The window and all open real-time displays close.

Section B: Switch resource configuration

In this section

Overview

Introduction

You must configure resources that are defined on the M1, M1 IE, or Succession CSE 1000 switch for Symposium Express Call Center. These resources include

- CDNs
- phonesets
- IVR ACD-DNs
- voice ports
- Voice Services voice ports (optional, if you have purchased the Voice Services feature)
- routes

Resource acquisition

Some resources—voice ports, phonesets, CDNs, IVR ACD-DNs, and routes—must be acquired from the switch so that the switch sends Symposium Express Call Center information about their status. In addition to adding these resources, you must then acquire them.

Ways to configure and acquire switch resources

There are two ways you can configure and acquire switch resources:

- Use the Import Utility provided with Symposium Express Call Center in the main application window.
- Manually configure and acquire switch resources as in Nortel Networks Symposium Call Center Server. For more information, refer to the Symposium Call Center Server documentation.

Using the Import Utility to import switch data

Introduction

Symposium Express Call Center automates the process of configuring and acquiring switch resources on the call center system. Rather than manually enter configuration data for the phonesets, CDNs, IVR ACD-DNs, voice ports, Voice Services ports, and routes on the server, you can use the switch overlay programs to capture information about resources defined on the switch, and then use the Import Utility to copy this information to the server.

Note: The system administrator can also configure and acquire switch resources manually using the Advanced Functions. For information on using Advanced Functions, refer to the documentation for Nortel Networks Symposium Call Center Server or the online Help.

Who can use the Import Utility

Only users with the system administrator password can access the Import Utility.

The process

To import switch resource data to Symposium Express Call Center, you must perform the following tasks:

- Configure the M1, M1 IE, or Succession CSE 1000 switch for your Symposium Express Call Center installation.
- Use the Data Parser to determine switch settings. The Data Parser uses three overlay programs (LD 81, LD 21, LD 23) to download and save the switch data information to a file.
- Use the Import Utility from the Administration window of Symposium Express Call Center to set up and acquire the switch resources.

Rerunning the Import Utility

To modify switch resource data after it has been imported, run the Data Parser utility and Import Utility again. New changes are added to Symposium Express Call Center. You can omit data by simply not choosing the options when running the Import Utility.

Connecting to the switch and parsing the data

Introduction

Follow this procedure to log on to the switch and use overlay programs to download the M1, M1 IE, or Succession CSE 1000 switch resource configuration data. Three overlay programs are used:

- LD 81, which provides information about the phonesets (TNs) configured on the switch
- LD 21, which provides information on all routes and trunk types configured on the switch
- LD 23, which provides information about each CDN and ACD-DN configured on the switch

For more information about the overlays, refer to the X11 documentation.

Who can use the overlay programs

A technician with access to the switch who knows the user ID and password can use the overlay programs to download the switch data.

Potential interference

The switch can be set up to send out intermittent maintenance messages. If any of these messages are transmitted during the data capture process, the import fails. To prevent interference from these messages, disable maintenance messages before you begin downloading resource data from the switch.

Before you begin

Before you begin to download configuration data from the switch

- ensure your PC is connected to the switch using terminal emulation software. The following table shows the required settings:

Emulation terminal and connection setup	Value
Baud rate	9600 kbits
Terminal type	VT100
Parity	8: 6 bits None: no parity
Stop bits	1
Flow control	None
Serial port	Com 1 or Com 2

- ensure that the M1, M1 IE, or Succession CSE 1000 switch is configured for Symposium Express Call Center

What you need

You need a disk on which to store the data from the switch. Alternatively, you can store the switch data locally and then copy it to the network.

To disable maintenance messages

1 Log on to a PC that has M1, M1 IE, or Succession CSE 1000 terminal emulation software (such as Reflections or HyperTerminal) installed, and that is connected to the switch.

2 Launch the terminal emulation software and establish a session with the switch.

3 Load Overlay 22 by typing **LD22** at the prompt.

4 Respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	prt	
TYPE	adan tty x	where x is the tty number from logon

Result: A list of parameters appears.

5 Make a note of all maintenance messages on the User parameter line. You must reenable them after printing the switch resources to a file.

6 Type ******** to exit from the overlay.

7 Load Overlay 17 by typing **LD17** at the prompt.

8 Respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	chg	
TYPE	adan	
ADAN	chg tty x	where x is the tty number from logon
USER	type an x in front of all messages	Example: xmtc xtrf xbug

Note: Always leave at least one message enabled. Nortel Networks suggests that this message be the sch message, as it will not affect the parsing process.

9 Type ******** to exit from the overlay, and then press Enter.

10 Log off the switch so that your changes take effect.

To get phoneset information

1 Create the text file in which the captured data will be stored.

Note: You can give the file any name, as long as it has a .txt extension.

2 Log on to a PC that has the switch terminal emulation software installed and is connected to the switch.

3 Launch the terminal emulation software, and establish a session with the switch.

4 Set the Capture to file feature on the terminal emulation application you are using, and select the name of the text file you created in step 1.

5 Load Overlay 81 by typing **LD81** at the prompt.

6 To capture the TNs (phonesets) that are configured as agents (AGN) and supervisors (SPV), respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	**Response**	**Description**
REQ	lst	List the phonesets
CUST	nn	Customer number
DATE		Current date
PAGE		
DES		
FEAT	agn	Agents
FEAT	spv	Supervisors
FEAT		

7 Type ******** to exit from the overlay.

To get Voice Services voice port information

Note: Voice Services is a keycoded feature. Follow this procedure only if you have purchased the Voice Services option and have installed and configured a Voice Services card on the switch.

1 Load Overlay 11 by typing **LD11** at the prompt.

2 Respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	**Response**	**Description**
REQ	prt	
TYPE	2616	
TN		If your switch is an Option 11, enter the TN of the card. If you use any other type of switch, enter the loop/shelf/card number of the card.

3 Type ******** to exit from the overlay.

To get voice port information

1 Load Overlay 81 by typing **LD81** at the prompt.

2 To capture the voice ports that are configured on the switch, respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	**Response**	**Description**
REQ	lst	
CUST	nn	Customer number
DATE		Current date
PAGE		
DES		
FEAT	vma	Voice Messaging
FEAT		

Note: This overlay program only recognizes voice ports configured as TNs on the switch. These may be required for either Meridian Mail or Meridian

Mail ACCESS. When you use the Import Utility, you can exclude those voice ports.

3 Type ******** to exit from the overlay.

To get CDN information

1 Load Overlay 23 by typing **LD23**.

2 To capture CDNs that are configured on the switch, respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	prt	
TYPE	cdn	
CUST	nn	Customer number
ACD		

3 Type ******** to exit from the overlay.

To get IVR ACD-DN information

1 Load Overlay 23 by typing **LD23**.

2 To capture the IVR ACD-DNs that are configured on the switch, respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	prt	
TYPE	acd	
CUST	nn	Customer number
ACD		

3 Type ******** to exit from the overlay.

To get route information

1. Load Overlay 21 by typing **LD21**.
2. To capture routes that are configured on the switch, respond to the prompts shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	prt	
TYPE	rdb	
CUST	nn	Customer number
ROUT		Route number
ACOD		

3. Type ******** to exit from the overlay.

To save the switch information

1. Stop the Capture to file feature.
2. Copy the text file to a disk or to a location that is accessible from the server.

To reenable maintenance messages

1. Load Overlay 17 by typing **LD17** at the prompt.
2. Respond to the prompts as shown in the following table:

Prompt	Response	Description
REQ	chg	
TYPE	adan	
ADAN	chg tty x	where x is the tty number from logon
USER	Remove x from messages	**Example**: USER mtc xtrf bug

3 Type ******** to exit from the overlay.

4 Load Overlay 22 by typing **LD22** at the prompt.

5 Respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	**Response**	**Description**
REQ	prt	
TYPE	adan tty x	where x is the tty number from logon

Result: A list of parameters appears.

6 Verify that the USER parameter appears with the correct messages listed. If not, rerun Overlay 17 and fix the messages.

7 Log off the switch.

What’s next?

Import the switch data to Symposium Express Call Center. For more information, see “Importing switch resource data” on page 529.

Importing switch resource data

When to use the Import Utility

Use the Import Utility to either add or update switch resource information on Symposium Express Call Center. You must be in online mode to use the Import Utility.

Who can use the Import Utility

To access the Import Utility, you must log on with the system administrator ID and password.

What you need

You need the disk or network location containing the text file into which you saved the switch information.

ATTENTION

When you run the Import Utility, it automatically configures and acquires all switch resources. This affects existing calls that are using those resources.

To import switch data

1 Log on to Symposium Express Call Center using the system administrator ID and password.

Note: Only the system administrator has access to the Import Utility.

2 Insert the disk containing the switch configuration data into the floppy drive.

3 On the Administration window, from the System Administration drop-down menu, choose Import Utility.

Result: The Open dialog box appears.

4 Select the file containing the switch configuration data, <*username*>.txt, and click Open.

Result: The Symposium Express Call Center Welcome window appears.

5 Click Next.

Result: The Terminal Number Configuration window appears.

Note: If no configuration data for phonesets (TNs), CDNs, or routes exists in the switch resource data file, the Import Utility aborts.

6 Select the TNs to add by clicking the TN number in the Exclude list, and then click the > button to move it to the Include list.

Tip: To add all items in the list, click the >> button.

Note: If you do not want to include a specific TN, leave it in the Exclude list.

7 Click Next.

Result: The Voice Port Configuration window appears.

8 Select the CallPilot, Meridian Mail, or third-party voice ports to add to the Include list, and then click the > button.

9 Select the Voice Services voice ports to add to the Include list, and then click the > button.

Tip: You can click Back at any time to update choices made on previous windows.

10 Click Next.

Result: If the configuration file contains IVR ACD-DNs, the IVR ACD-DN Configuration window appears. Continue with the following step.

If the configuration file does not contain IVR ACD-DNs, the Controlled Directory Number Configuration window appears. Skip to step 15.

11 Select the IVR ACD-DNs to add to the Include list, and then click the > button.

12 Click Next.

Result: The Controlled Directory Number Configuration window appears.

13 Select the CDNs to add to the Include list, and then click the > button.

ATTENTION Do not add a CDN if its number is zero (0). Symposium Express Call Center cannot use a CDN numbered 0.

14 Click Next.

Result: The Route Configuration window appears.

15 Select the routes to add to the Include list, and then click the > button.

16 Click Next.

Result: The Open Log File Automatically dialog box appears.

17 Click Yes or No, and then click Finish.

Result: A progress bar provides information on the process. When the import is complete, the log file opens in a Notepad window (if you clicked Yes in step 17).

18 View the session results in the log file.

19 Choose File → Exit to close the Notepad window, and then click OK to close the Configuration Manager window.

To check your setup

1 On the Administration window, click Print to run a configuration report.

2 From the System Administration drop-down menu, choose Advanced Functions.

3 In the System window, open Switch Resources and verify that all resources have been added and acquired.

What's next?

You can configure call presentation classes, users, and skillsets with the offline data importer. For more information, see "Configuring data in offline mode" on page 537, and the *Symposium Express Call Center Call Center Management Guide*.

After you configure call presentation classes, users, and skillsets, you should create call treatments, and then run the Call Routing wizard to define how calls are routed.

Run the Import Utility again if you need to make changes to the system.

Deleting switch resource data

Introduction

Follow this procedure to delete switch resource data from Symposium Express Call Center. This process also deacquires the resources that are removed, but it does not modify the Data Parser file or remove resources from the switch.

When to use the Import Utility

Use the Import Utility to remove (by updating) switch resource information on Symposium Express Call Center.

Who can use the Import Utility

To access the Import Utility, you must log on with the system administrator ID and password.

What you need

You need the disk that contains the text file into which you saved the switch resource data.

To delete switch data

1 Log on to Symposium Express Call Center using the system administrator ID and password.

Note: Only the system administrator has access to the Import Utility.

2 Put the disk containing the switch configuration data into the floppy drive.

3 On the Administration window, from the System Administration drop-down menu, choose Import Utility.

Result: The Open dialog box appears.

4 Select the file containing the switch configuration data, *<username>*.txt, and click Open.

Result: The Symposium Express Call Center Welcome window appears.

5 Click Next.

Result: The Terminal Number Configuration window appears.

Note: If no configuration data for phonesets (TNs), CDNs, or routes exists in the switch resource data file, the Import Utility aborts.

6 Select the TNs to remove by clicking the TN number in the Include list, and then click the < button to move it to the Exclude list.

Tip: To remove all items in the list, click the << button.

7 Click Next.

Result: The Voice Port Configuration window appears.

8 Select the CallPilot, Meridian Mail or third-party voice ports to remove from the Include list, and then click the < button.

9 Select the Voice Services voice ports to remove from the Include list, and then click the < button.

Tip: You can click Back at any time to update choices made on previous windows.

10 Click Next.

Result: If the configuration file contains IVR ACD-DNs, the IVR ACD-DN Configuration window appears. Continue with the following step.

If the configuration file does not contain IVR ACD-DNs, the Controlled Directory Number Configuration window appears. Skip to step 15.

11 Select the IVR ACD-DNs to remove from the Include list, and then click the < button.

12 Click Next.

Result: The Controlled Directory Number Configuration window appears.

13 Select the CDNs to remove from the Include list, and then click the < button to move them to the Exclude list.

14 Click Next.

Result: The Route Configuration window appears.

15 Select the Routes to remove from the Include list, and then click the < button.

16 Click Next.

Result: The Open Log File Automatically dialog box appears.

17 Click Yes or No, and then click Finish.

Result: A progress bar provides information on the process. When the import is complete, the log file opens in a Notepad window (if you clicked Yes in step 17).

18 Choose File → Exit to close the Notepad window, and then click OK to close the Configuration Manager window.

19 Run the Call Routing Utility to redefine how calls are routed.

20 Run the Import Utility again if you need to make changes to the system.

Section C: Configuring and importing data

In this section

Offline data importer

Introduction

Symposium Express Call Center includes an offline data importer utility that allows you to work in offline mode on a client PC to configure users, skillsets, agent assignments, and call presentation classes. Data is then imported to the customer's system using the Import Utility.

This feature allows distributors to set up and test customer systems before going on-site, which reduces setup costs and time required to configure a system. You do not connect to a server while in offline mode.

The process

To configure Symposium Express Call Center using the offline data importer and Import Utility, you must perform the following tasks:

1. Access the Symposium Express Call Center client application in offline mode.
2. Set up call presentation classes, supervisors and senior supervisors, agents, and skillsets on the system.
3. Assign agents to skillsets.
4. Exit from Symposium Express Call Center, and save the information.
5. Log on to the customer system using the system administrator ID and password, and use the Import Utility to load the data.

You can use the Import Utility on a Symposium Express Call Center system that already has data loaded. The Import Utility will not modify or overwrite existing data. The Import Utility only adds new information.

Configuring data in offline mode

Introduction

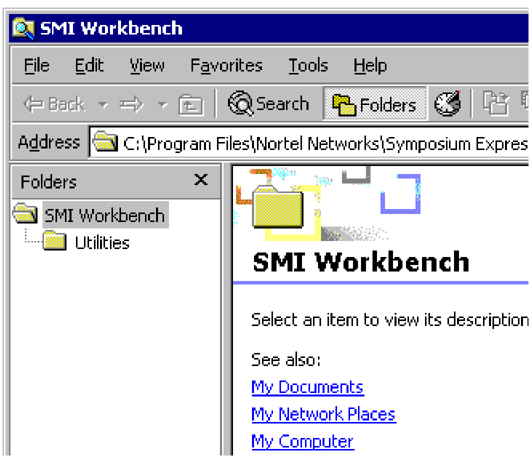
As part of the process of configuring Symposium Express Call Center, you must do the following:

- Define ways that calls are presented to agents.
- Add supervisors and agents.
- Create skillsets.
- Define agent to skillset assignments.

To configure data in offline mode

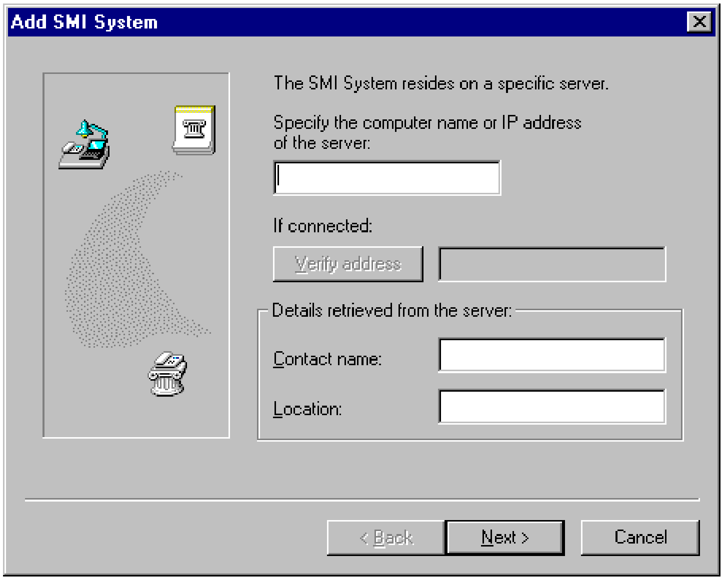
1 From the Windows Start menu, choose Programs → SMI Workbench.

Result: The SMI Workbench folder appears.



2 Double-click Add System.

Result: The Add SMI System dialog box appears.



3 For the computer name or CLAN IP address, type **0.0.0.0**, and then click Next.

Result: The Add SMI System window appears.

4 Enter the system name.

5 Optionally, enter notes or comments that describe this SMI system.

6 Click Finish.

Result: An SMI system is added to the SMI Workbench folder.

7 Run Symposium Express Call Center in offline mode by double-clicking the new icon.

Result: The Symposium Express Call Center Administration window appears with only the User Administration menu visible.

8 On the Administration window, from the User Administration drop-down menu, choose the function you want to configure.

Result: A message appears stating that a new offline session is beginning, and then the appropriate window appears.

9 Set up the call presentation classes, supervisors, agents, and skillsets as required.

10 Click Close, and then click Yes.

Result: Your additions are automatically saved in a text file, gnortel.txt, in the directory C:\nortel\en\client\data\ (where C: is the drive on which the client is installed).

ATTENTION

Do not modify the gnortel.txt file. A specific format is required for the Import Utility.

What's next?

Import the data to the customer's system. For more information, see "Importing configuration data" on page 540.

Importing configuration data

Introduction

Follow this procedure to import the user, skillset, agent to skillset assignment, and call presentation classes configuration data to Symposium Express Call Center.

When to use the Import Utility

You use the Import Utility to add data to the Symposium Express Call Center database.

Who can use the Import Utility

You must log on with the system administrator ID and password to access the Import Utility.

To import switch data

1. Log on to Symposium Express Call Center using the system administrator ID and password.

   Note: Only the system administrator has access to the Import Utility.

2. On the Administration window, from the System Administration drop-down menu, choose Import Utility.

   Result: The Open dialog box appears.

3 Select the file containing the configuration data (gnortel.txt), and then click Open.

ATTENTION Do not modify the gnortel.txt file. A specific format is required for the Import Utility.

Result: The Configuration Manager window opens and adds the data to the Symposium Express Call Center database. A progress bar provides information on the process.

Note: Users are added in the following order: supervisor-only users (including senior supervisors), supervisors who are also agents, and then agent-only users. Any agent/supervisor relationships are maintained.

4 (Optional) View the log file to see what changes have been made.

You can find the log file in the directory C:\nortel\client\en\data\gnortel.log (where C: is the drive on which the client is installed).

5 Choose File → Exit to close the Notepad window.

What’s next?

Check your configuration by printing a configuration report. See “Printing a configuration report” on page 547.

Configuring phoneset displays

Introduction

Phoneset displays allow you to configure the field labels as they appear on the phoneset LCD display. You must configure phoneset displays from the Advanced Functions option on the System Administration drop-down menu. This option is not available to customer administrators.

Note: The configuration applies to all phoneset displays of the phoneset type. For example, if you configure a 1x16 alphanumeric phoneset, the configuration applies to all phonesets of that type.

Before you begin

Before you configure the phoneset display, ensure that the phoneset type is configured on the switch.

For more information, refer to the *Nortel Networks Symposium Call Center Server Symposium, M1/CSE 1000, and Voice Processing Guide.*

To configure a phoneset display

1 Log on to Symposium Express Call Center as the system administrator.

2 On Administration window, from the System Administration drop-down menu, choose Advanced Functions.

3 From the SMI Workbench, choose Switch Administration → Phoneset Displays.

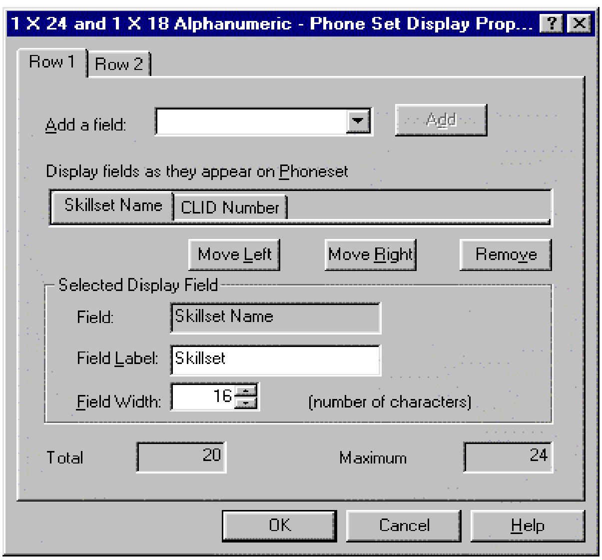
Result: The Phoneset Displays window appears.

4 Select the phoneset display type you want to change.

Note: This phoneset display type must be configured on the M1, M1 IE, or Succession CSE 1000.

5 Choose File → Properties.

Result: The Phone Set Display Properties dialog box appears.



6 If the display has more than one row, click the tab for the row you want to change.

7 From the Add a field drop-down list, select the field to be added to the display.

8 Click Add.

Result: This adds the field to the Display fields as they appear on Phoneset box.

9 Do you want to change any of the settings assigned to the field?

IF you	THEN
want to change the label assigned to the field	**a.** from the Display fields as they appear on Phoneset box, select the field for which you want to change the label. **b.** in the Field Label box, enter the new label.
want to change the field width	**a.** from the Display fields as they appear on Phoneset box, select the field you want to resize. **b.** in the Field Width box, enter or select the new size.
want to change the order of fields as they appear on the display	**a.** from the Display fields as they appear on Phoneset box, select the field you want to move. **b.** position the field using the Move buttons.
do not want to change any of the settings	go to step 5.

3 Repeat steps 7 to 9 for each field that you want to add to this row for this phoneset display type.

4 Repeat steps 6 to 8 for each row that you want to configure for this phoneset display type.

5 Click OK to complete the procedure.

Result: The status of the display type in the Phoneset Displays window changes to Configured.

Section D: Configuration report

In this section

Overview

Introduction

You can create a configuration report that lists all configuration data. The configuration report supplies data on

- supervisor properties
- senior supervisors
- agent properties
- agent skillsets
- skillset properties
- CDN properties
- route properties
- IVR ACD-DN properties
- voice port properties

You can preview, print, or export this report to another application.

Printing a configuration report

Introduction

When you finish configuring a customer’s system, you can run a configuration report to confirm your settings and to keep as a record for future reference. You can also save the report to a file such as HTML or export it to another program such as Excel.

Who can print the configuration report

Any Symposium Express Call Center user can print this report.

To print the configuration report

1. Log on to Symposium Express Call Center.
2. On the Administration window, click Print.

   Result: The Configuration report appears.
3. Click the printer icon.

   Result: The Windows Print dialog box appears.
4. Set the print options, and then click OK.

Chapter 13

Configuring a Voice Services card

In this chapter

Overview

Introduction

A Voice Services card installed in the Meridian 1 or CSE 1000 switch provides front-end voice processing capability to Symposium Express Call Center. It also enables you to provide comfort messages and voice menu capabilities to a call center.

The Voice Services card provides functionality similar to that provided by CallPilot, Meridian Mail, and MIRAN. You can use the Voice Services card to play recorded announcements based on the caller's position in queue or expected wait time (as determined by Symposium Express Call Center).

The Voice Services card also allows you to collect customer-entered data. This feature (Prompt/Collect Digits) is not available when you use CallPilot, Meridian Mail, or MIRAN with Symposium Express Call Center.

Optional features

All features described in this section are optional, keycoded features. Voice Services, Digit collection, Position in Queue, and Expected Wait Time are available only if you have purchased these options.

Before you begin

For information on the installation and the initial configuration of the Voice Services card, refer to the *Symposium Express Call Center Voice Services Card Installation Guide*.

After you install the Voice Services card

After you install the Voice Services card on the switch, and perform the initial configuration as described in the *Voice Services Card Installation Guide*, you must perform the following tasks to configure the card on the server, and to play messages:

1. Add the Voice Services voice ports to Symposium Express Call Center. See “Adding Voice Services voice ports to Symposium Express Call Center” on page 554.

2. Save the Voice Services card configuration information from the switch into a text file, and then run the Voice Services Configuration Utility to import the information into Symposium Express Call Center. See Section B: “Running the Voice Services configuration utility” on page 559.

3. Use the Symposium Express Call Center client to record comfort messages, voice menus, and voice segments, if required. Refer to the *Symposium Express Call Center Management Guide*.

4. Create call treatments. When you create call treatments, you specify which announcements and voice segments to play, and when to play them.

   For more information about configuring voice segments and creating call treatments, refer to the *Symposium Express Call Center Management Guide*.

Section A: Setting up the Voice Services card

In this section

Adding Voice Services voice ports to Symposium Express Call Center

Introduction

Each Voice Services port available on the Voice Services card that you use to provide functionality to Symposium Express Call Center must be

- configured on the switch (For detailed instructions, see “Initial configuration of the Voice Services card” in the *Symposium Express Call Center Voice Services Card Installation Guide.*)
- added in Symposium Express Call Center
- acquired in Symposium Express Call Center

This section provides procedures for adding and acquiring a Voice Services port in Symposium Express Call Center.

Note: Voice Services ports are not added automatically as voice ports by the Symposium Express Call Center import utility, as are other voice ports (for example, Meridian Mail voice ports).

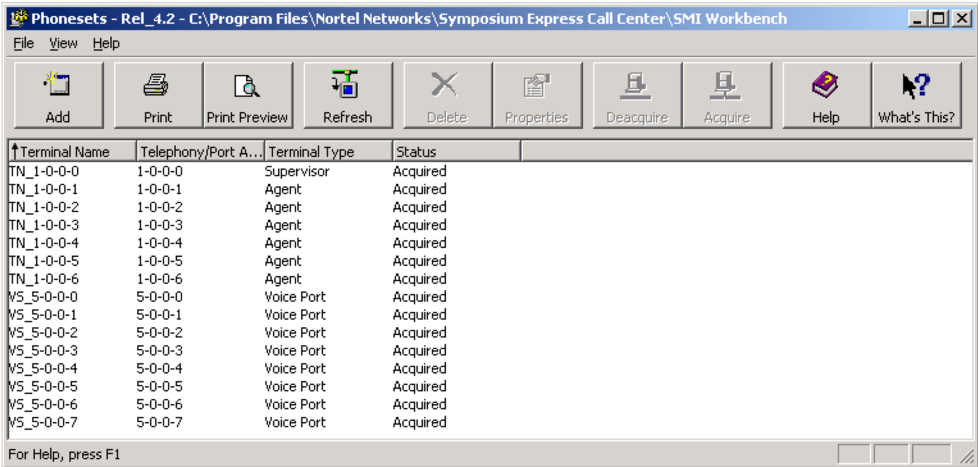
You do not need to acquire Voice Services voice ports to record and play prompts on the initial setup. It is only if you want Symposium Express Call Center to play prompts using the Voice Services card that Symposium Express Call Center must acquire the voice ports.

Once Voice Services ports are added or changed, you may need to add or change the matching voice port configuration information in Symposium Express Call Center.

To add a Voice Services voice port

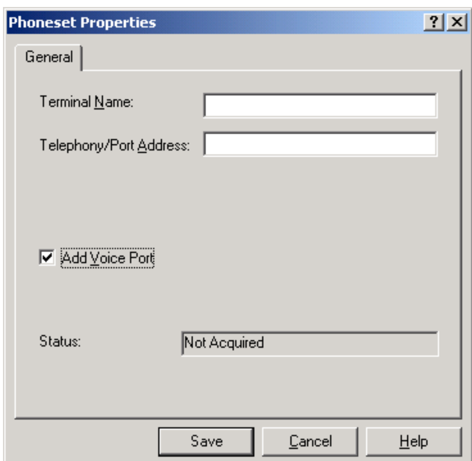
1 In the Administration window, click Phonesets.

Result: The Phonesets window appears.



2 Click Add.

Result: The Phoneset Properties dialog box appears.



3 Enter the Terminal Name and Telephony/Port Address of the voice port.

4 Select Add Voice Port.

5 Click Save.

6 In the Administration window, click Advanced Functions.

Note: You must have sysadmin access privileges to do this.

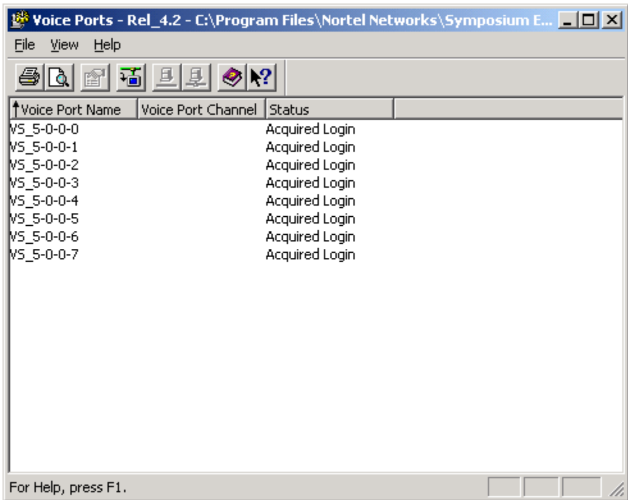
To acquire the port as a voice port

Each voice port that you add in the previous procedure must be acquired in Symposium Express Call Center.

1 Click Switch Administration.

2 Double-click Voice Ports.

Result: The Voice Ports dialog box appears.



3 Select the Voice Port that you just added, and then click Acquire (the third button from the right).

4 Click Refresh (the fourth button from the right).

Result: The Status changes to Acquired Login or Acquired Logout.

What's next?

To use Voice Services, you must also run the Voice Services configuration utility. Refer to Section B: "Running the Voice Services configuration utility" on page 559.

The next step is to record and configure the voice services treatments in Symposium Express Call Center. To do this, you must use the Symposium Express Call Center client (choose Voice Services from the Call Administration drop-down menu on the Administration window). Finally, you create call treatments. When you create call treatments, you specify which announcements and voice segments to play, and when to play them.

For more information on recording voice services treatments and setting up call treatments, refer to the *Symposium Express Call Center Management Guide*.

Migrating the Voice Services card to a new switch

Introduction

Follow this procedure after you have completed moving Symposium Express Call Center to the new switch.

To migrate the Voice Services card to a new switch

1. Reseat the Voice Services card in the new switch. For instructions, refer to the *Symposium Express Call Center Voice Services Card Installation Guide*.
2. Configure the new Voice Services ports. For instructions, refer to the *Symposium Express Call Center Voice Services Card Installation Guide*.
3. Import the Voice Services card information from the switch. For instructions, refer to “To collect Voice Services card information from the switch” on page 562.
4. Run the Voice Services Configuration Utility to change the Voice Services card properties. For instructions, refer to “To run the Voice Services Configuration Utility” on page 563.

Section B: Running the Voice Services configuration utility

In this section

Overview

Introduction

Run the Voice Services Configuration utility to import Voice Services configuration data into Symposium Express Call Center. Run the utility whenever you add, make a change to, or remove a card.

Note: If you did not purchase the Voice Services option, you do not need to perform the procedures in this section.

Before you begin

Before you run the Voice Services Configuration utility, you must ensure that

- the Voice Services card is installed and configured on the switch
- the Symposium Express Call Center server and client software are installed
- you have run the Import Utility from the client with sysadmin access privileges to import switch resource information (TNs, voice ports, CDNs, IVR ACD-DNs, and routes) into Symposium Express Call Center

  Note: The Import Utility adds Voice Services voice ports as agent phonesets, not as voice ports. For this reason, it is best to run the Import Utility before configuring the Voice Services resources, and then add the Voice Services voice ports manually. However, if you ran the Import Utility before configuring the Voice Services resources, you must manually delete the Voice Services voice ports (added as phonesets), and then add them again as voice ports. For more information, refer to “Adding Voice Services voice ports to Symposium Express Call Center” on page 554.

Information you need

To add a card, you must know the following information:

- card name
- IP address of the card
- keycode information
- the default DN

Importing Voice Services card information

To collect Voice Services card information from the switch

1. Log on to the switch from a PC with terminal emulation software (such as Reflections or HyperTerminal) installed, and that is connected to the switch.
2. Launch the terminal emulation software, and establish a session with the switch.
3. Start the Capture to file feature. (For example, if you use HyperTerminal, choose Transfer → Capture Text, create the text file, and then click Start.)
4. Load Overlay 11 by typing **LD 11** at the prompt.
5. Respond to the prompts as shown in the following table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	**Response**	**Description**
REQ	PRT	
TYPE	2616	
TN	xx xx xx	If your switch is an Option 11, enter the slot number of the card. If you use any other type of switch, enter the loop/shelf/card number of the card.

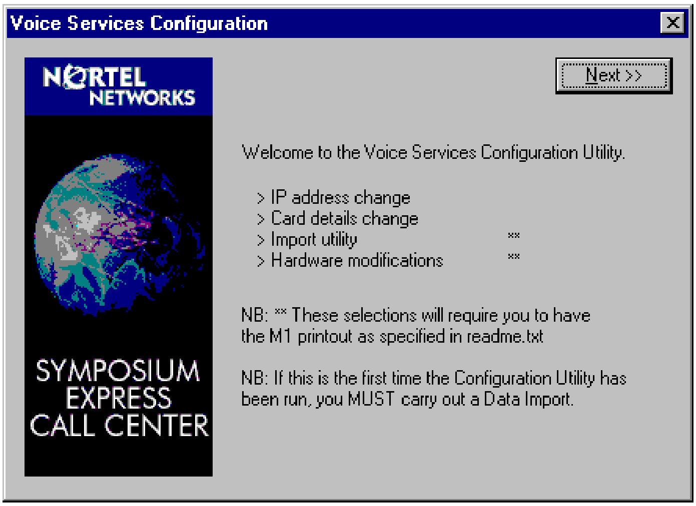
6. Stop the Capture to file feature after LD 11 has finished its print to screen.
7. Copy the text file to a disk or a location that is accessible from the server.

To run the Voice Services Configuration Utility

1. Log on to the Symposium Express Call Center server using the system administrator user ID.

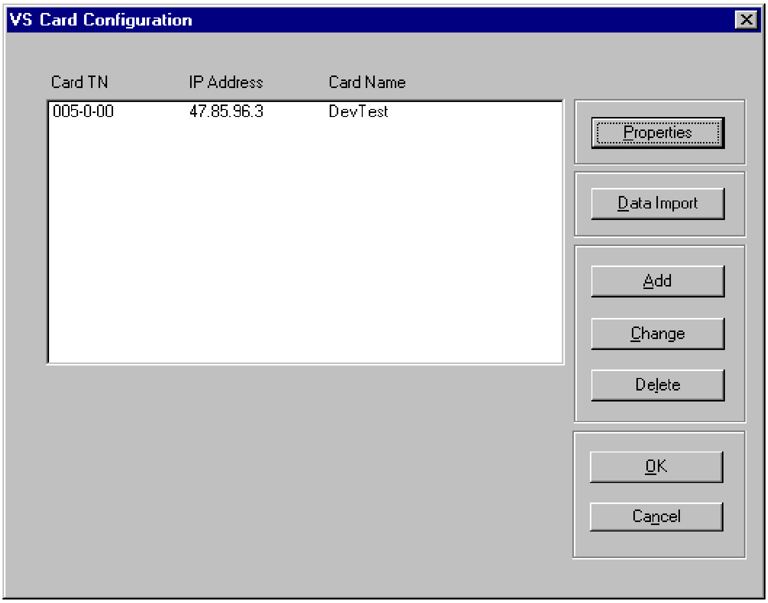
2. From the Windows Start menu, choose Programs → Symposium Express Call Center → Voice Services → Configuration.

   Result: The Voice Services Configuration dialog box appears.



3 Click Next.

Result: The VS Card Configuration dialog box appears.



4 What do you want to do?

IF you want to	THEN refer to
view or change the properties for a Voice Services card	"To view or change the properties for a Voice Services card" on page 566.
import TN (virtual phoneset) data	"To import data" on page 567.
add a Voice Services card to the system	"To add a Voice Services card to the system" on page 568.
change Voice Services card properties	"To change Voice Services cards" on page 568.
remove a Voice Services card from the system	"To remove a Voice Services card from the system" on page 569.

What's next?

After you import the Voice Services configuration data, use the Symposium Express Call Center client to record and configure voice segments. Then, create call treatments. For more information, see the *Symposium Express Call Center Management Guide*.

TAPI server

If you configure prompt/collect digits Voice Services treatments, you must install the Nortel Networks TAPI server and complete these procedures:

- Check the license file to ensure the TAPI_IVR feature is enabled to support digit transfer from the Symposium Express Call Center server to the TAPI server. See "To check the license file" below.
- Set the Symposium Express Call Center server IP address. See "To set the IP address on TAPI" below.

To check the license file

1 To launch the FlexLM Manager from the Windows Start menu, choose Programs → Nortel → Symposium TAPI SP for M1 → FlexLM Manager.

2 Click License tab.

3 Click Show license file.

Result: If the TAPI_IVR feature is enabled, the following line is included in the file: Feature TAPI_IVR.

To set the IP address on TAPI

1 To launch the database configuration utility from the Windows Start menu, choose Programs → Nortel → Symposium TAPI SP for M1 → Configure Database.

2 Select the Host tab.

3 Enter the Symposium Express Call Center IP address in the Host Address entry field.

For more information, see the *Nortel Networks Managers Guide for the Symposium TAPI Service Provider for Meridian.*

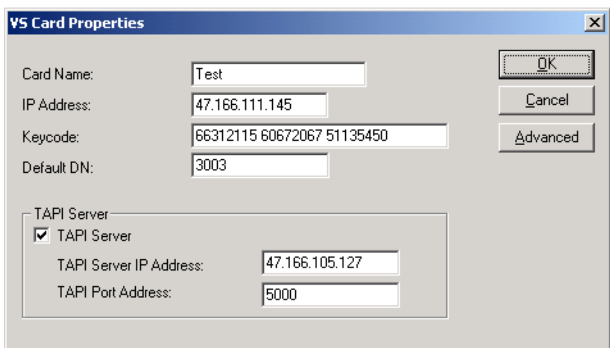
To view or change the properties for a Voice Services card

You change the properties of a Voice Services card in the Voice Services Properties dialog box. To use the prompt/collect digits feature, you must have Symposium TAPI Service provider installed, and Symposium Agent or another agent software that is compatible with Symposium TAPI Service provider. For more information on installing and configuring TAPI Service provider and Symposium Agent, see

- *Network Managers Guide for the Symposium TAPI Service Provider for Meridian 1*
- *Nortel Networks Symposium Agent Installation Guide*

1 Continue from step 3 in “To run the Voice Services Configuration Utility” on page 563 by selecting the card, and then click Properties.

Result: The VS Card Properties dialog box appears.



2 Change the card name, IP address, or keycode number as necessary. The keycode number must be entered in three groups of eight digits with a space separating each group (for example, 11111111 22222222 33333333).

3 To enable the Prompt/Collect Digits option, click the TAPI Server box and enter the TAPI Server IP Address and the TAPI Port Address.

Note: The TAPI server IP address represents the CLAN IP address of the TAPI server.

4 In the default DN section, enter a valid DN. In the event of treatment failure, the caller is transferred to this DN.

Note: If an invalid number is entered as a default DN, the caller may be disconnected.

5 Click OK.

Note: The Advanced button is for Nortel Networks Product Support use only.

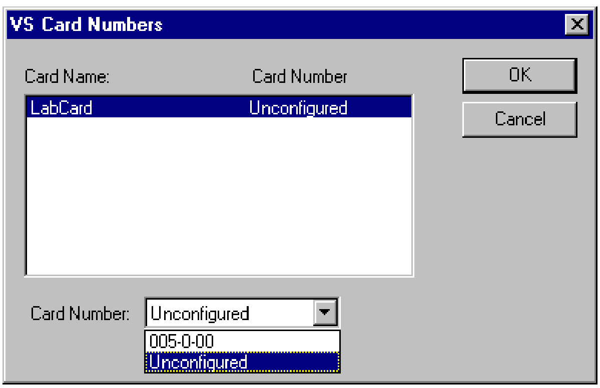
To import data

1 Continue from step 3 in “To run the Voice Services Configuration Utility” on page 563 by clicking Data Import.

Result: The Open dialog box appears.

2 Navigate to the text file that contains the phoneset information you downloaded in “To collect Voice Services card information from the switch” on page 562, and then click Open.

Result: The VS Card Numbers dialog box appears.



3 Select the card and pick the card number from the Card Number drop-down list.

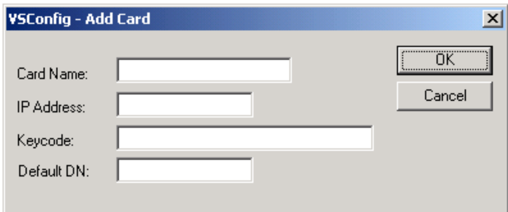
4 Click OK.

Result: The card number is updated, and the database is populated with ACD/TN information for the card.

To add a Voice Services card to the system

1 Continue from step 3 in “To run the Voice Services Configuration Utility” on page 563 by clicking Add.

Result: The VSConfig - Add Card dialog box appears.



2 Enter the card name, IP address, keycode number, and Default DN, as necessary.

3 Click OK.

Result: The new card appears in the list.

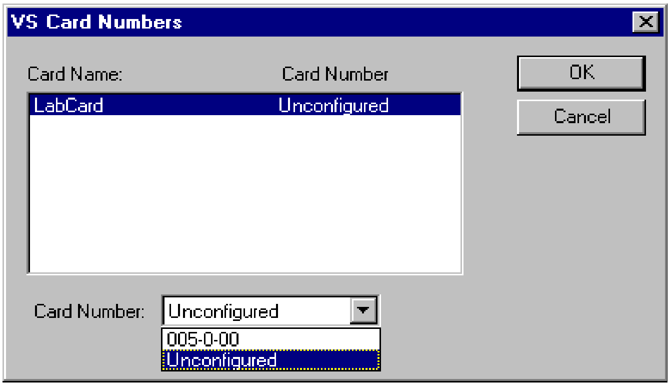
To change Voice Services cards

1 Continue from step 3 in “To run the Voice Services Configuration Utility” on page 563 by clicking Change.

Result: The Open dialog box appears.

2 Navigate to the text file that contains the phoneset information you downloaded in “To collect Voice Services card information from the switch” on page 562, and then click Open.

Result: The VS Card Numbers dialog box appears.



3 Select the card and pick the card number from the Card Number drop-down list.

4 Click OK.

Result: The card number is updated, and the database is populated with ACD/TN information for the card.

To remove a Voice Services card from the system

1 Continue from step 3 in “To run the Voice Services Configuration Utility” on page 563 by selecting the card you want to remove, and then click Delete.

2 Click Yes to confirm that you want to remove the card.

For information on configuring Voice Services, call treatments, and routing, refer to the *Symposium Express Call Center Management Guide*.

Chapter 14

Tools and troubleshooting

In this chapter

Section A: Utilities

In this section

Server utilities

Introduction

Symposium Express Call Center utilities are automatically installed when you install Symposium Express Call Center. These utilities enable you to perform system operations not available on the Symposium Express Call Center client.

You can access the server utilities from the Windows Start menu by choosing Programs → Symposium Express Call Center.

Utility name and function overview

Utility name	Function
Computer Name Sync	Updates the computer name in the Symposium Express Call Center database.
Configuration (Nbconfig)	Enables you to modify the site name and IP addresses for the CLAN and ELAN adapter cards.
Database Expansion Utility	Enables you to expand the size of your Symposium Express Call Center database.
Database Restore	Restores the database from a backup tape or a remote directory.
Feature Report	Enables you to view and modify switch parameters. It also enables you to view other system information and a list of installed features.
Migration	Allows you to obtain system information in preparation for server conversions, recovery procedures, or migrations to another hardware platform.
Network DB Backup Path	Enables you to select whether to back up your database to a remote directory on a network computer, or to a tape.

Utility name	Function
PEP Viewer	Enables you to view the list of Product Enhancement Packages (PEPs) and Service Update packs that you have installed on Symposium Express Call Center.
Registry Maintenance	Performs a registry comparison. This utility enables you to check for any corruption or changes in the registry.
Setup Configuration	Enables you to enter your server setup configuration settings after you have installed the server software.
Shutdown/Startup (separate utilities)	Shuts down and starts up certain Symposium Express Call Center services. This is required for some maintenance and troubleshooting activities.
System Information	Shows particulars about the Symposium Express Call Center system, such as names, IP addresses, and system numbers.
System Monitor	Enables you to view the current status of all the Symposium Express Call Center services.

Computer Name Sync

Introduction

If you change the computer name after installing the Symposium Express Call Center, use this utility to synchronize the Symposium Express Call Center name and the current computer name.

Notes:

- This utility also determines whether the DNS Host Name matches the new computer name and notifies you if the two names are different.
- This utility changes the database name to match the new computer name.

Computer name restrictions

The new computer name must be a single word without spaces, 6 to 15 characters long. Letters, numbers, and underscores are allowed. Spaces, hyphens, and dashes are not allowed.

To change the computer name

To change the computer name, you must first change the name on the operating system, and then use the Computer Name Sync utility to synchronize the new computer name with the Symposium Express Call Center name.

1 From the Windows Start menu, select Settings → Control Panel → System.

2 Change the computer name.

3 Click OK.

Result: The system prompts you to restart the server.

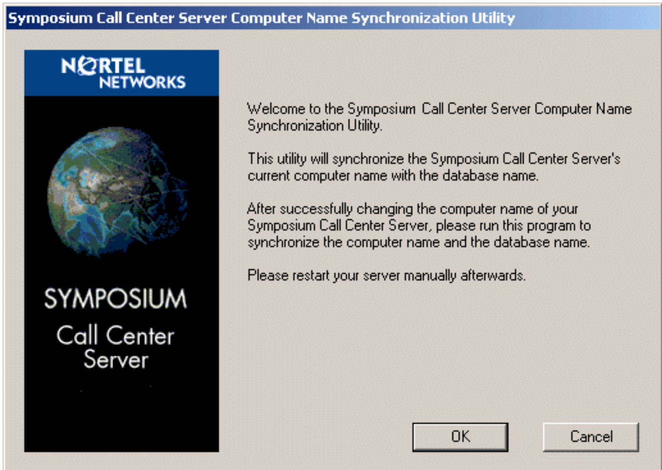
4 Click Yes.

Result: The server restarts.

5 Log on to the server as **Administrator**.

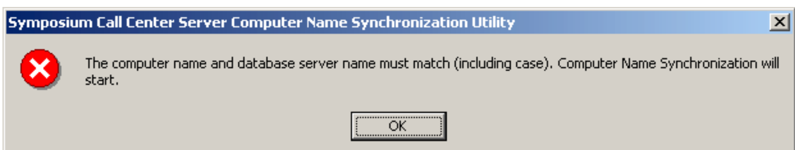
6 From the Windows Start menu, choose Programs → Symposium Express Call Center → Computer Name Sync.

Result: The Symposium Express Call Center Computer Name Synchronization Utility dialog box appears.



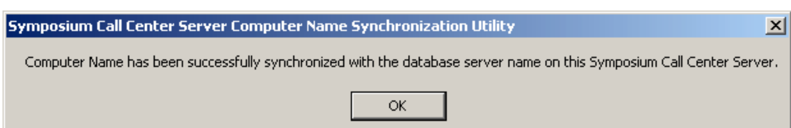
7 Click OK.

Result: The utility compares the computer name with the database server name. If the names do not match, then the following message appears:



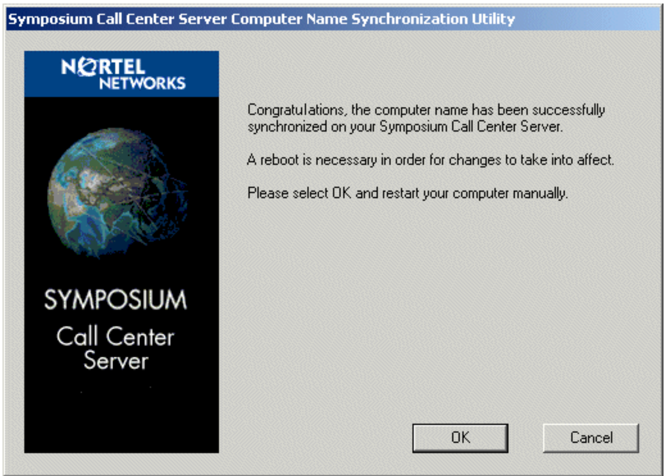
8 Click OK.

Result: The utility shuts down the Symposium Express Call Center services, and then synchronizes the computer name with the database server name. When the process is finished, the following message box appears:



9 Click OK.

Result: The following dialog box appears:



10 Click OK.

11 Restart the server.

Configuration (Nbconfig)

Introduction

Use the Configuration utility (Nbconfig) to perform the following tasks:

- Change the IP address of the server's CLAN or ELAN card (see page 580).
- Change the server site name (see page 582).

Notes:

- To perform these tasks, you must start the Configuration utility with the admin access level. For more information, see "To start the Configuration utility with the admin access level" on page 580.
- You can also use the Server Setup Configuration utility to perform these tasks.
- The Address Table and Site Table property pages present information that is not applicable to Symposium Express Call Center.

Access levels

Two access levels are available in the Configuration utility—regular and admin. Based on the access level with which you open the Configuration utility, you can perform different actions. With the *regular* access level, you cannot edit any settings—all information is read-only. In the *admin* access level, you can make changes to the server settings.

To start the Configuration utility with the regular access level

From the Windows Start menu, choose Programs → Symposium Express Call Center → Configuration.

Result: The Nbconfig window appears with the following three tabs:

- Local Machine Settings
- Address Table
- Site Table

To start the Configuration utility with the admin access level

1. From the Windows Start menu, choose Run.
2. Type **nbconfig -admin,** and then click OK.

   Result: The Nbconfig window opens with the admin access level.

Changing the server IP address or site name

To change IP addresses on Symposium Express Call Center, you must make your changes in the following places:

- Change the IP addresses through the operating system's control panel.
- Change the IP addresses in the Configuration utility (Nbconfig).
- Add the new IP address on the Symposium Express Call Center client.

During installation, the IP addresses are defined in the operating system's control panel, and then again during the server software installation. No further action is required unless you need to change the IP addresses after installation.

To change the IP address of Symposium Express Call Center

1. Log on to the server as **NGenSys**.
2. Shut down all Symposium Express Call Center services by choosing Start → Programs → Symposium Express Call Center → Shutdown. The shutdown process takes a few minutes to complete.
3. Ensure that the SMonW window is closed.
4. Through the Windows control panel, change the CLAN or ELAN IP address.
5. When prompted to restart the server, choose to restart later. (Do not restart the server at this time.)
6. Change the CLAN or ELAN IP address using the Configuration utility (Nbconfig) as follows:

   a. From the Windows Start menu, choose Run.

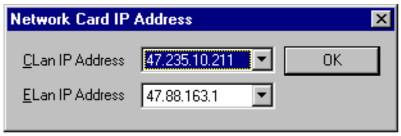
   b. Type **nbconfig -admin**.

      Result: The Nbconfig window appears, with the Edit button on the Local Machine Settings tab enabled.

c. In the Card Name column, select the network card for which you want to change the IP address.

d. Click Edit.

Result: The Network Card IP Address window appears, enabling you to select another CLAN or ELAN IP address from the drop-down lists.



e. Make your changes.

f. Click OK to close the Network Card IP Address window.

g. Click OK to close the Nbconfig window.

7 Run nicomsetup as follows:

a. From the Windows Start menu, choose Programs → Accessories → Command Prompt.

b. In the Command Prompt window, change to the drive on which Symposium Express Call Center is installed. For example, type **D:,** and then press Enter.

c. Type **CD \Nortel\ICCM\bin**, and then press Enter.

d. Type **nicomsetup**, and then press Enter.

Result: The IP address change is completed.

8 Restart the server by choosing Shutdown → Restart from the Windows Start menu.

9 When the server restarts, on the Symposium Express Call Center client, choose the site whose IP address you changed.

a. Open the properties for the site.

b. Add the new IP address (do not delete the old IP address).

c. Click OK to save your changes.

To change the server site name

1 Log on to the server as **Administrator**.

2 Ensure that the SMonW window (the System Monitor) is closed.

3 Shut down all Symposium Express Call Center services by choosing Start → Programs → Symposium Express Call Center → Shutdown. The shutdown process takes a few minutes to complete.

4 Run nicomsetup as follows:

   a. From the Windows Start menu, choose Programs → Accessories → Command Prompt.

   b. In the Command Prompt window, change to the drive on which Symposium Express Call Center is installed. For example, type **D:**, and then press Enter.

   c. Type **CD\Nortel\ICCM\bin,** and then press Enter.

   d. Type **nicomsetup,** and then press Enter.

   e. Close the Command Prompt window.

5 Change the server site name using the Configuration utility (Nbconfig) as follows:

   a. From the Windows Start menu, choose Run.

   b. Type **nbconfig -admin**.

   Result: The Nbconfig window appears, with the Edit button on the Local Machine Settings tab enabled.

   c. Make the desired changes to the site name, and then click OK.

   d. Click OK to close the Nbconfig window.

6 On the Symposium Express Call Center client, choose the site name that has been changed.

   a. Open the properties for the site.

   b. Modify the site name from the old site name to the new site name, and then save your changes.

   c. Add the new site (do not delete the old site).

   d. Click OK to save your changes.

To run the nicomsetup utility

Run the nicomsetup utility after a site name change to clear information from the Address Table and Site Table tabs in the Nbconfig window.

1 From the Windows Start menu, choose Programs → Accessories → Command Prompt.

Result: The Command Prompt window appears.

2 Change directories to Nortel\ICCM\bin as follows:

a. Navigate to the drive where Symposium Express Call Center is installed. For example, type **D:**, and then press Enter.

b. Type **CD\Nortel\ICCM\bin,** and then press Enter.

3 Type **nicomsetup,** and then press Enter.

Result: All information is reset in the Address Table tab and Site Table tab.

4 Open the Configuration utility to verify that the new information has been added to the Address Table tab and Site Table tab.

Database Expansion utility

Introduction

The Database Expansion utility enables you to expand the size of your Symposium Express Call Center database by

- expanding it into a new partition
- expanding it into additional space on an enlarged partition following a conversion or platform migration

The Database Expansion utility also allows you to reserve new partitions for non-database use.

Before you begin

Ensure that you create a Platform Recovery Disk and perform a database backup.

Note: If there is a hardware problem with an added partition or a segmentation problem in the database, a database expansion will fail, and you will not be able to recover your system without a Platform Recovery Disk and a database backup.

For more information on creating a Platform Recovery Disk and a database backup, see Chapter 15, “Backing up data.”

Expanding the database into a new partition

If you create a new partition on your server for database use, you must use the Database Expansion utility to expand the database into that partition. When you run the Database Expansion utility, it automatically detects any usable new partitions that are not already in use. When it detects usable new partitions, the utility assumes that you want to expand your database into them.

The utility automatically selects a partition for expansion if

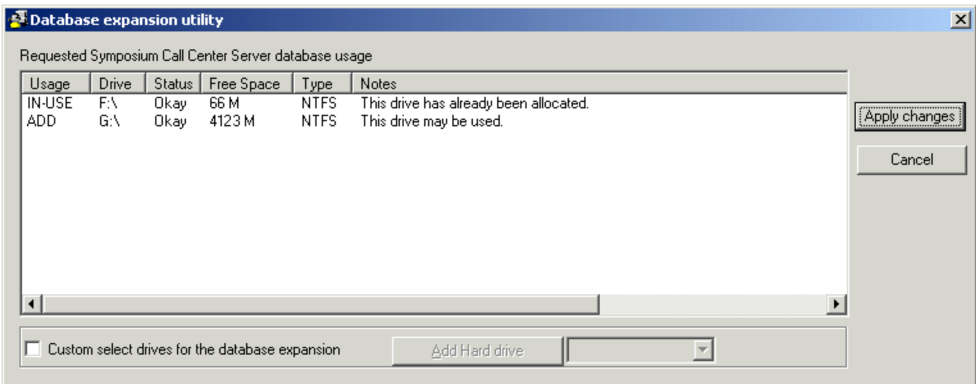
- it is not currently being used for a database
- it is formatted as NTFS
- it has at least 2.1 Gbytes of free space

In the following example, a new partition for the server’s database has been created and labeled G. This procedure explains how to use the Database Expansion utility to expand the database into the new G partition.

To expand the database into a new partition

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Expansion Utility.

Result: The Database expansion utility dialog box appears:

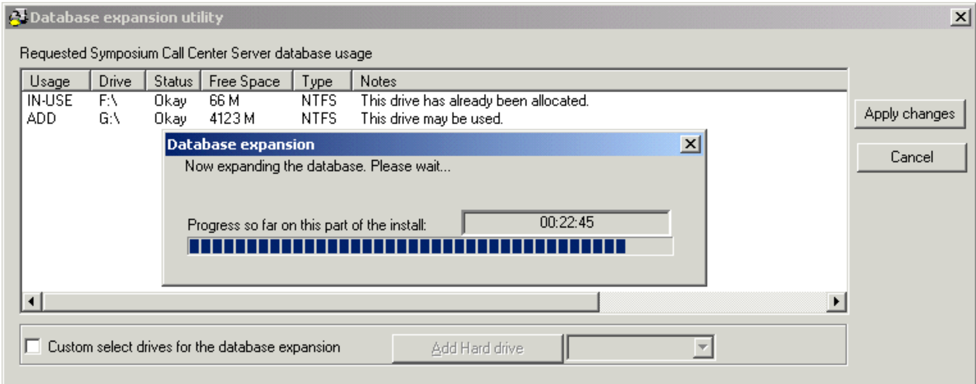


In this example, the Database Expansion utility has detected that partition G is usable for expansion and has assumed that you want to use it. The system assigns the value ADD in the Usage field to the partition G. (It shows the existing database partition, F, as IN-USE.)

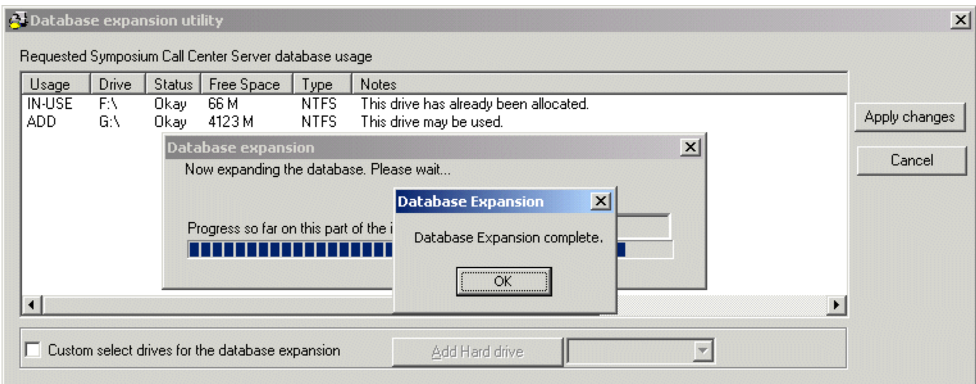
Note: If you have added a partition into which you do *not* want your database to expand (for example, if you want to reserve a partition for trace files or third-party full backup images), you must tell the Database Expansion utility not to use this partition. To do this, click the check box beside Custom select drives for the database expansion, select the partition letter you want to change from the drop-down list, and click **“**Do Not Create Database.” This marks the drive letter as unavailable, and the Usage field changes to “---”.

2 To expand the database to partition G, click Apply changes.

Result: A series of dialog boxes appear stating that services are being shut down. Once the process is complete, the following dialog box appears:



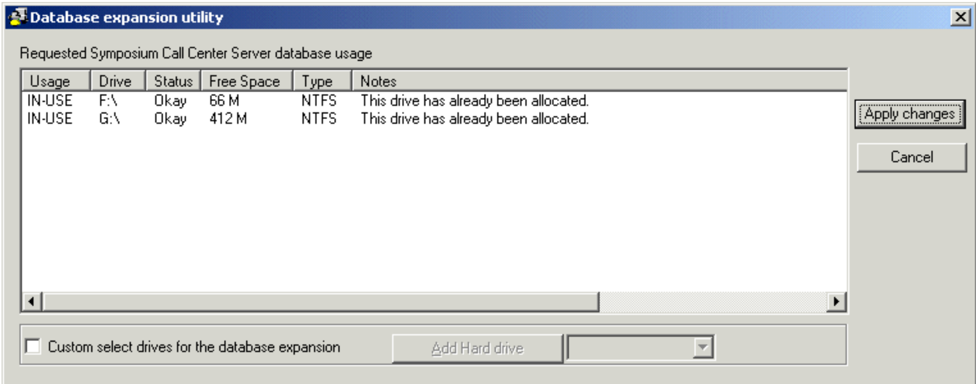
When the expansion is complete, the following dialog box appears:



3 Click OK.

Result: The Database expansion utility closes.

Tip: If you want to confirm that your database has been expanded into your new partition, restart the Database Expansion utility to check that the new partition now shows the value IN-USE. In this example, you should see the following:



4. Restart the Symposium Express Call Center services by choosing Start → Symposium Express Call Center → Startup.
5. Create another Platform Recovery Disk.
6. Back up the database.

Expanding the database to make use of a larger partition following conversion or platform migration

You can expand the database to make use of a larger database partition following conversion or platform migration.

During a conversion or a platform migration, database expansion is not automatic. If you want to expand a partition to take advantage of extra space, you must do it manually using this utility.

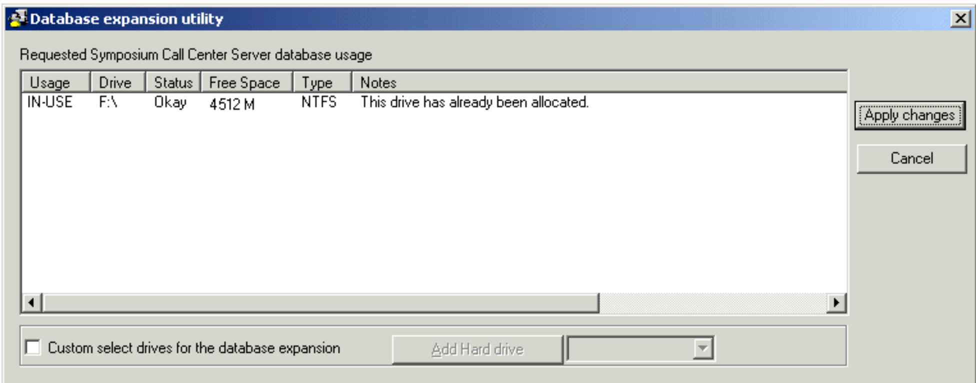
For example, you have completed a conversion from your original server to a new server. Your original server had only one database partition, D, and the database size was 2 Gbytes. Your new server has only one database partition, F. However, the F partition on your new server is 6 Gbytes. To make use of the additional 4 Gbytes on the new server's F partition, you must use the Database Expansion utility to expand the F partition.

The following procedure explains how to expand the F partition in this example.

To expand the database to make use of a larger partition during conversion or platform migration

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Expansion Utility.

Result: The Database expansion utility dialog box appears. Note that the F partition shows over 4 Gbytes of free space.

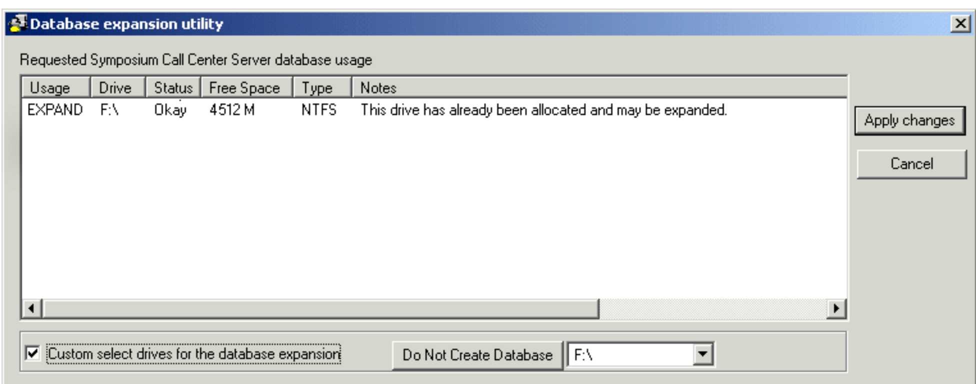


2 Click the check box beside “Custom select drives for the database expansion.”

3 From the drop-down list, select the drive you want to expand (in this case, F).

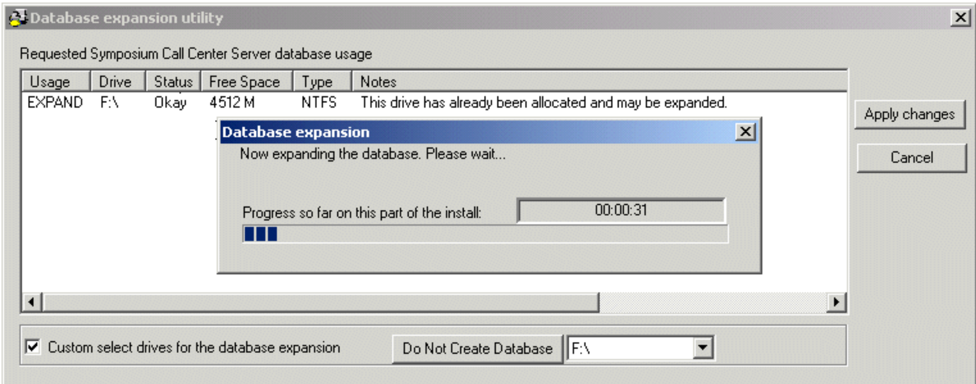
4 Click Expand Database.

Result: The Usage field for the selected drive changes to *EXPAND*:

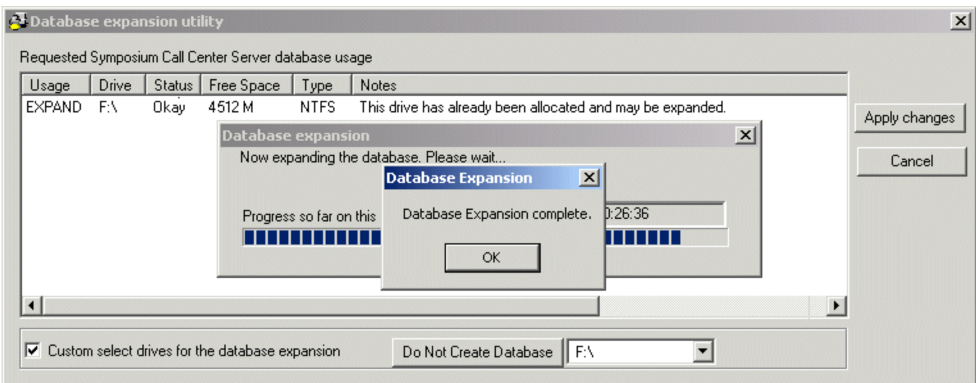


5 To expand the database into drive F, click Apply changes.

Result: A series of dialog boxes appear stating that services are being shut down. Once the process is complete, the following dialog box appears:



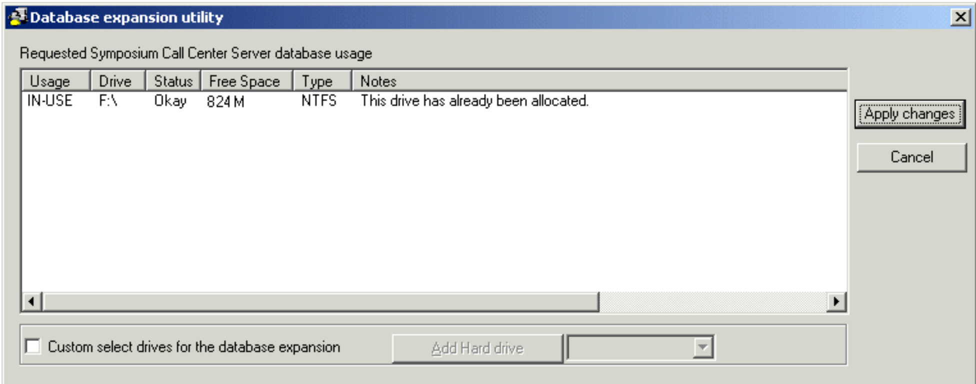
When the expansion is complete, the following dialog box appears:



6 Click OK.

Result: The Database expansion utility closes.

Tip: If you want to confirm that your database has been expanded to make use of the larger partition, restart the Database Expansion utility to check that the new partition shows the value IN-USE, and that the amount of free space has been reduced accordingly. In this example, you should see the following information:



7. Restart the Symposium Express Call Center services by choosing Start → Symposium Express Call Center → Startup.
8. Create another platform recovery disk.
9. Back up the database.

Usage column entry meanings

Each line in the Usage column displays one of the following entries:

Usage entry	Meaning
IN-USE	The drive is currently in use for the database.
EXPAND	The drive is currently in use, but you have indicated that you want to expand the database to take advantage of more disk space. **Note:** This is only necessary when performing a conversion or a platform migration, and one or more of the database partitions on the new server is larger than the original database partition. During a conversion or a platform migration, database expansion is not automatic. If you want to expand the database to take advantage of extra space, you must do it manually using this utility.
ADD	The drive is currently not in use, but you want to use it. When you add a new partition to the server, the system automatically assigns it the value ADD.

Usage entry	Meaning
---	The drive is currently not in use because you have reserved it for something other than database use. This drive is not selected for database expansion, but you can select it if it ■ has at least 2.1 Gbytes of free space ■ is formatted as NTFS

Database Restore

Introduction

Use this utility to restore a corrupted database or to restore a database as part of a migration or conversion procedure. You can restore your database from either

- a remote directory on a network computer
- a tape in a local tape drive

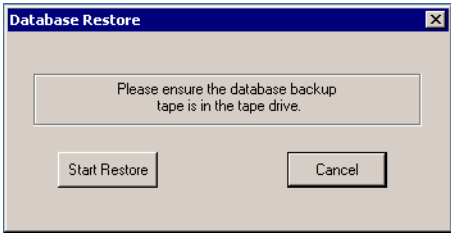
You must have backed up your database to the same location from which you want to restore it.

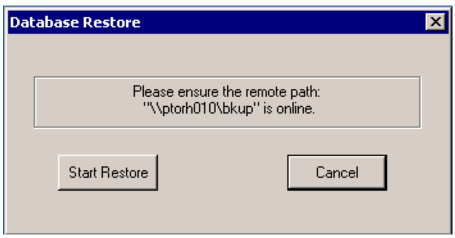
For detailed instructions on setting up both of these options, see “Setting up database backups to tape” on page 676, and “Setting up database backups to a remote directory” on page 679.

To access the Database Restore utility

1 From the Windows Start Menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears. The dialog box you see varies depending on whether you have set up your system to back up files to a tape or a remote directory.





2 If you are restoring from a tape, make sure the backup tape is in the tape drive.

3 If you are restoring from a remote directory, make sure that the remote computer is online.

4 Click Start Restore to restore the database.

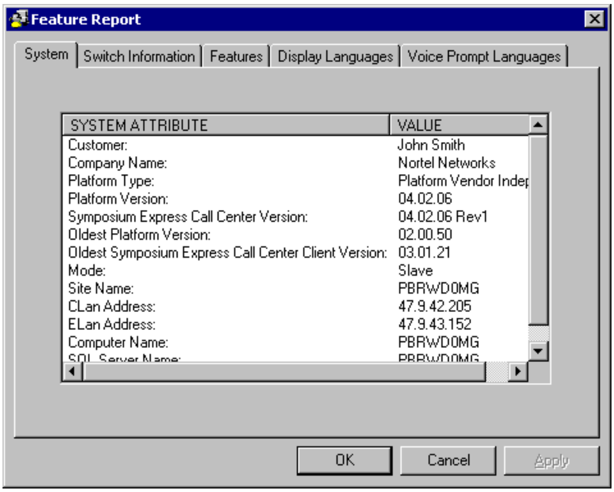
Checking the restore status

The Database Restore utility creates a log file, named Restore.log, in the path D:\Nortel\data\backup\RestoreLogs. Use a text editor, like Notepad, to open the log file and check the status of the restore.

Feature Report

Introduction

Use this utility to display system information and a list of installed features. The following illustration shows the Feature Report tabs:



Modifiable information

Only the Switch Information tab contains information that you can modify. All other tabs contain read-only information.

To start the Feature Report utility

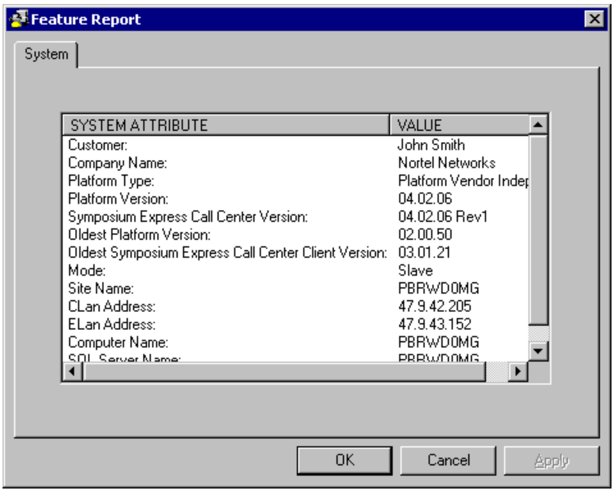
From the Windows Start menu, choose Programs → Symposium Express Call Center → Feature Report.

Result: The Feature Report window appears. See the following pages for a description and example of the Feature Report tabs.

Feature Report tabs

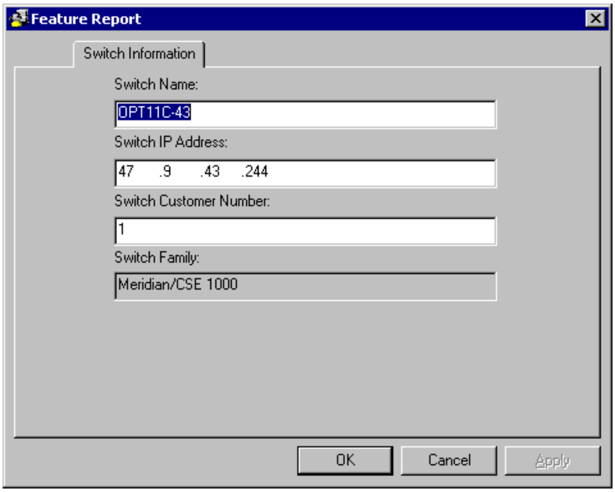
System

The System tab lists information entered at installation, including computer name, IP addresses, and site name. You cannot edit any of the items showing in this tab, as it contains read-only information.



Switch Information

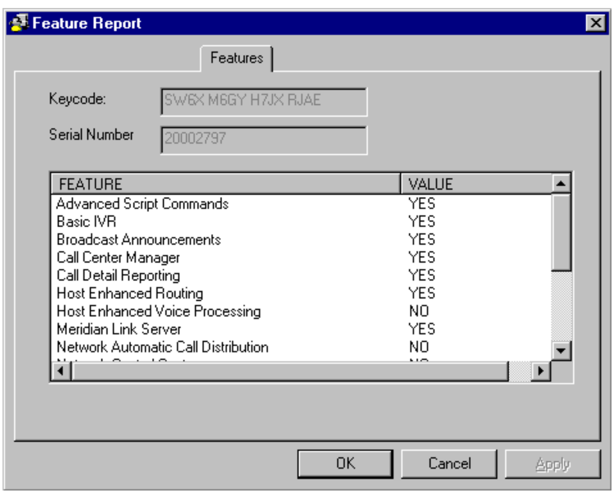
The Switch Information tab lists switch information and parameters. This information is entered during server software installation, but you can modify it after installation on this tab.



Features

The Features tab lists product features, and specifies which features are installed on the server. The features that are installed depend on what features were purchased and the keycode entered during server installation.

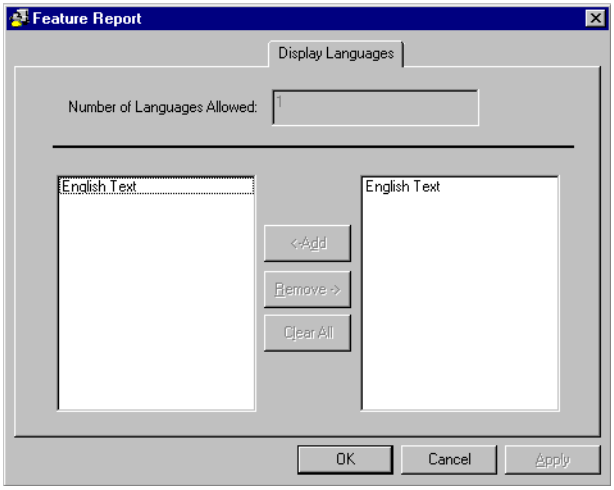
This tab contains read-only information.



Note: The value YES indicates that a feature is installed. The value NO indicates that the feature is not installed.

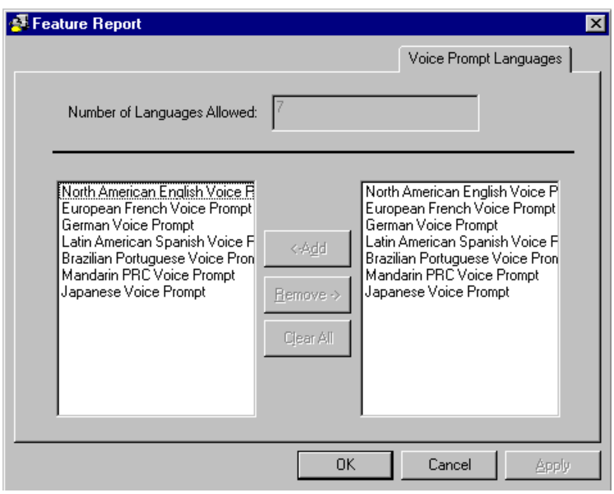
Display Languages

The Display Languages tab lists the languages that are installed for information that appears on the screen. This tab contains read-only information. The Add, Remove, and Clear All buttons are disabled.



Voice Prompt Languages

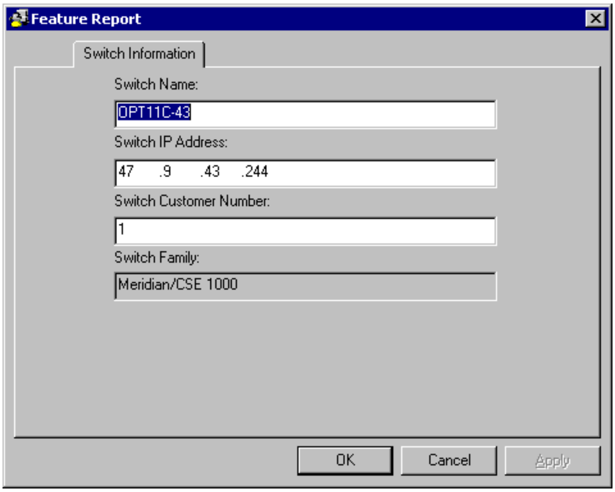
The Voice Prompt Languages tab lists the languages that are installed for voice prompts. This tab contains read-only information. The Add, Remove, and Clear All buttons are disabled.



To view or change switch information

1. From the Windows Start menu, choose Programs → Symposium Express Call Center → Feature Report.
2. Select the Switch Information tab.

   Result: The Switch Information tab appears.



3. Modify any switch information, if required.
4. To save your changes, click OK.

   Result: The system prompts you to restart the server.
5. Restart the server.

   Result: The switch information is now updated on the server.

Migration

Introduction

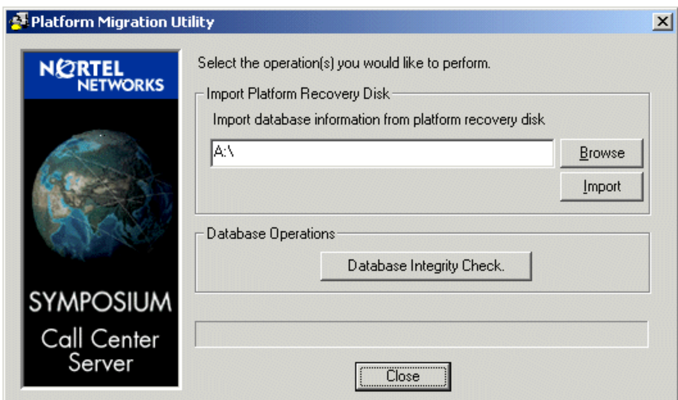
Use this utility

- during installation, upgrade, conversion, or changes to the server configuration, to import database information from a Platform Recovery Disk. For more information on creating the Platform Recovery Disk, see “Creating a server Platform Recovery Disk” on page 716.
- to perform a Database Integrity Check on the server’s database

Accessing the Migration utility

From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility dialog box appears.



Performing a Database Integrity Check

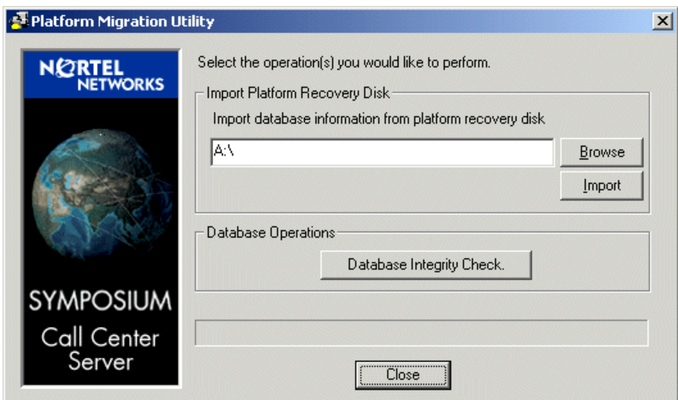
You can perform a Database Integrity Check to repair the database allocation map and the index allocation map in your database. This process can take several hours, depending on the size and state of your database, and the speed of your server. This procedure automatically takes the server offline for the duration of the check, so you must plan the timing of these checks accordingly.

To perform a database integrity check

1 Log on to the server as **Administrator** or **NGenSys**.

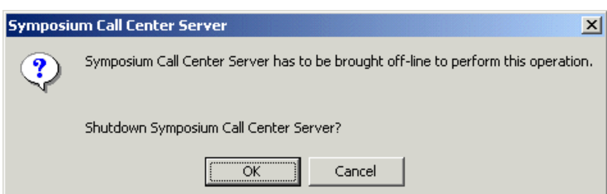
2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility dialog box appears.



3 Click Database Integrity Check.

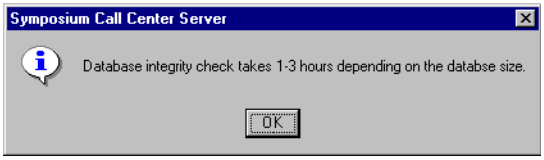
Result: The following dialog box appears:



4 Click OK.

Result: The system displays messages as it checks the status of each service running on the server.

5 Wait until the following dialog box appears:



6 Click OK to start the database integrity check.

Result: A DOS window appears on the screen. Do not close this window. The database integrity check takes from 1 to 3 hours to complete. You may not see any activity on the screen, but you should notice continuous disk activity.

7 Wait until the following dialog box appears:

8 Click OK.

9 Click Close to close the Platform Migration Utility dialog box.

10 Check the database check log (C:\DbChk.log) for database errors. To do this, use a text editor (such as Notepad).

When checking the log file, search for key words such as ERROR or MSG. Contact your Nortel Networks customer support representative for any detected database error. *Do not* put the server into service with any detected database errors, even though it may seem to be functioning normally.

Note: If you completed this procedure as part of a server recovery scenario or a platform migration, return to the chapter that referenced this procedure now. That chapter tells you what procedure to perform next.

To import database information from the Platform Recovery Disk

You can use the Migration utility to import database information during conversion, migration, and recovery procedures. You can import the information from a Platform Recovery Disk located either on a floppy disk or in a remote directory.

1 From the Windows Start menu, click Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility dialog box appears. The system defaults to a floppy drive located on drive A.

2 If your Platform Recovery Disk is located on a floppy disk, insert it in the drive, and then click Import to import the database information.

Note: If your Platform Recovery Disk is located in a remote directory, click Browse to navigate to the directory. Then, when you have selected the directory, click Import.

3 The system imports the data and notifies you when the process is complete.

Network DB Backup Path

Introduction

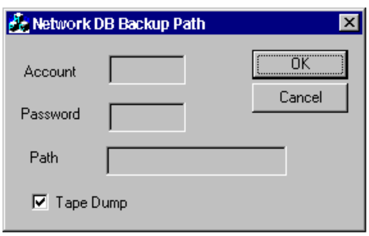
You can use the Network DB (database) Backup Path utility to select whether to back up your database to a remote directory on a network computer, or to a tape. If you choose to perform a backup to a remote directory, use this utility to enter the account information and the path of the remote directory in Symposium Express Call Center. If you choose to perform a backup to a tape, use this utility to select the tape option.

Note: If you choose the remote directory option, you must set up the remote directory and user accounts on the server in Symposium Express Call Center and the remote computer before using this utility. For more information, see "Setting up database backups to a remote directory" on page 679.

To start the Network DB Backup Path utility

From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path window appears.



To select the tape backup option

For more information on tape backups, see "Setting up database backups to tape" on page 676.

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path window appears.

2 Ensure that the Tape Dump check box is selected.

3 Click OK.

Result: The next scheduled backup will go to the tape drive.

To select the remote directory backup option

Before you choose this option, you must first complete a series of steps to set up the connection between the server in Symposium Express Call Center and the remote directory. For more information, see “Setting up database backups to a remote directory” on page 679.

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path window appears.

2 In the Network DB Backup Path window, ensure that the Tape Dump check box is deselected.

3 In the Account box, type the User Name that you assigned to the account on both the network computer and the server.

4 In the Password box, type the password that you assigned to the account on both the network computer and the server.

5 In the Path box, type the network path for the shared directory that you created on the network computer. Use the following format:

computername\sharename

6 Click OK to save your settings and exit.

Result: Symposium Express Call Center is now set to back up the database to the remote directory on the network computer.

- If you want to perform a backup, see Section B: “Performing database backups” on page 691.
- If your backup is already scheduled, the system automatically sends the database backup files to the remote directory.

PEP Viewer

Introduction

You can use the Product Enhancement Package (PEP) Viewer utility to view a list of all PEPs and Service Update packs (SUs) that have been installed on the server. Use this utility before installing a new PEP or SU to verify that it has not already been installed.

You can also use the PEP Viewer utility to remove all PEPs and SUs installed on the server. You can use this feature when you are installing new PEPs and SUs on the system and want to remove all existing PEPs and SUs from the system. You can also use it as part of a recovery scenario or when you want to remove everything and use the server for a different purpose.

You cannot use this utility to remove specific PEPs or SUs. Instead, you must use the Windows Add/Remove Programs utility. For more information, see “Uninstalling server PEPs and SUs” on page 285.

To start the PEP viewer utility

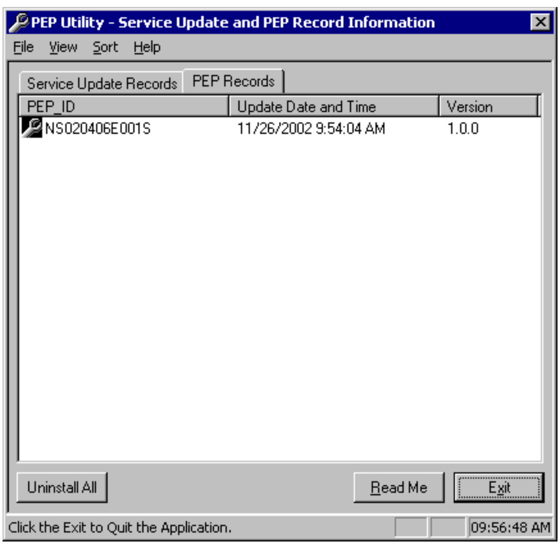
From the Windows Start menu, choose Programs → Symposium Express Call Center → PEP Viewer.

Result: The PEP Utility - Service Update and PEP Record Information window appears, displaying the latest installed SU.

To view a list of all the PEPs installed on a server

Click the PEP Records tab.

Result: The list of installed PEPs appears.



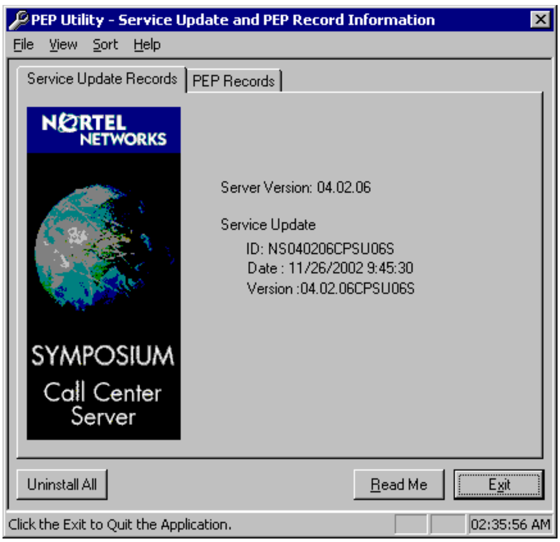
Tip:

- Double-click a PEP to display its readme file.
- Use the Sort menu to sort the PEPs by ID or date.

To remove all the PEPs and SUs installed on a server

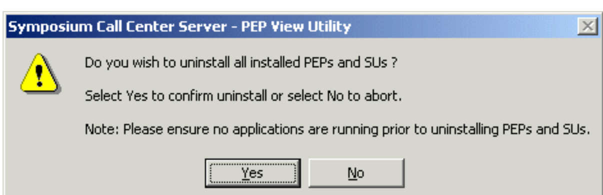
1. Make sure all running applications are closed.
2. From the Windows Start menu, choose Programs → Symposium Express Call Center → PEP Viewer.

   Result: The PEP Utility - Service Update and PEP Record Information window appears.



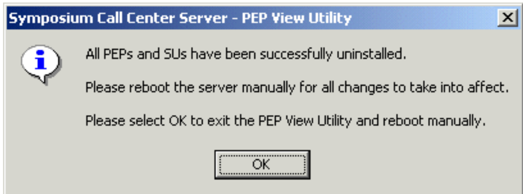
3. To remove all the PEPs and SUs installed on the server, click Uninstall All.

   Result: The following window appears:



4 Click Yes.

Result: The PEPs and SUs are uninstalled and the following window appears:



5 Click OK.

Note: You must restart the system to ensure that all the changes take effect.

Registry Maintenance

Introduction

Use this utility to perform a registry comparison between two remote computers, a remote and a local computer, or two subkeys on the local computer. This utility also has backup and restore capabilities.

The comparison picks up any difference between the two registry entries, such as values with the same name but different data, and values or subkeys that exist in one registry but not on the other. Filtering options are available.

To access the Registry Maintenance utility

From the Windows Start menu, choose Programs → Symposium Express Call Center → Registry Maintenance.

Result: The regexam window opens. From this window, you can perform the following tasks:

- Compare the registry on the server PC with the registry on a different PC.
- Compare the structure of the registry with the structure in an input file. Any differences between the two are noted, including different data and missing/extra keys/values. The input file is editable, and you can customize it to have a set or range of accepted values for certain keys instead of a fixed value.
- Write (dump) the structure of the registry starting from a given subkey. This option is an easy method for generating an initial input file for the detection option.
- Restore an earlier version of the registry.

Setup Configuration

Introduction

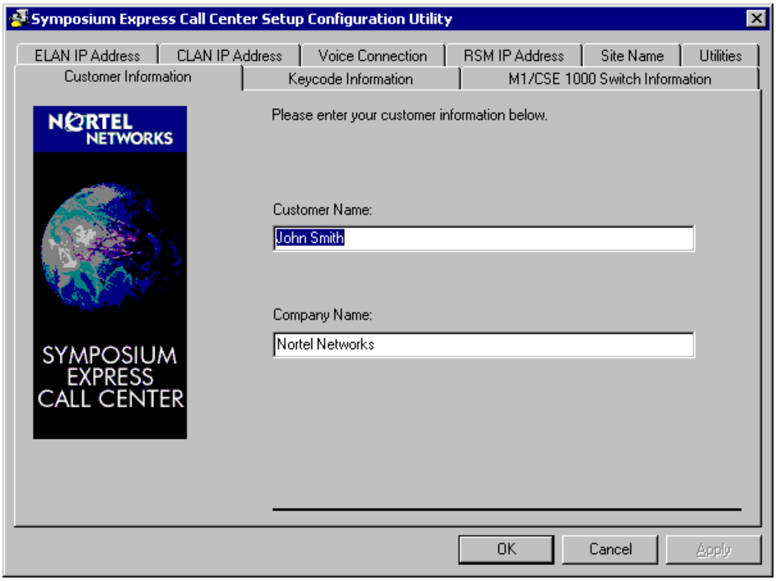
Use the Server Setup Configuration utility to

- configure Symposium Express Call Center and the database after performing a new installation. For more information on the software and database installation process, see “Configuring the server and database (phase 3)” on page 156.
- enter server configuration data after reinstalling the server software and performing a platform migration
- configure the connection to your voice processing system
- import server configuration data from a file, or export configuration data to a file
- create a Platform Recovery Disk
- enable new features by upgrading your keycode

To start the Server Setup Configuration utility

From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Symposium Express Call Center Setup Configuration Utility window opens, displaying a series of tabs.



Updating server configuration information

After you have successfully installed the server software, you can use the Server Setup Configuration utility to update configuration data that has changed. After you update the information and click OK in any of the tabs, the system

- validates all updated data that you have entered and notifies you if it is incorrect
- verifies that the Symposium Express Call Center computer name matches the current database computer name. If the names are different, then the Server Setup Configuration utility updates the database name to match the server's computer name.

  Note: You can also use the Computer Name Sync utility to perform the same verification and synchronization. For more information on this utility, see "Computer Name Sync" on page 576.
- asks if you want to create a Platform Recovery Disk. For more information, see "Creating a server Platform Recovery Disk" on page 716.
- prompts you to restart the server to register the changed information

You can update configuration information in the following tabs:

- **Customer Information** Use this tab to change your customer name or company name.
- **Keycode Information** Use this tab to enter a new serial number and keycode when you enable new features on your server. When you click OK, the system verifies that the numbers are valid, and that they enable new features.

  Note: You cannot enter a number for a version of the software that is lower than that which you currently have installed.

  When you enter a keycode and press OK, the system also validates whether it matches the serial number, and that the server and switch type corresponding to the new keycode have not changed from the previous keycode.
- **M1/CSE 1000 Switch Information** Use this tab to update switch information, such as the switch name, IP address, and customer number.
- **ELAN IP Address** Use this tab to update the ELAN IP address of the server.
- **CLAN IP Address** Use this tab to update the CLAN IP address of the server.
- **Voice Connection** Use this tab to configure the connection to the voice processing system (CallPilot or Meridian Mail).
- **Site Name** Use this tab to change the site name for Symposium Express Call Center.

Adding server features with a keycode upgrade

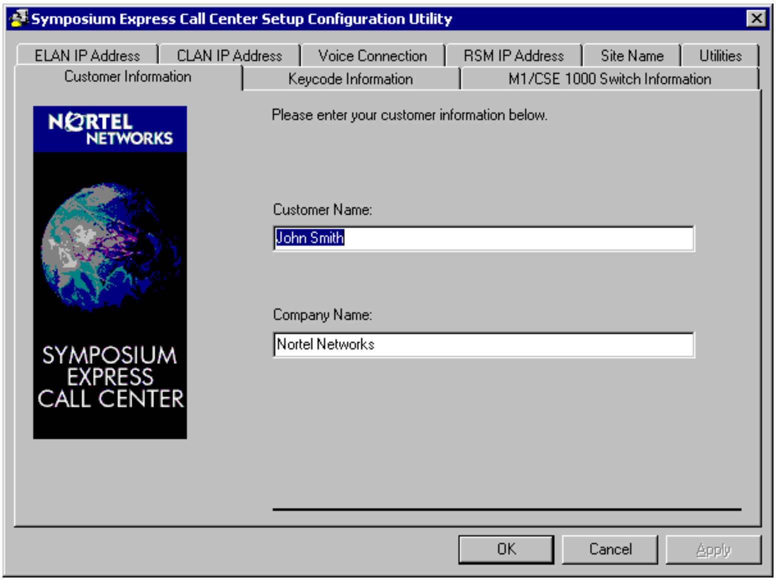
Use the Keycode Information tab in the Server Setup Configuration utility to enable new features on your server. When you purchase the new features, you are given a new keycode. Type this keycode in the Keycode Information tab and click OK to reconfigure your system and activate the new features.

Note: You cannot enter a keycode for a version of the software that is lower than that which you currently have installed.

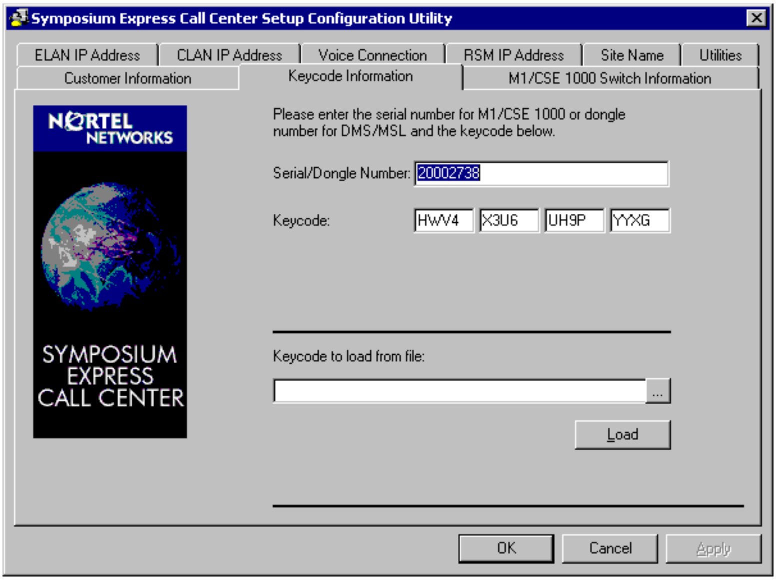
To upgrade the Symposium Express Call Center keycode

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Symposium Express Call Center Setup Configuration Utility window opens, displaying a series of tabs.



2 Click the Keycode Information tab.



3 In the Keycode boxes, type the keycode for the upgraded features.

4 Click OK.

Result: The system shuts down the services and reconfigures your server setup. After the reconfiguration, the system prompts you to create a Platform Recovery Disk.

5 Click OK to create the Disk (or click Cancel if you do not want to create the Disk).

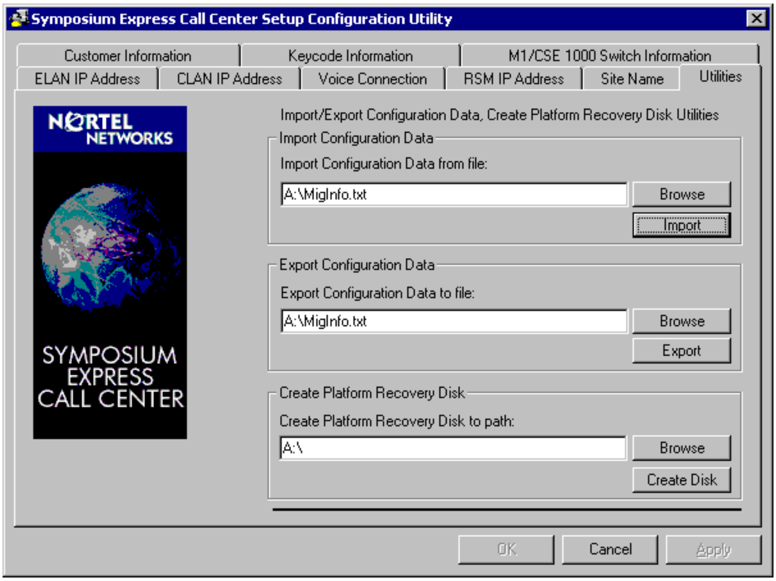
Result: The system prompts you to restart the server.

6 Restart the server to save your configuration settings.

Importing and exporting configuration data

You can use the Utilities tab of the Symposium Express Call Center Setup Configuration Utility to import configuration data from a text file, or to export configuration data to a text file. The file can be located on a floppy disk, on a drive that you specify on the server, or in a remote directory.

Note: If you specify a remote directory, you must map a drive to the directory before you import or export configuration data.



The system defaults to a file called MigInfo.txt, located on drive A. This is the name of the configuration file that the system saves when you create a Platform Recovery Disk. However, you can specify a different name for this file, and use the Browse feature to navigate to a different save location.

To import configuration data from a file

You can import configuration data when you need to recover your server setup, or when you need to reinstall the server software. You can import the data from a text file that you have previously exported, or you can import the MigInfo.txt file that the system saved when you created the Platform Recovery Disk.

1. In the Utilities tab, type the path and name of the file that you want to import, or click Browse to locate the file.
2. Click Import.

   Result: The system imports the configuration data to the tabs in the Symposium Express Call Center Setup Configuration Utility.
3. Click any tab other than the Utilities tab.

4 Click OK.

Result: The system reconfigures your server setup. After the reconfiguration, the system prompts you to create a Platform Recovery Disk.

5 Click OK to create the Disk (or click Cancel if you do not want to create the Disk).

Result: The system prompts you to restart the server.

6 Restart the server to save your configuration settings.

To export configuration data to a file

After configuring your server, you can export its configuration settings to a file located on a floppy disk, or in a directory located on the server, or on a remote computer. You can then import this file if you need to recover your server at any point by using the Import function on the Utilities tab.

1 In the Utilities tab, type the path and name of the file that you want to export, or click Browse to navigate to the file and save location.

2 Click Export.

Result: The system exports the configuration data to the specified location.

3 After the export is complete, a message box appears informing you that it was successful.

4 Click OK.

Creating a Platform Recovery Disk

When you create a Platform Recovery Disk, the system saves both server and database configuration data in the following four text files:

- **MigInfo.txt** This file contains all the server setup configuration information.
- **dbdvc.txt** This file contains information about the size and location of your database files.
- **dbseg.txt** This file contains information about the data and log segments in your database.

- **rbackup.txt** This file includes details about the user name, password, and path used when you perform a database backup to a remote directory. This is the information entered in the Network DB Backup Path utility.

You can use these files if you have to recover your server. For more information on creating and using the Platform Recovery Disk, see "Creating a server Platform Recovery Disk" on page 716.

Shutdown

Introduction

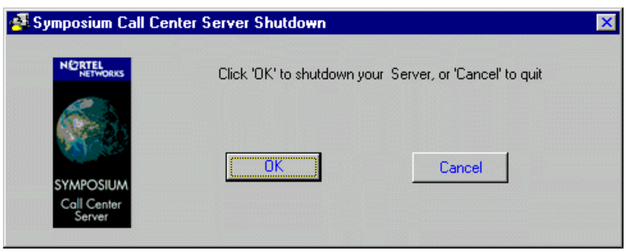
Use this utility to shut down Symposium Express Call Center services. You may have to shut down services prior to performing some maintenance activities.

This utility informs you about the state of each service and describes each action taken by the utility. At the end of the process, the utility provides general information on whether the system is completely shut down, and provides appropriate messages if there are services that cannot be shut down. The utility also reports any errors encountered during the shutdown.

To shut down the server

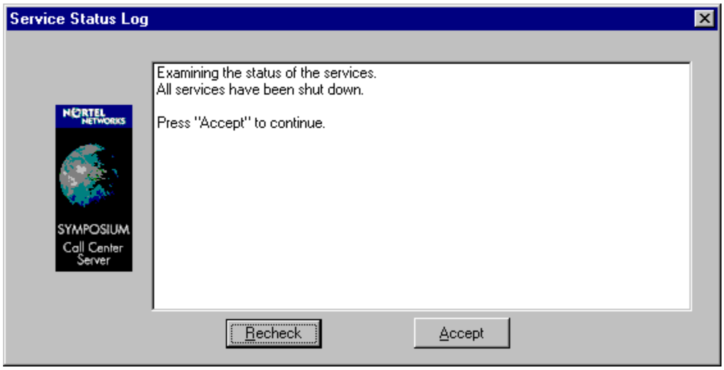
1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Shutdown.

Result: The Symposium Call Center Server Shutdown dialog box appears.



2 Click OK.

Result: The utility shuts down all services, and then the Service Status Log dialog box appears. This log displays any services that failed to shut down. Click Recheck to refresh the service statuses.



3 If any services are still running, use the control panel Administrative Tools → Services icon to manually shut down the listed services. Then click Recheck to update the status log.

4 Click Accept to exit the utility.

Startup

Introduction

Use this utility to start up the Symposium Express Call Center services after they have been stopped by the Shutdown utility.

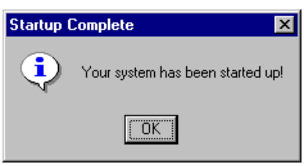
To start up the server

1 From the Windows Start menu, choose Programs → Symposium Express Call Center → Startup.

Result: The Symposium Call Center Server Startup dialog box appears.

2 Click OK.

Result: After all services have started, the Startup Complete dialog box appears.



3 Click OK.

System Information

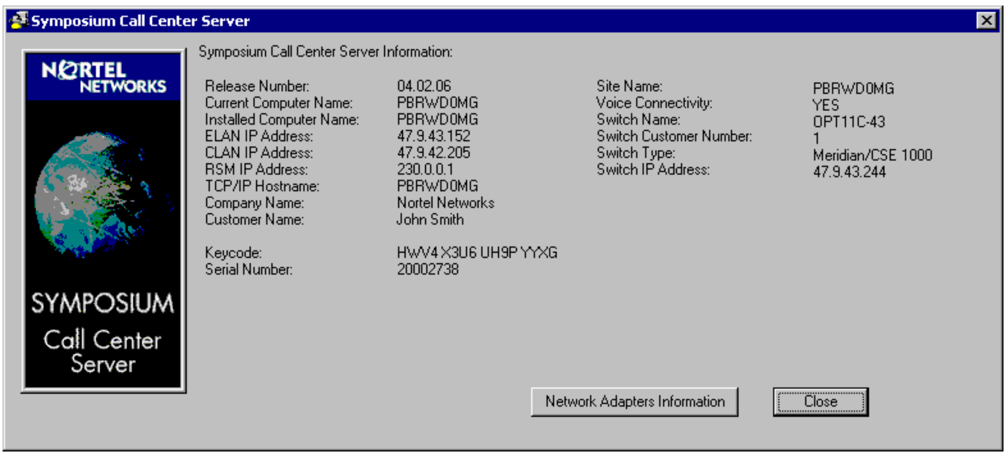
Introduction

Use this utility to view particulars about the Symposium Express Call Center system, such as names, IP addresses, and system numbers.

To access the System Information utility

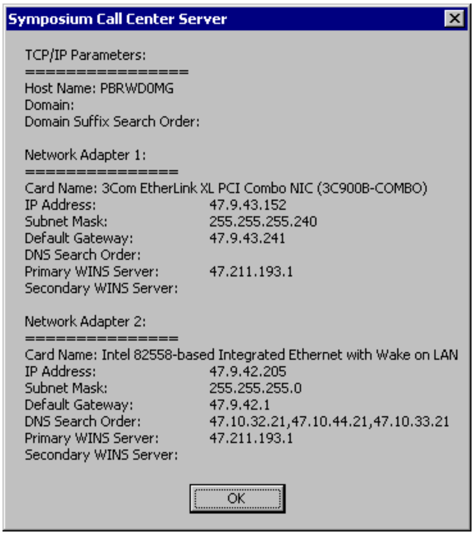
From the Windows Start menu, choose Programs → Symposium Express Call Center → System Information.

Result: The Symposium Call Center Server information window appears.



To obtain Network Adapters Information

You can use this utility to obtain detailed information about network addresses by clicking Network Adapters Information. When you click this button, the following window appears:



After viewing the information on this screen, click OK to return to the System Information utility main window.

System Monitor

Introduction

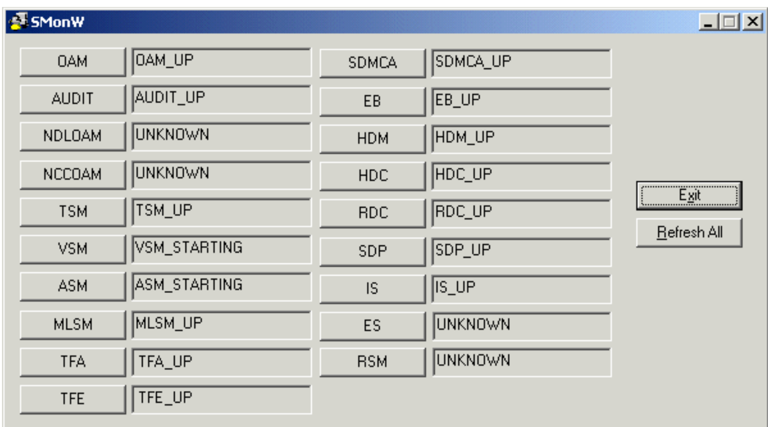
You can use the System Monitor utility to view the current status of all Symposium Express Call Center services.

To start the System Monitor utility

To start this utility, you must use the Windows Start menu.

From the Windows Start menu, choose Programs → Symposium Express Call Center → System Monitor.

Result: The SMonW window appears.



Some services take a few minutes to become active. When a service is running properly on Symposium Express Call Center, the SMonW window shows the status as UP.

If a service has to be reactivated or refreshed, then click Refresh All. To refresh individual services, click the appropriate button.

For more information on the SMonW window, see "Troubleshooting problems with Symposium Express Call Center services" on page 636.

Section B: Troubleshooting

In this section

Troubleshooting installation problems

Introduction

Use this section to determine why errors occur during installation and how to resolve them. Information about M1 patches is available on the Meridian PEP Library (MPL) web site at https://www21.nortelnetworks.com/MPL (for Europe), or from https://www43.nortelnetworks.com/MPL (for North America).

Server will not install

Ensure that the client software is not already installed on the server PC.

Keycode is not accepted

If the keycode contains a string of wide characters (such as “www”), you may not be able to enter the fourth character in the keycode. To resolve this problem, create a keycode file on a removable disk, and load this file during installation.

To create and load a keycode file

1 Log on to Windows 2000 Server or Advanced Server.

2 From the Start menu, choose Programs → Accessories → Notepad.

3 Enter the following information in the Notepad file:

key1 key2 key3 key4
nnnnnn

where *key1* to *key4* are components of the keycode (separated by spaces) and *nnnnnn* is your switch serial number.

Note: To determine the switch serial number, use the REQ TID command in LD 22. On the Options 51C, 61C, 71C, and 81C, the keycode is generated against the System ID, but on the Option 11C, the keycode is generated against the Auxiliary ID.

4 Insert a disk in your floppy disk drive.

5 Choose File → Save.

6 Save the file as **keycode.ntk** on the disk.

7 Run the Setup program again to install the server software. (Refer to Chapter 4, “Server software,” for detailed instructions.)

8 When the Keycode Information window appears, in the Keycode to load from file section, enter the path to the keycode file (for example, a:\keycode.ntk).

9 Click Load.

10 Click Next to continue the installation.

11 When the installation is complete, store the keycode disk in a secure place.

The installation is interrupted

Disable any screen saver, wallpaper, or antivirus software on the server, and then reinstall.

Troubleshooting server problems

Introduction

To perform troubleshooting for the software installation, refer to the chart on page 629.

Troubleshooting chart for server installation problems

Symptom	Probable cause	Action
Error messages from the database setup during server installation.	Files copied incorrectly; other programs running on the server during installation.	■ Uninstall, and then reinstall the software. ■ Close any other programs running on the server (for example, Control Panel) before reinstalling.
Error messages at the end of the server software installation.	Files copied incorrectly.	Uninstall and then reinstall the software.
Server fails to initialize with the switch.	Incorrect switch parameters were entered during server installation.	Verify and change switch parameters defined on the server. See “Feature Report” on page 594.
Blue screen appears after installing pcAnywhere while working in third-party program.	Incompatible third-party software is installed on the server.	Uninstall any third-party software applications, such as word processing and graphics programs, and then restart the server. Consult Symantec’s web site at www.symantec.com/pcanywhere for more information.

Symptom	Probable cause	Action
Blue screen appears during restart after pcAnywhere installation.	Incompatible video driver.	You need to restart the server in Safe mode and then uninstall and reinstall pcAnywhere. 1 Press Reset to restart the server. 2 While the server is starting, a continuous line appears across the bottom of the window above the text “For troubleshooting and advanced startup options for Windows 2000, press F8.” Immediately press F8. 3 Use the arrow keys to highlight Safe mode, and then press Enter. The server restarts in Safe mode. **Note:** If you cannot restart the server in Safe mode, then you must change the GINA that the server is calling. For more information, search on the Symantec web site (www.symantec.com) for document ID number 2001060615310512. 4 Uninstall pcAnywhere. For more information, see “Uninstalling pcAnywhere 10.5” on page 188. 5 Update the server’s modem and video drivers by consulting the driver manufacturers’ web sites for the latest versions. 6 Reinstall pcAnywhere. For more information, see “Installing pcAnywhere version 10.5” on page 173. 7 Restart the server.

When a system error occurs

For all errors, record the error messages, the system configuration, and actions taken before and after the error occurred. If the problem persists, contact your Nortel Networks customer support representative.

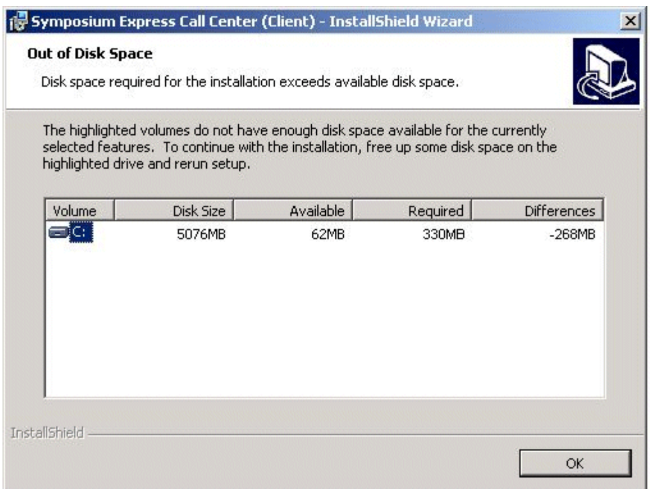
Troubleshooting client problems

Introduction

Use this section to determine why errors occur during client installation and operation, and how to resolve them.

Out of disk space message appears during client installation

If you do not have enough disk space available on the computer onto which you are trying to install the client software, the system halts the installation and displays a window similar to the one shown below:



Note: This is an example only; the information shown in the window varies depending on the specific configuration of the computer.

If you get this message, you must remove unnecessary data and files from the computer until the required space is available. Then retry the installation. For tips on removing unneeded files, consult the online Help provided with the operating system.

Problems connecting to the server

Inability to connect to the server can be caused by the following problems:

- The IP address in the shortcut is incorrect.
- The customer LAN is unavailable.
- The server is down.

To troubleshoot inability to connect to the server

1. Verify that the server is up and running.
2. Verify that TCP/IP is installed by typing **ipconfig** in an MS-DOS window.
3. At the client PC, check the IP address in the shortcut by following these steps:
   - **a.** Right-click the icon on the desktop.
   - **b.** Click the Shortcut tab.
   - **c.** Check the IP address at the end of the Target box. If it is incorrect, correct it and click OK.
4. On the client PC, check the Protocols tab in the Network control panel to verify that the TCP/IP protocol is installed. Display the properties of the TCP/IP protocol to find the client's IP address.
5. On the client PC, ping the client PC by entering the following command in an MS-DOS window:

   ping *aaa.bbb.ccc.ddd*

   where *aaa.bbb.ccc.ddd* is the IP address for the client PC. If the ping fails, the network card drivers may be incorrect. Check the Network control panel to make sure that the network card, cable, and network drivers are installed correctly. Test the network card with the test utility provided by the manufacturer (if any).
6. Repeat step 5 on the server PC.
7. On the client PC, ping the server by entering the following command in an MS-DOS window:

   ping *aaa.bbb.ccc.ddd*

where *aaa.bbb.ccc.ddd* is the IP address for the server PC. If the ping fails, check the network hardware, and make sure any hubs are configured correctly. Also, make sure IP addresses are unique, and that all resources are within the same subnet mask.

8 On the server PC, ping the client by entering the following command in an MS-DOS window:

ping *aaa.bbb.ccc.ddd*

where *aaa.bbb.ccc.ddd* is the IP address for the client PC. If the ping fails, check the network hardware, and make sure any hubs are configured correctly. Also, make sure IP addresses are unique, and that all resources are within the same subnet mask.

9 Determine if you can ping your own server by entering the following command in an MS-DOS window:

ping *aaa.bbb.ccc.ddd*

where *aaa.bbb.ccc.ddd* is the IP address of the server. If you cannot ping your own server, it usually indicates that the TCP/IP protocol could not be bound to the network interface card. Check to see if you are using the correct network interface card driver.

Call Routing wizard or the Agent/Skillset assignment application fails to start

The following errors may occur after installing the client software. The message `An unsupported operation was attempted` appears when attempting to start the Agent/Skillset Assignment application, Voice Services, or the Call Routing wizard. If you get this error, follow these steps:

1 From the Start menu, choose Run.

2 Type **command**, and then press Enter.

3 Navigate to the Windows\system directory.

- For Windows 2000, go to WINNT\system32.
- For Windows XP, go to WINDOWS\system32.

4 Type **regsvr32.exe pvdt70.ocx**, and then press Enter.

Note: To register the controls, you may need to copy pvdt70.ocx to the same directory as regsvr32.exe.

Uninstall GRTD causes client to function incorrectly

If the client software coresides with any Real-Time Interface (RTI) applications (such as GRTD or a customer-supplied RTI application), and either application is uninstalled, the remaining application may fail to operate properly. Symposium Express Call Center and RTI applications share common files and communication registries. If this problem occurs, you may need to reinstall the application.

Uninstall (stand-alone client) does not completely clean the registry

In some instances, the uninstall process may not remove all files associated with the Symposium Express Call Center folder. Remnant disk files should not adversely affect subsequent installations of the client software. If you experience problems uninstalling the client software, remove the following files, folders, and registry entries manually (only if there is no other Nortel Networks-supplied software installed):

Files and folders:

- C:\secc42.log
- *<install directory>*\Program Files\Nortel Networks\Symposium Express Call Center

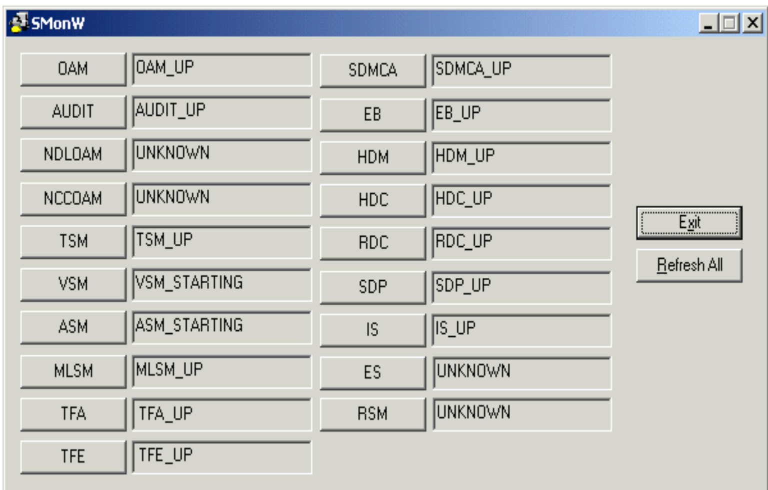
Registry entries:

- HKEY_LOCAL_MACHINE\SOFTWARE\Nortel

Troubleshooting problems with Symposium Express Call Center services

System Monitor window

The System Monitor window (SMonW) is a server utility that you can open to view the status of services on the server. Some services take a few minutes to become active. When a service is running properly on Symposium Express Call Center, the SMonW window shows its status as UP.



ATTENTION

Only one SMonW window should ever be open at any given time. More than one open SMonW window causes services to shut down.

If a service must be reactivated or refreshed, click Refresh All. To refresh individual services, click the appropriate button.

Symposium Express Call Center services

All of the Symposium Express Call Center functions are Windows services. Each service, as described in the following table, is started automatically by the Services manager when the server starts up:

Server service	Shown as	Purpose
Operations, Administration and Management	OAM	System operation, administration, and management
Auditing	AUDIT	Monitor function that manages all services
Network services (Meridian 1/CSE 1000 only)	NDLOAM	(Not used for Symposium Express Call Center. Shows the value UNKNOWN in SMonW window.)
Network services (Meridian 1/CSE 1000 only)	NCCOAM	(Not used for Symposium Express Call Center. Shows the value UNKNOWN in SMonW window.)
Telephony Service Manager	TSM	Telephony interface between switch and server
Voice Services Manager	VSM	Interface to Meridian Mail via ACCESS VOICE processing interface
Agent Skillset Manager	ASM	Agent and skillset handling
Meridian Link Services Manager	MLSM	Allows third-party applications to interface with Symposium Express Call Center
Task Flow Access	TFA	Allows third-party access via scripting commands (Data Exchange server)
Task Flow Executor	TFE	Executes all scripts and handles all calls
Statistical Data Manager Configuration	SDMCA	Manages all of the other statistical collection services
Event Broker	EB	Receives and manages events from other services
Historical Data Manager	HDM	Manages all of the historical data collected by HDC

Server service	Shown as	Purpose
Historical Data Collection	HDC	Collects all of the historical data
Real Time Data Collector	RDC	Collects and generates real-time statistics for displays
Statistical Data Propagator	SDP	Distributes incoming statistical data to the appropriate service
Intrinsic Services	IS	Manages skillset intrinsic data
Event Server	ES	(No longer used for Symposium Express Call Center. Shows the value UNKNOWN in SMonW window.)
Real-time Statistic Multicast	RSM	(Not used for Symposium Express Call Center. Shows the value UNKNOWN in SMonW window.)

TFA and TFE do not come up after a new installation

This is normal. These services come up only after the latest Service Update pack and PEPs have been applied.

NDLOAM, NCCOAM, ES, and RSM services show the status UNKNOWN

This is normal. These services are not used for Symposium Express Call Center.

Other services do not come up

This problem can occur if you have more than one System Monitor window open.

Troubleshooting Voice Services problems

Introduction

Use this section to determine how to resolve problems with the Voice Services card. This section also explains the default call behaviour when different errors occur.

Voice Services monitor

The Voice Services monitor provides a status of the link between the Voice Services card and the Symposium Express Call Center server. Whenever Voice Services does not appear to be functioning properly, you should check the Voice Services monitor to identify any connection problems. If the ELAN goes down or the Voice Services card shuts down, the VS monitor displays “Link down.” If it is searching for the status of the card, it displays “Link unknown.”

Channels cannot be acquired by the VS service and the status of the Voice Services card is “logged in”

If you execute a data import in Symposium Express Call Center after Voice Services have been configured, Voice Services ports may be acquired as agents instead of voice ports. Add each Voice Services port as a voice port and reaquire it. For more information, refer to Chapter 13, “Configuring a Voice Services card.”

Channels cannot be acquired by the Voice Services RPC service and the Voice Service link is in “Link up” state

Ensure that the Voice Services keycode is correct and that it has been added using the Voice Services configuration utility. For more information, refer to Chapter 12, “Using the configuration utilities.”

All calls are defaulted to the Voice Services default DN

When this occurs, communication with the Voice Services card has been lost. If this happens, ensure that

- the network connection to the Voice Services card is available
- the Voice Services card is enabled (in active state)
- the VS service and the VS Monitor are running
- the correct IP address is entered in the Voice Services configuration utility. For more information, refer to Chapter 12, “Using the configuration utilities.”
- the correct card location is specified in the Voice Services configuration utility. For more information, refer to Chapter 12, “Using the configuration utilities.”

For more information on Voice Services default behaviour, refer to “Voice Services default behaviour” on page 643.

Symposium Express Call Center greeting or wait announcements are not played by Voice Services card

Ensure that Symposium Express Call Treatments are correctly configured. For instructions on configuring call treatements, refer to the *Symposium Express Call Center Management Guide*. In particular, ensure that

- you select “Meridian Mail, CallPilot or IVR” as the announcement type
- you enter the correct IVR ACD DN for calls to be transferred to hear announcements
- you select to play an announcement ID and that a valid announcement ID is entered

A specific Symposium Express Call Center greeting or wait announcement is not played

If a particular announcement is skipped and the caller continues to hear ring-back or the next appropriate greeting, the Voice Services announcement may have been deleted, renamed, or restored out of synchronization.

IF the announcement file (.sbc file) is	THEN you must
renamed	update the new name in the treatment properties. In the properties dialog box, click Browse and find the new name. For more information, refer to the *Symposium Express Call Center Management Guide*.
deleted	either add it again or restore it from a previous backup. For more information on Voice Services restores, refer to Chapter 16, “Restoring data.”
restored out of synchronization	redo the restore ensuring that the Voice Services PCMCIA card backup file and the Voice Services database backup file are from the same date. For more information on Voice Services restores, refer to Chapter 16, “Restoring data.”

Incorrect Symposium Express Call Center controlled announcements are played

If incorrect announcements are played, check the following items:

- Check that the call treatment is configured properly. For more information, refer to the *Symposium Express Call Center Management Guide*.
- Check that the switch map entries in the Voice Services Administration window are correct for each IVR ACD Queue.
- Check the position IDs for each port/channel. You can check this as follows:

a. Log on to the Meridian 1.

b. Load Overlay 11 by typing **LD 11** at the prompt.

c. Respond to the prompts as shown in the table. If a prompt appears that is not in the table, press Enter to accept the default value:

Prompt	Response	Description
REQ	PRT	
TYPE	2616	
TN	xx xx xx	If your switch is an Option 11, enter the slot number of the card. If you use any other type of switch, enter the loop/shelf/card number of the card.

Configuration changes made using the Voice Services configuration utility do not take effect

Changes made using the Voice Services configuration utility do not take effect until you close down the Voice Services configuration utility and restart the VS service. This is done by clicking Stop in the VS service monitor, waiting until the service is down (the link state changes to Link Down), and then clicking start to restart the VS service.

Digits collected from a Prompt/Collect digits treatment are not being sent to TAPI

Ensure that the following entries are correctly set in the VS Card Properties window of the Voice Services configuration utility:

TAPI Server IP Address: *aaa.bbb.ccc.ddd* (address of TAPI server)

TAPI Port Address: (default is 5000)

After you make changes, you must restart the VS service.

Digits button is disabled in the Voice Services Administration window

Prompt/Collect digits is a keycode-enabled feature. Ensure that the Symposium Express keycode includes the Prompt/Collect digits feature.

Prompt/Collect digits treatment does not verify the digits entered

Select the treatment from the Voice Services Administration window, and then click Properties. Ensure that the Verify option has been selected. Also, check that the digit voice prompts have been created and recorded for each digit from zero to nine. For more information, refer to the *Symposium Express Call Center Management Guide*.

Voice Services default behaviour

Use the following table to determine what default behaviour occurs after several error conditions:

System state	Voice Services monitor status	Call behaviour	Service behaviour
Ethernet link goes down	Service Restarting: Link Down	After polling times out (approximately 15 seconds), all calls in the system are routed to the default DN.	The Voice Services RPC service restarts and continually attempts to connect until successful. At this point, calls are treated normally.

System state	Voice Services monitor status	Call behaviour	Service behaviour
Voice Services card crashes or is rebooted	Service Running: Link Unknown	Calls currently receiving treatment are disconnected. Calls waiting in the IVR ACD queue for an available Voice Services agent will continue to ring until the card restarts. Then the call is transferred to the night call forward DN set up for the ACD queue.	The Voice Services RPC service restarts and continually attempts to connect until successful. When the service reconnects, it logs off all Voice Services agents, and all calls are forwarded to the night call forward DN. When the problem is resolved, Voice Services agents are then logged on again, and calls are accepted normally.
Server crashes		After polling times out (approximately 15 seconds), all calls are routed to the default DN as specified in the Voice Services configuration utility.	When the problem is resolved, the VS service starts up automatically and reconnects to the Voice Services card, and calls are accepted normally.
Card is disabled	Service Running: Link Up	Voice Services agents are logged off. All calls are routed to the night call forward DN on the IVR ACD DN used for Voice Services.	
Card is enabled	Service Running: Link Up	Voice Service agents are logged on. All calls will receive regular treatment.	Service is normal.

System state	Voice Services monitor status	Call behaviour	Service behaviour
Treatment ID not available from the protocol handler	Service Running: Link Up	If Voice Services is being used through Symposium Express Call Center to play announcements, and there is an error whereby the protocol handler (vps_prot.dll) cannot hand back a treatment ID, the call is disconnected.	
SBC file missing	Service Running: Line Up	If the SBC file is missing in a front-ending scenario, the call is transferred to the default DN as configured in the Voice Services configuration utility. If the SBC file is missing from a treatment configured in the Call Treatment wizard, then the caller does not hear the announcement, but continues to queue and hear ringback or music, depending on what is configured in the treatment.	

Poor configuration results in call looping

To help prevent calls from entering a continuous loop condition, do not configure a treatment with an after-treatment that references its own treatment ID (for example, the treatment ID 1000 must never have an after-treatment that references a treatment ID of 1000).

Loadware upgrade fails

When reverting the Voice Services loadware to a previous version, you cannot uninstall the loadware from the card. Therefore, the recommended procedure to return the card to an older loadware version is to perform a loadware upgrade procedure using the older loadware release. For more details on how to upgrade the Voice Services Card loadware, see “To upgrade the loadware” in the *Symposium Express Voice Services Card Installation Guide* for Release 4.2.

Troubleshooting other problems

Introduction

Use this section to troubleshoot other errors that occur during system operation.

Problems connecting to the switch

Inability to connect to the switch can be caused by the following problems:

- The IP address of the switch is not unique or correct.
- The serial number of the switch is not correctly configured.
- The embedded LAN is unavailable.

To troubleshoot this problem, follow these steps.

1 Verify that the switch is up and running.

2 Verify that the switch IP address is not the default installed with the switch. Network conflicts can result if you use the default address.

   Note: To find the switch IP address, use the STAT ELNK command in LD 137.

3 On the server PC, ping the switch by entering the following command in an MS-DOS window:

   ping *nnn.nnn.nnn.nnn*

   where *nnn.nnn.nnn.nnn* is the IP address for the switch.

4 Use the Feature Report utility to verify that the switch IP address and serial number are correctly configured on the server. If the IP address is incorrectly configured, you can modify it with this utility. If the serial number is incorrect, contact your distributor for a new keycode; you must reinstall the server.

Phantom calls and problems with recorded announcements

Meridian Mail ports used by Symposium Express Call Center and Symposium Link must not be shared with any other applications (for example, voice mail). Port sharing can cause phantom calls or affect recorded announcements. To dedicate ports, follow these steps.

1. On the switch, define a unique ACD-DN for Symposium Express Call Center.
2. Determine the number of voice ports needed to support IVR in Symposium Express Call Center.
3. Assign the appropriate number of voice ports to the new ACD-DN.
4. On Symposium Express Call Center, ensure that the voice ports and IVR ACD-DNS configured match those configured on the switch.
5. Repeat steps 1 to 3 to define ACD-DNs for Symposium Link.

Acquire of music and RAN routes fails

Symposium Express Call Center does not need to acquire music and RAN routes. It uses music and RAN route information only for reporting purposes. If you see an Acquire failed message, ignore it.

Voice processing stops

You can configure password expiry for Meridian Mail mailboxes. If this option is set, you must change Meridian Mail passwords regularly. If you fail to do so, voice processing stops when the password for the mailbox expires.

Switch name and server name must not be the same

The switch name and the server name must be different so that there is no duplicate WINS name on the ELAN.

Switch problems

Do not use the default switch IP address

Do not use the default IP address that comes with the switch or you may experience network conflicts.

Meridian Mail uses dedicated voice ports (M1, and M1 IE only)

Meridian Mail voice ports used by Symposium Express Call Center must not be shared with any other application (for example, general voice mail). Otherwise, you may encounter phantom calls in the real-time displays, or configured announcements may not play.

Message indicates that Music and RAN routes fail to be acquired

Music and RAN routes are not acquired by Symposium Express Call Center, but they are saved to the database. If you receive an acquired failed message, music and RAN announcements should still function properly.

All callers receive default treatment

If, after restarting the server PC, CDNs are acquired, the TF Loader window indicates everything is functioning correctly, and SMonW indicates all services are running, yet all calls entering the call center receive the default treatment (that is, the agent status shows ACD Active), then ensure that you are running the minimum required software release for the Meridian 1. If you are running the correct software and the problem persists, perform either of the following steps:

- Ensure that the Meridian 1 PEP MPLR11129 is installed on the switch.
- Shut down the server PC, and then shut down the Meridian 1 switch. Then restart the switch followed by the server PC.

Swap file usage exceeds 80 percent, or system is low on virtual memory

If the server has insufficient swap file space, a warning message appears, notifying you that it is low on virtual memory. You can also check swap file usage in the Windows System Monitor. Swap file usage should not be consistently greater than 80 percent. If this problem occurs, contact your Nortel Networks customer service representative.

Reports cannot be generated from the Client PC

If you are unable to generate Symposium Express Call Center reports from the Client PC, check the bindings order of the network interface cards. You must configure them such that the CLAN card comes first, followed by the ELAN card, and then the Virtual Adapters for RAS. If the CLAN card is not first, you cannot generate reports from the Client PC.

The bindings order is controlled through a dialog box in the Windows operating system. For information on checking the bindings order, see page 113. Refer to the documentation provided by Microsoft for further information on modifying the protocol bindings order.

System log warns that database disks are at or near capacity

The server's System Log in the Windows Event Viewer may display warning messages with the following text:

```
The [disk letter] disk is at or near capacity. You may need
to delete some files.
```

If this message appears for any of the database drives (F drive through U drive), you can ignore the message.

These warning messages are generated by the Windows 2000 operating system whenever the percentage of free disk space in a drive drops to or below 10 percent. However, due to the way the Symposium Express Call Center database drives are installed, 90 percent of each database drive is automatically reserved for the database, leaving the percentage of free disk space at 10 percent, even before the database begins filling up. This means that the warning message above can appear on a newly installed server that does not yet contain any data in the databases.

The database files created during the installation of Symposium Express Call Center are of fixed size (90 percent of the database drive size) and, therefore, do not grow in size.

Note: If you have stored additional files on the database drives (such as log files or trace files), this can push the used space on the database drives beyond 90 percent and possibly result in additional warning messages. You should avoid storing these files on the database drives.

MAS LinkHandler service terminates or generates continuous error messages in the Event Viewer log

The Windows Event Viewer may display warning messages with the following Description text:

```
The MAS LinkHandler Port #2 service terminated
unexpectedly. It has done this xx time(s).
```

This problem occurs if the server does not have a COM2 port physically configured. The COM2 port is not required; however, if your server does not have this port configured, you must perform the following procedure to disable the MAS LinkHandler service. Otherwise, the volume of error messages generated as a result of this problem can grow large enough to cause a system crash.

To disable the MAS LinkHandler service

1 On the server, from the Start menu, choose Programs → Administrative Tools → Services.

2 From the list of services, select MAS LinkHandler Port #2.

3 Click Action → Properties.

4 Change the Startup type from Automatic to Disabled, and then click OK.

5 Restart the server.

Configuration utility fails after restoring the database during conversion to Release 4.2

During the server conversion procedure from Release 2.0 or Release 3.0 to Release 4.2, the Server Setup Configuration utility may fail and display the following error message:

```
ERROR: convert11db.bat generated a Sybase error in
D:\Nortel\iccm\dbinst\SCCSPH1log.txt
```

This occurs during the configuration of the new server's software and database, after restoring the original server's database to the new server (see "Step 24. Configure the new server's software and database" on page 405 of Chapter 9, "Converting from server Release 2.0 or 3.0 to Release 4.2.").

This problem can occur if certain settings for the historical statistics stored in the server's database are set higher than the default values. If these values are not reset to the default values before conversion, as described in the conversion procedure, space in the server's database that is normally free might be filled with historical data. This free space is required for database conversion.

If you encounter this error, you must do the following:

For conversions on the same server:

1. Recover your Release 2.0 or Release 3.0 server.
2. Restart the conversion steps at "Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database" on page 340. You must complete this step successfully to avoid the error described above.
3. Complete the conversion procedure, as per the Conversion checklist.

For conversions involving migration to a different server:

1. On the new Release 4.2 server, you must roll back the conversion to the point before you restored the database. To do this, complete the following procedures in Chapter 4, "Server software":
   - "Removing the database" on page 195
   - "Uninstalling Sybase ASE 12.0" on page 198
2. On the original Release 2.0 or Release 3.0 server, restart the conversion steps at "Step 5. Check the settings for historical statistics and, if required, purge surplus data from the database" on page 340. You must complete this step successfully to avoid the error described above.
3. Complete the conversion procedure, as per the Conversion checklist.

Nortel Networks support

Software support

Software support is available for customers who purchase Symposium Express Call Center Release 4.2 software to install on a third-party Windows 2000 server platform.

Nortel Networks provides support for installation and configuration questions concerning the operating system (when it concerns Symposium Express Call Center), the Symposium Express Call Center software, and its third-party components.

Hardware support

Nortel Networks does not provide hardware support for the server. Customers must forward all related hardware issues to their hardware vendor. The hardware vendor must supply the appropriate hardware diagnostic software.

It is the responsibility of the distributor (or end user) to ensure the hardware platform is operational and properly prepared before installing the Symposium Express Call Center software. The distributor (or end user) should test the PVI server before putting the server into live operation at a customer site. This testing should include making sure the system conforms to specifications listed in this guide, and installing the operating system and ensuring it is functional (for example, it must start up correctly and connect successfully to the network).

Once the Symposium Express Call Center software is installed, it is the responsibility of the distributor (or end user) to test basic functionality. This includes ensuring that services come up, reports print, real-time displays can be viewed, agents can be logged on, and calls can be successfully processed through scripts.

General troubleshooting procedures for hardware

Hardware problem

All hardware diagnostics are the responsibility of the platform manufacturer, and are not included in this guide. This section reviews and suggests remedies for problems that can impede normal operation. Always check with the manufacturer's instructions and recommendations before you perform any hardware-related procedure.

Network-related error

If the problem is a network-related error, determine if the server has enough memory and hard disk drive capacity. Consult your network operating system manual.

Connections

Verify that all cables and boards are securely plugged into their appropriate connectors or slots.

Added options

Remove all added options, and change only one component at a time.

Power cords

Unplug the server’s power cord(s), wait 20 seconds, plug the power cord(s) in again, and restart the system.

If there is a hardware error

1. Log users off the LAN and power down the server. Disconnect the power cord and unplug the telephone cables.
2. Simplify the server configuration to a monitor, one floppy and one hard disk drive, and a keyboard and mouse. Remove all third-party options, and reinstall options one at a time, checking the system after each installation. Reconnect the power cord and telephone cables.
3. Restart the system. If the system does not function, refer to “If the system does not power on” on page 655.

If the system does not power on

1. Ensure that all cables and power cords are firmly plugged into their proper receptacles.
2. Ensure that all parts of the system are powered on and properly adjusted.
3. If the server is plugged into a switched multiple-outlet box, ensure that the switch on the outlet box is powered on.
4. Plug a different electrical device (such as a printer) into the power outlet, and power it on.
5. Unplug the power cord, wait 20 seconds, plug the power cord in again, and restart the system.
6. If the system still does not function, contact the server manufacturer.

Chapter 15

Backing up data

In this chapter

Overview of backing up data

Introduction

Your backup strategy is a critical part of your disaster recovery program. Backups minimize the data loss from catastrophic failure.

Your backup strategy can include the following types of backups:

- database (partial) backups
- Platform Recovery Disk
- Voice Services backups
- full backups (using a third-party utility)

Note: In previous releases of this guide, the term “partial backup” was used to describe a backup of the server’s database, which contains historical data, reports, and call center configuration information. For Release 4.2 of Symposium Express Call Center, this type of backup is now referred to as a “database backup.” This is separate from, and not to be confused with, the Voice Services database and configuration backup, which is discussed in more detail later in this chapter.

Database backups

When you perform a database backup, the system backs up historical data, reports, and call center configuration information stored on the server. You can direct the backup to a tape or to a remote directory on a network computer. You can perform an unscheduled or scheduled database backup. A database backup is performed while the server is online.

In conjunction with a Platform Recovery disk (see the description below), a database backup allows you to restore all system data (scripts and statistics) after a crash.

When to perform a database backup

Nortel Networks recommends performing a daily database backup using the Symposium Express Call Center backup utility.

Platform Recovery Disk

When you create a Platform Recovery Disk, the system saves both server and database configuration data into a series of text files. You must keep an up-to-date Platform Recovery Disk available in case you need to recover your server software, database, or both.

When to create a Platform Recovery Disk

Nortel Networks recommends you create a Platform Recovery Disk after any major modifications to the system. For a detailed list of these modifications, see “Backup best practices” on page 661.

Voice Services backups

Note: Voice Services is a keycode-enabled feature. You can only perform Voice Services backups if you have this option.

There are two steps to a full Voice Services backup:

- Voice Services PCMCIA card backup
- Voice Services database and configuration backup, which backs up treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on)

When to perform Voice Services backups

Perform a full Voice Services backup (the PCMCIA card, and the Voice Services database and configuration) every time a full Symposium Express Call Center backup takes place. You should also do a full Voice Services backup every time you

- create new prompts
- change the treatment configuration (for example, make changes to a previously created voice menu)
- add, remove, or change Voice Services ports, either through a Voice Services data import, or through the Switch Map section of the Voice Services Administration application
- change the Voice Services configuration

Full backups

A full backup backs up the contents of all hard drives, including the registry and the database. A full backup allows you to restore the server to its state at the time of the backup. It is useful for recovery from a catastrophic failure in the server's disk subsystem. In combination with a current database backup, a full backup can help you minimize your data loss.

A full backup is performed while the server is offline.

Note: You do not require a full backup of your Symposium Express Call Center server if you maintain a current database backup, Platform Recovery Disk, and Voice Services database and configuration backup, as well as the original server software.

When to perform a full backup

You should create a full backup

- after installation and configuration of a new server
- before and after a major conversion of the server (for example, from Release 3.0 to Release 4.2)
- before and after any major hardware upgrades (such as a disk expansion, BIOS upgrade, or platform migration)

ATTENTION

To create a full backup, you must use a third-party backup utility. For information on preparing for a third-party backup, see Section E: "Using a third-party backup utility to create full backups" on page 723.

Administration levels for backups

There are two levels of Symposium Express Call Center administration: customer and system. The recommended access levels for backups are as follows:

- full backups – Windows administrator user
- unscheduled database backups – customer administrator (custadmin user)
- scheduled database backups – system administrator (sysadmin user)

- Voice Services backups – Windows administrator user

Daily maintenance and database backups

The daily maintenance process consolidates statistics. It runs on the server at midnight and takes several hours, depending on the system configuration. Frequent delays occur if you schedule a backup at the same time as the daily maintenance process. The server puts the backup on hold until the maintenance process is completed. The delay is logged in the backup log file, and it has no impact on the system or backup.

Backup best practices

To help you recover your database in the case of a system failure, follow the guidelines listed below to ensure that you always have an up-to-date backup of your database files:

- Create a new Platform Recovery Disk after you have expanded your database using the Database Expansion Utility, restored your database, and each time you change any of the following information on the server:
  - **Customer Information** If you change your customer name or company name, then you must create a new Platform Recovery Disk.
  - **Keycode Information** If you enter a new serial number and keycode when upgrading the server software, then you must create a new Platform Recovery Disk.
  - **M1/CSE 1000 Switch Information** If you update switch information, such as the switch name, IP address, and customer number, then you must create a new Platform Recovery Disk.
  - **ELAN/CLAN IP Addresses** If you update the ELAN or CLAN IP address of the server, then you must create a new Platform Recovery Disk.
  - **Voice Connection** If you update the connection to the voice processing system (CallPilot or Meridian Mail), then you must create a new Platform Recovery Disk.
  - **Site Name** If you change the site name for Symposium Express Call Center, then you must create a new Platform Recovery Disk.

- Perform daily database backups. For more information on setting up database backups, see Section A: “Setting up database backup options” on page 673.

Backup speeds

Backup types and backup speeds

The following table provides a summary description of the types of backups:

Backup type	Definition	Result	Approximate speed of backup
Database backup	Backs up all information stored in the Symposium Express Call Center database to a remote directory or to tape.	*Online* operation: Call processing continues as the backup executes. No Symposium Express Call Center services are stopped.	■ See notes below the table.
Full backup **Note:** Full backup requires a third-party backup utility.	Backs up the entire system using a third-party backup utility.	*Offline* operation: Allows you to restore the system to its state at the time of the backup.	■ See the documentation for the third-party backup utility.

Notes:

- To help calculate the speed of database backups before a conversion, it is a good idea to perform a trial run of the backup at least several days before the conversion. Keep in mind that the time required to do a database backup can vary between the trial run and the actual backup day due to several factors.
- For a listing of the variables that can affect the speed of your backup and restore, see “Variables affecting backup and restore speed” on page 664.

Variables affecting backup and restore speed

Since Symposium Express Call Center runs on a Platform Vendor Independence (PVI) platform, the factors that affect backup speeds can vary from server to server. The factors shown in the following table can affect backup and restore speed for both remote directory and tape backups. To improve the backup/ restore speed on your server, note the recommendations in the last column of the table.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Symposium Express Call Center CPU speed	Faster CPU means more free processing time available for the backup/ restore.	Use a higher CPU speed on your PVI server.
Symposium Express Call Center database disk speed	Faster database disk speed allows for a higher data transfer rate for the backup/restore task.	Use a faster disk.
Symposium Express Call Center processing time	Since database backup/ restore is a low priority background task on the server, more call traffic, real-time displays, or scheduled reports will slow down the backup/ restore task.	Backup/restore your database during low traffic hours, or during periods of low server activity.
Symposium Express Call Center local tape type	Different tape drives have different data transfer rates. Faster tape drives will allow faster database backup/restore on a local tape.	Use a faster tape drive type for local tape backup/restore.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Remote PC CPU speed	Faster CPU speed on the remote PC will mean more free processing time available for the remote backup/restore task on the remote PC.	Use a remote PC with a higher CPU speed.
Remote PC disk type	Different disk types have different data transfer rates (for example, SCSI is usually faster than IDE, or a newer ATA interface is faster than the older IDE type, and so on). Remote database backup/ restore speed depends on the total data transfer rate of the remote PC disk.	Use a faster disk type on the remote PC.
Remote PC disk speed	A faster disk speed allows for a higher data transfer rate for the remote backup/restore task on the remote PC.	Use a faster disk on the remote PC.
Remote PC processing time	The more processes run on the remote PC, the more the remote database backup/restore task on the remote PC will be slowed down.	Do not run other processes or applications on the remote PC during remote database backup/ restore.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
LAN bandwidth	The speed of the remote database backup/restore is proportional to the network bandwidth (speed). A higher LAN speed will have a higher bandwidth to handle the additional network traffic for the backup/restore.	Use a LAN with a higher bandwidth.
LAN traffic	The speed of the remote database backup/restore largely depends on the actual LAN traffic at the time of the backup/restore. Additional traffic in the network delays the backup/restore packets between Symposium Express Call Center and the remote PC.	Back up/restore your database during low LAN traffic hours.
Symposium Express Call Center database data	The total length of backup time is proportional to the actual amount of physical data in the database at the time of the backup. The length of the backup time will be shorter if less data is in the database.	Keep the minimum call statistical data required (for example, do not keep 10 days of data if you only need to keep 2 days of data).

Calculating the capacity requirements for database backups

Introduction

Before you perform a database backup, you must ensure that the tape or remote directory used for a database backup has enough capacity to hold the backup files. To calculate the amount of space required in the tape or remote directory, you have two options, based on the version of the Symposium Express Call Center software installed on the computer on which you are performing the backup:

- **Symposium Express Call Center Releases 2.0/3.0/4.2** You can use the DBSpace utility included on the Release 4.2 Server Supplementary CD-ROM. For more information, see "Calculating the capacity requirements for database backups using the DBSpace utility" below.
- **Symposium Express Call Center Release 4.2 only** You can access a new database view called "SCCSDBSpace" included when you install the latest Service Update pack. You must create a custom report to extract the contents of the new database view. For more information, see "Calculating the capacity requirements for database backups using the SCCSDBSpace view (on Release 4.2 servers only)" on page 669.

Calculating the capacity requirements for database backups using the DBSpace utility

You can use the DBSpace utility included on the Release 4.2 Server Supplementary CD-ROM to calculate the amount of data that you have stored in the blue, CBC, and master databases, as well as the total amount of data stored, in megabytes.

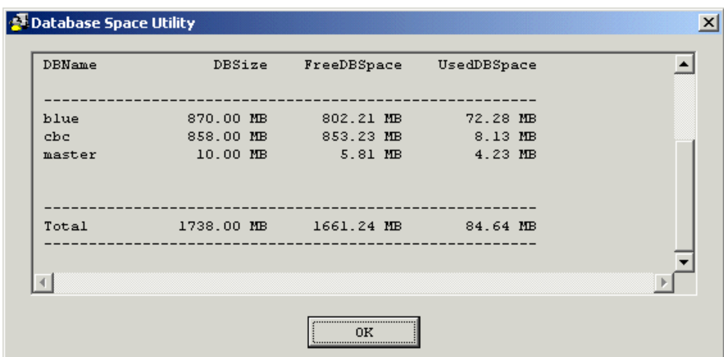
Note: Since the amount of data stored can change between the time when you run this utility and the time when you back up your database, as an extra precaution, it is a good idea to add a 15 to 30 percent buffer to the amount shown in the Total row of the UsedDBSpace column in the utility window.

To calculate the capacity requirements for database backups using the DBSpace utility

1. Insert the Release 4.2 Server Supplementary CD-ROM into the server in Symposium Express Call Center.
2. On the CD-ROM, browse to the file *DBSpace.exe* located in the directory Utility/DBSpace.
3. Copy the file DBSpace.exe.
4. On the server, create a directory with the name of your choice. This directory can be located anywhere on either the C: or D: logical partition.
5. Paste the DBSpace.exe file into this directory.
6. On the server, open an MS-DOS prompt window and navigate to the directory containing the file. For example, if the directory name is *Database*, type **cd\Database**, and then press Enter.
7. Start the utility by typing **dbspace.exe <*sysadmin password*>**, and then pressing Enter. For example, if the sysadmin password for your server is *nortel1*, then type dbspace.exe nortel1, and press Enter.

   Note: Leave a space between the file name and the sysadmin password.

   Result: The Database Space Utility opens and calculates the amount of data stored in the database.



   Note: Although Express servers do not store data in the CBC (call-by-call) database, the DBSpace Utility still shows a row for this database in the results.

8. In the window, note the values in the UsedDBSpace column. These values show the amount of data stored in each database (blue, CBC, and master).

Use the scroll bar to view the bottom portion of the pane where the total amount is listed (see the example above). The total value shown in the UsedDBSpace column is the amount of space that you need to have available in a tape or remote directory before you perform a database backup (plus the 15 to 30 percent buffer to safely perform the database backups without any space constraints).

9 Click OK to close the window.

Tip: For your reference, the system creates a replica of the utility results and stores it in a text file called *dbspace.txt*. This file is located in the same directory where you saved the utility and you can view it at any time.

Calculating the capacity requirements for database backups using the SCCSDBSpace view (on Release 4.2 servers only)

On servers running Release 4.2 of Symposium Express Call Center, the latest available Service Update pack includes a new database view called the SCCSDBSpace view. After you install the Service Update pack, to access the contents of the view, create a custom report with your reporting application.

When you generate your custom report, you see the following information:

- the amount of space allocated to the Symposium Express Call Center databases (blue and master)
- the amount of space used by the databases
- the amount of allocated space that is unused

To calculate the capacity requirements for database backups using the SCCSDBSpace view

1 Make sure the latest Service Update pack is installed on the server.

2 Create a custom report with the report writing application of your choice (for example, Crystal Reports). The custom report must point to the new “SCCSDBSpace” view on the server. For information on creating custom reports, see the documentation included with your report writing application.

3 Generate the report to view the capacity requirements for your database backup.

Requirements for database backups

Introduction

You have the option of backing up your server's database to either

- a remote directory on a network computer
- a local tape drive on the server

For each option, this section outlines requirements and recommendations.

Remote directory requirements

If you are using a remote directory to back up your database, read this section to understand requirements for the remote computer and network.

Remote computer requirements

The remote computer for your database backup can be either a server or a workstation that meets the following requirements:

- The operating system must be Windows NT 4.0, Windows 2000 Server, Windows 2000 Professional, or Windows XP.
- The drive partition for the remote directory must be NTFS.
- The directory you use for the backup must have enough space available to hold the backup files.

Network requirements for remote directory backups

Database backups to a remote directory on a network computer require a LAN connection. Ensure that the LAN has low traffic during the scheduled time for the database backup. If you run the backup when LAN traffic is high, the database backup may take longer than planned.

If your server has both CLAN and ELAN network interface cards, use the CLAN connection for the remote backup. If your server has only an ELAN card, consider the following options for obtaining a temporary network connection:

- Reconfigure the ELAN card with a CLAN IP address to connect the server to the customer network.

- Disconnect the ELAN card from the switch and connect it to a temporary server via a hub, creating a local LAN.

If you want to use the remote backup capability for all scheduled backups, Nortel Networks recommends adding a second network interface card to connect to the customer network. The disadvantage of using a single network interface card is that the call center must be shut down to perform a backup. This is impractical for daily backups.

Tape drive requirements and maintenance

If you are using a tape to back up your database, read this section to understand tape drive requirements and maintenance steps.

Tape drives

Use a Windows 2000-compliant tape drive large enough to capture the information. For a detailed explanation of supported tape drives, see “Tape drive requirements and guidelines” on page 33.

Head-cleaning kit

Nortel Networks recommends purchasing a head-cleaning kit to prolong the life of your tape heads and ensure the quality of your backups. You should clean tape drives based on how often they are used.

Tape cartridges used per day	1	2	3	4 or more
Cleaning interval	Weekly	Every other day	Every other day	Daily

Most cleaning kits suggest how often heads should be cleaned.

Dedicated tapes for backup types

Use one backup tape for each backup, regardless of whether extra space is available on the tape. Make sure you have enough backup tapes on hand so that you can save backups for a safe period of time before you have to overwrite an old backup.

CAUTION

Risk of overwriting data

After a backup, the tape is not ejected from the tape drive. Ensure that you eject the tape after each backup to prevent the next backup from overwriting the data.

Tape size

Ensure that the backup tape is large enough to store the data you are backing up. You cannot use multiple backup tapes for a single backup.

Tape rotation

Rotate tapes daily and store them at an off-site location. Do not keep a tape in the tape drive for more than one or two days for the following reasons:

- The next backup may overwrite existing data on the tape. If the same tape is used for several consecutive nightly backups and the tape becomes damaged, no other backup is available to restore lost data.
- Consistent reuse of the same tape accelerates wear on the tape. Tapes may need replacement earlier than their normal life span.

Nortel Networks recommends storing backup tapes off-site for as long as possible before reusing them. Store tapes for at least two weeks.

Section A: Setting up database backup options

In this section

Overview

Introduction

Before you run a scheduled or unscheduled database backup, you must determine which backup option you want to use and set it up on the server for Symposium Express Call Center. Your options are

- backing up to a remote directory on a network computer
- backing up to a tape in a local tape drive

If required, you can switch between these methods; however, you cannot use both methods simultaneously.

You set your database backup option on Symposium Express Call Center using the procedures in this section. Then you perform the backup from the client PC as described in “Performing database backups” on page 691.

Note: There are no predefined backup schedules.

Pros and cons of tape backups and remote directory backups

Tape backups

Pros	Cons
▪ not affected by network instability ▪ no dependency on low network traffic	▪ requires maintenance of tape drive and tapes ▪ possibility of mechanical failure of tapes and drives ▪ backup data is readable only by Sybase backup server; cannot be read by Windows backup utility ▪ for technical support, tapes must be handed off or shipped; data cannot be transmitted electronically

Remote directory backups

Pros	Cons
▪ for technical support, backup data can be transmitted electronically ▪ backup data files can be recognized by the Windows file system ▪ low maintenance and not prone to mechanical failure	▪ requires a stable network ▪ must be scheduled when network traffic is low ▪ requires an archiving plan for backup files after each backup to ensure the files are not overwritten

Setting up database backups to tape

Introduction

You can back up your database to a tape in a local tape drive on your Symposium Express Call Center server. You choose the tape backup option through a dialog box in the server software.

Declaring a tape drive

Before you can use a tape drive to perform a backup, you must declare a functional tape drive in the operating system. You should also test the tape drive to ensure it is ready to perform a backup.

Note: Ensure that you have the SCSI drivers for your tape drive installed. For instructions, refer to documentation that came with the operating system.

To check whether the tape drive is declared correctly, or to declare it

1. If you have not installed the physical tape drive, shut down the server and install it.
2. Restart the server.
3. From the Start menu, choose Settings → Control Panel.
4. Double-click System, and then click the Hardware tab.
5. Click Device Manager, and then click Tape drives.

   If there is a question mark under Tape drives, this means you have not declared the tape drive correctly. If this happens, do the following:

   a. Delete the tape drive.

   b. Restart the server, and then select the correct tape drive.

To test the tape drive backup

1. From the Start menu, choose Programs → Accessories → System Tools → Backup.
2. Double-click the Backup icon.

3 Click the Backup tab.

4 In the Backup destination box, select your tape drive.

5 In the Backup media or file name box, select a test file to back up.

6 Click Start Backup.

7 Make sure the backup runs correctly before running any backups with Symposium Express Call Center.

Setting up a tape backup

When you do a fresh installation of the Symposium Express Call Center software, the default setting is tape backup. If you want to confirm that your server is set to tape backup, or if you want to change from remote directory backup to tape backup, use the following procedure.

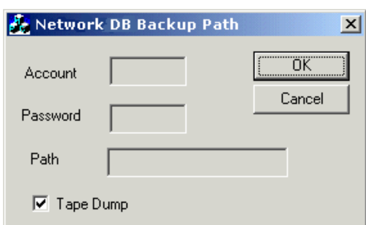
Once you have completed these steps, the next scheduled or unscheduled backup goes to the tape drive.

To set up a tape backup

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears.



3 Make sure the Tape Dump check box is checked.

4 Click OK.

Result: The backup option is set to tape backup.

- If you want to back up your database now, see Section B: “Performing database backups” on page 691.
- If your backup is already scheduled, the system automatically sends the backup to the tape drive.

Setting up database backups to a remote directory

Introduction

You can back up your database to a remote directory on a network computer. You choose this option through a dialog box on Symposium Express Call Center server. However, you must first complete a series of steps to set up the connection between the server in Symposium Express Call Center and the remote directory. To set up a remote directory backup, you must do the following:

1. Prepare the network computer:
   - Create a local Windows user account with administrator privileges.
   - Create a shared directory to contain the remote database backup files.
2. Prepare the server in Symposium Express Call Center:
   - Create an identical local Windows user account with administrator privileges.
   - Add the account to the policy “Log on as a service.”
   - Enter the account and path information through a dialog box in the Symposium Express Call Center server, and deselect the tape backup option.

Once you have completed these steps, the next scheduled or unscheduled backup goes to the remote directory. See the detailed procedures below.

ATTENTION

After you configure the remote directory for backup and restore, check your configuration before backing up or restoring the database by following the guidelines listed in the section “Testing the remote directory backup and restore configuration” on page 688.

Files created during remote directory backup

The backup process creates three files:

blue.dmp	Contains the contents of the Blue database.
cbc.dmp	Contains the contents of the CBC database.
master.dmp	Contains the contents of the Master database.

CAUTION

Risk of database restoration error

If you must restore your database, the restore program looks for the exact file names listed above. If you change the file names for archiving purposes—for example, by adding a date to the name—you must change the names back to their original state before you try to restore the database. Otherwise, the restore process fails.

Before you start

Make sure that your remote computer and the network meet the requirements identified in “Remote directory requirements” on page 670.

Worksheet for setting up a remote directory backup

You must set up accounts, passwords, and a shared directory in preparation for remote directory backups. Create names for these items ahead of time and record them in the table below.

Item	Fill in the required information
User Name You must create a name and assign it to two user accounts—one on the network computer and the other on the Symposium Express Call Center server. The name must be identical on both computers.	
User account password You must create a password and assign it to the two accounts described above. The password must be identical on both computers.	
Computer Name of the network computer Obtain and record this name so you have it available when you set up the remote directory backup on the server.	
Share Name for the remote directory You must create a share name and assign it to the directory on the remote computer. The share name can be the directory name (this is the default in Windows) or a different name. **Note:** The Share Name for the remote directory must not contain any spaces. Spaces in the remote directory name cause errors.	

Preparing the network computer for remote directory backup

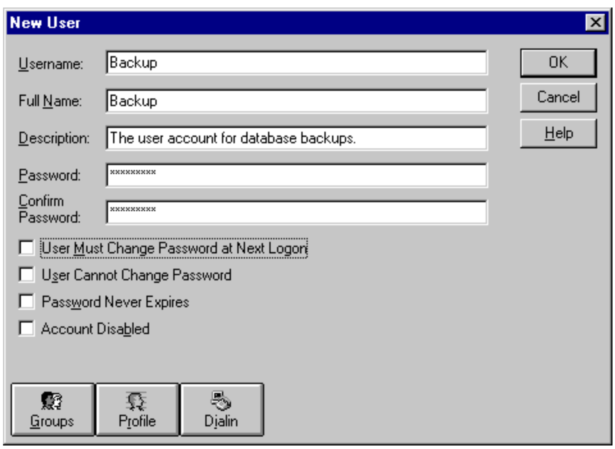
Once you determine which network computer you will use for the remote directory backup, you must create a local Windows user account on it, and then create a shared directory to contain the remote backup. Use the basic steps below, along with the documentation that came with the operating system, to correctly set up the user account and shared directory.

Note: The following procedures do not provide detailed steps, since they differ depending on the operating system on your network computer.

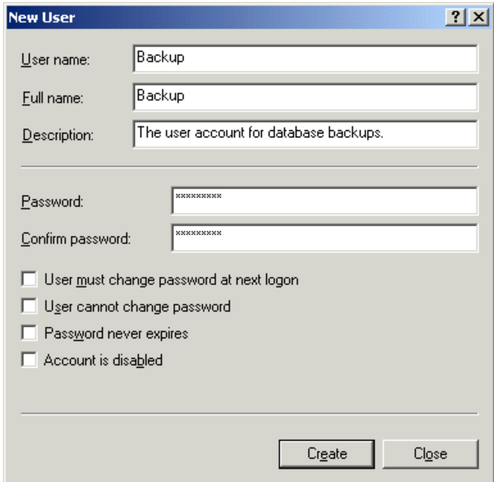
To create the local Windows user account on the network computer

1 Create a new user account in Windows using the User Name and password that you recorded in the worksheet you filled out.

- In Windows NT, you create the new user in Programs → Administrative Tools → User Manager. Then, from the User menu, select New User. Type the user account details in the New User window.



- In Windows 2000, you create the new user in Programs → Administrative Tools → Computer Management. Right-click Local Users and Groups, and then select New User from the resulting pop-up menu. Type the user account details in the New User window.



CAUTION

Risk of database backup failure

When you are creating the new user account in Windows, you must deselect the check box for "User must change password at next logon." If this check box is selected, the Symposium Express Call Center server may not be able to connect to the remote computer.

2 Make the user account a member of the Administrators group.

To create and share the remote directory on the network computer

1 On the network computer, create a directory (folder) to contain the database backup. You can use the Share Name you recorded in the worksheet.

Note: The name of the remote directory must *not* contain any spaces. Spaces in the remote directory name cause errors.

2 Make sure file sharing is enabled on your computer.

3 Make the directory shared, and assign the Share Name you recorded in the worksheet that you filled out.

4 For the shared directory permissions, grant Full Control access rights to the user account that you created in the previous procedure.

Result: The network computer is now set up for remote directory backups. You must now prepare the Symposium Express Call Center server using the procedures below.

5 Make sure you have recorded the computer name of the network computer in the worksheet.

Preparing the Symposium Express Call Center server for remote directory backup

On your Symposium Express Call Center server, you must create a local Windows user account that is identical to the one you created on the network computer. You then add the account to the policy "Log on as a service." To complete preparation of the server, you enter the account information and the path of the remote directory on the Symposium Express Call Center server and turn off the tape backup option. See the detailed procedures below.

To set up the local Windows user account on the server

1 Log on to the server as **NGenSys**.

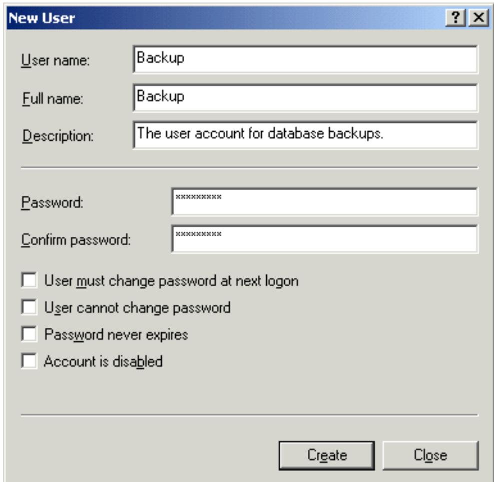
2 From the Start menu, choose Programs → Administrative Tools → Computer Management.

Result: The Computer Management dialog box appears.

3 In the left panel, navigate to Local Users and Groups → Users.

4 Right-click the Users folder, and then select New User.

Result: The New User dialog box appears.



5 In the User name box, type the name you recorded in the worksheet that you filled out. This must be the same user name you assigned to the account on the network computer.

6 In the Password box, type the password you recorded in the worksheet that you filled out. This must be the same password you assigned to the account on the network computer.

7 In the Confirm password box, type the password again.

8 Uncheck the check box for User must change password at next logon.

Note: If you do not remove this check mark, the database backup or restore may fail because the Symposium Express Call Center server may not be able to access the network computer.

9 Click Create.

10 Click Close.

11 In the left panel of the Computer Management window, click the Users folder to display its contents in the right panel.

12 In the right panel, right-click the new user you just created, and then select Properties.

Result: The Properties dialog box for the user appears.

13 Click the Member Of tab.

14 Click Add.

Result: The Select Groups dialog box appears.

15 In the Name column, click Administrators, and then click Add.

Result: The group appears in the bottom list box.

16 Click OK.

17 When the Member Of tab reappears, click Apply, and then click Close.

18 Close all windows that remain open.

To set up the local security settings

1 On the server, select Start → Programs → Administrative Tools → Local Security Policy.

Result: The Local Security Settings dialog box appears.

2 In the left panel, navigate to Local Policies → User Rights Assignment. Click User Rights Assignment to view its contents in the right panel.

3 From the right panel, double-click Log on as a service.

Result: The Local Security Policy Setting dialog box appears.

4 Click Add.

Result: The Select Users or Groups dialog box appears.

5 In the Name column, select the user account that you just created, and then click Add.

Result: The account appears in the bottom list box.

6 Click OK.

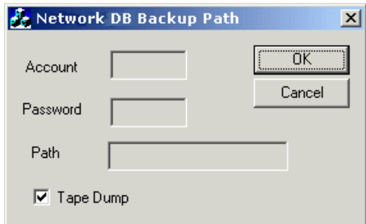
7 Click OK to close the Local Security Policy Setting dialog box.

8 Close the Local Security Settings dialog box.

To complete the remote directory settings on the server

1 On the server, select Start → Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears.



2 Uncheck the Tape Dump check box.

3 In the Account box, type the User Name you recorded in the worksheet that you filled out. This must be the same User Name you assigned to the account on both the network computer and the server.

4 In the Password box, type the password you recorded in the worksheet that you filled out. This must be the same password you assigned to the account on both the network computer and the server.

5 In the Path box, type the network path for the shared directory that you created on the network computer. Use the following format:

- computername\sharename

Refer to the computer name and share name that you recorded in the worksheet that you filled out.

6 Click OK to save your settings and exit.

Result: Symposium Express Call Center is now set to back up the database to the remote directory on the network computer.

- If you want to perform a scheduled or unscheduled backup, see Section B: “Performing database backups” on page 691.
- If your backup is already scheduled, the system automatically sends the database backup files to the remote directory.

Testing the remote directory backup and restore configuration

To ensure that you have configured the remote directory backup correctly, after completing the configuration procedures listed above, perform the following steps before backing up to, or restoring from the remote directory. Before a migration or conversion, it is important that you perform these steps on both the original server (before backing up your database) and on the new server (before restoring the database).

Check the physical connection between server and remote PC

1. On the Symposium Express Call Center server, use the remote PC computer name to ping the remote PC. This enables you to check the physical network connection between the server and the remote PC.

2. If you cannot ping the remote PC from the Symposium Express Call Center server, check the remote PC computer name, DNS configuration, and the physical network connection between the server and the remote PC (for example, the IP address and router configuration).

Check the access to the shared folder

1. On the server, log on to Windows using the local Windows user account that you created on the server. For more information on this account, see “To set up the local Windows user account on the server” on page 684.

2. On the server, temporarily map to the shared folder on the remote PC as a mapped network drive.

3. To check the access level to this mapped folder, on the server, copy any small file (for example, a text file) and paste it into this mapped drive. Then delete this file from the mapped drive.

4. If the system prompts you to enter the user name and password for the shared folder, then check that the user name and password for the Windows user accounts are synchronized on the server and the remote PC.

5. If you cannot paste the copied file into the shared folder, or delete the file from it, then on the remote PC, check that the Windows user account has been granted Full Control access rights.

6. On the server, unmap the shared folder, and then log off the server.

Perform a test backup

After configuring the remote backup, you can schedule a backup and check the results in the backup log file when the backup is complete. Make sure you do this when there is low network traffic.

Checklist for performing backups

Step	✔
After installing your server, or after making changes to your server configuration (for example, IP addresses), create a Platform Recovery disk. For more information, see “To create a Platform Recovery Disk” on page 716.	
If you have the Voice Services feature, perform a Voice Services backup after installing your server, or after making changes to your Voice Services configuration (for example, creating new prompts or changing the treatment configuration). For more information see Section C: “Performing Voice Services backups” on page 707.	
Decide whether to use tape backups or remote directory backups, and configure the setting on Symposium Express Call Center. For more information, see Section A: “Setting up database backup options” on page 673.	
If you are backing up to a tape, ensure that you have the following: ▪ enough backup tapes to rotate them. See page 671. ▪ a head-cleaning kit. Also ensure that you clean the tape drive regularly. See page 671.	
Schedule a daily database backup from the client software. See page 691. **Note:** You may also want to plan an offline full backup using a third-party backup utility.	

CAUTION

Risk of data loss

The server does not contain a default backup schedule. Perform a backup after all system hardware and software are installed and also before and after any conversion. Schedule a daily database backup.

Section B: Performing database backups

In this section

Overview

Introduction

To ensure that your system information can be restored after a hardware failure or data corruption, schedule regular backups. For scheduling suggestions, see “When to perform a database backup” on page 658.

You can back up your database either to a local tape drive or to a remote directory on a network computer. You must configure one of these options on your Symposium Express Call Center *before* scheduling a backup. For more information, see Section A: “Setting up database backup options” on page 673.

ATTENTION

In the following procedure, you must select PrimaryServerTape as the backup device for both tape backups and remote directory backups.

Note: To recover your system, you must have a Platform Recovery disk. See “To create a Platform Recovery Disk” on page 716.

Overwriting data

Remote directory backups

When you schedule regular backups to a remote directory, the backup program overwrites any existing database backup files in the remote directory with new versions of those files. To avoid overwriting the database backup files, move each set from the remote directory to another location following each backup, and store them according to the date when they were created. For a list of files created at each backup, see “Files created during remote directory backup” on page 680.

Tape backups

When you schedule a backup to tape, the overwrite option is selected automatically. This option overwrites any data on the tape. To avoid overwriting the data after a scheduled backup, remove and replace the tape, make sure it is labeled appropriately, and store it in a safe place.

To prepare tapes prior to a scheduled backup

1 Remove the write-protect tabs from the backup tapes.

2 Label your backup tapes with the following information:

- backup date and time
- backup files
- name of person who is performing the backup

3 Insert the tape properly into the tape drive on the server.

CAUTION

Risk of equipment damage

If you insert the tape incorrectly, you run the risk of damaging your system.

Performing database backups

Introduction

You can perform either unscheduled or scheduled backups. Follow the appropriate procedure below.

To perform an unscheduled online database backup (for both tape and remote directory backups)

1 Make sure the services on your server are up.

Note: A database backup uses the HDM service. If this service is down, the database backup cannot start, and the system generates an error message in the Backup Status window stating that the backup completed abnormally.

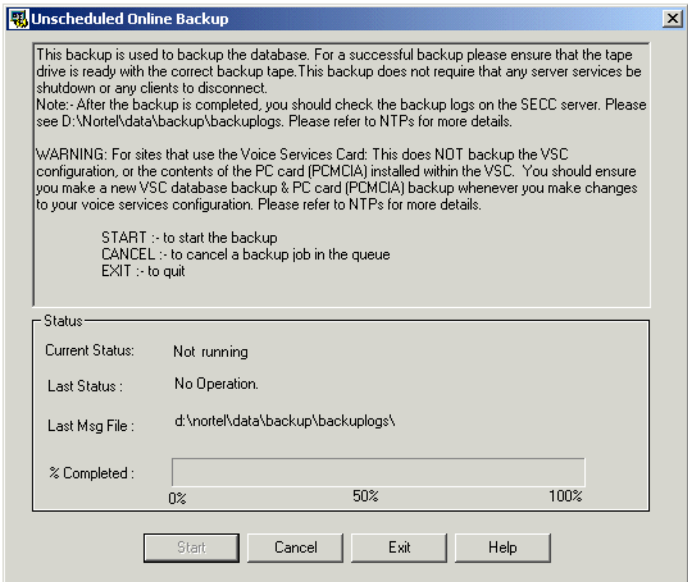
2 Make sure your server is set up to back up either to a tape or to a remote directory. For instructions, see Section A: “Setting up database backup options” on page 673.

3 Log on using the customer administrator or system administrator user ID.

4 If you are backing up your database to a tape, place a tape in the tape drive of the server.

5 In the Administration window, from the System Administration drop-down menu, choose Backup.

Result: The Unscheduled Online Backup dialog box appears.



6 To begin the backup process, click Start.

7 The backup starts and runs until it is complete. You can view the status of the backup in the lower half of the Unscheduled Online Backup window shown in step 5. For detailed information on checking the status of a backup, see “Monitoring backups” on page 701.

Note: Use Cancel to cancel a job in queue. You cannot cancel a backup job while it is running.

To perform a scheduled database backup (for both tape and remote directory backups)

ATTENTION

In the following procedure, you must select PrimaryServerTape as the backup device for both tape backups and remote directory backups.

1. Make sure the services on your server are up.

   Note: A database backup uses the HDM service. If this service is down, the database backup cannot start, and the system will generate an error message in the Backup Status window stating that the backup completed abnormally.

2. Make sure your server is set up to back up either to a tape or to a remote directory. For instructions, see Section A: “Setting up database backup options” on page 673.

3. If you are backing up your database to a tape, place a tape in the tape drive of the server.

4. Log on to the client using the system administrator user ID.

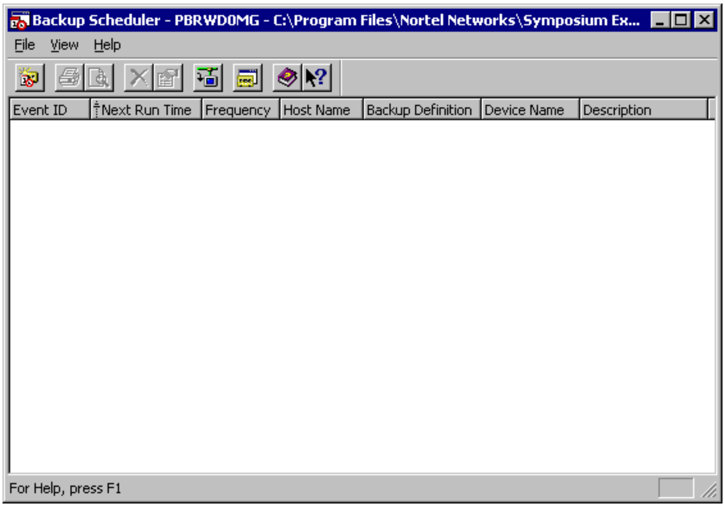
5. In the Administration window, from the System Administration drop-down menu, choose Advanced Functions.

6. Double-click System Administration.

7. Double-click Server backup.

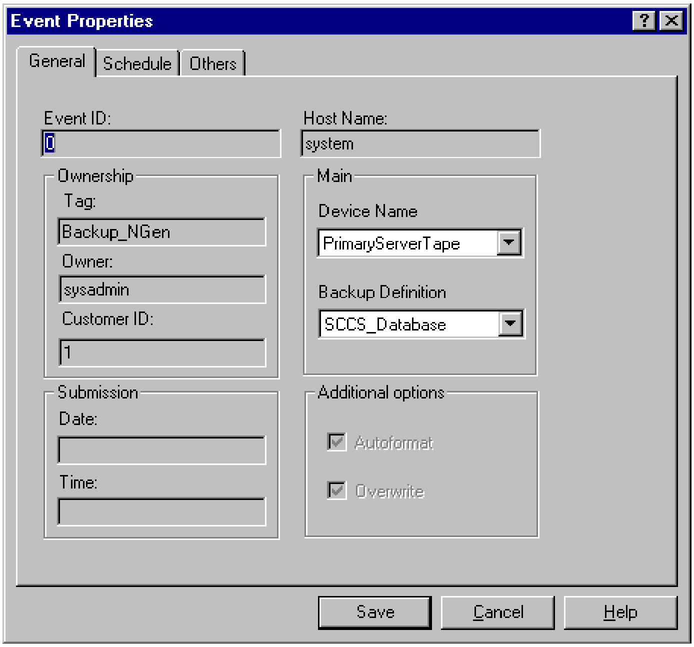
8 Double-click Backup scheduler.

Result: The Backup Scheduler window appears.



9 Click the New Schedule icon (the icon on the far left).

Result: The Event Properties window appears.

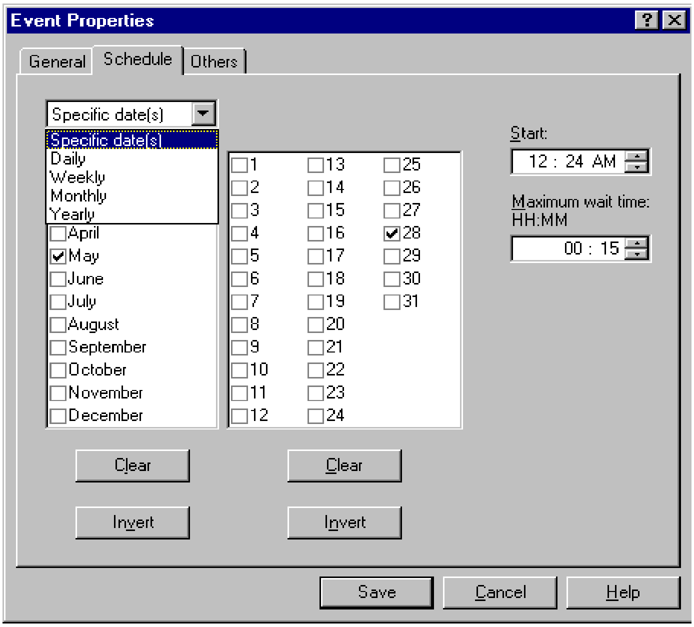


10 In the Device Name drop-down box, ensure that PrimaryServerTape is selected.

Note: This is the default value. This value applies to both tape backups and remote directory backups.

11 Click the Schedule tab.

Result: The following dialog box appears:



12 Select the type of schedule (daily, weekly, monthly, yearly, or specific date).

13 Select the month, day, or date on which the backup should run. (The options available depend on the type of schedule selected.)

14 In the Start box, select the time to start the backup.

Note: The backup is scheduled according to the server time, which is not necessarily the same as the client PC time.

15 In the Maximum wait time box, enter the length of time the system can wait before starting the backup. This time is required in case a scheduling conflict with other tasks forces the backup to wait. If the wait time expires before the backup is able to start, then the backup is skipped. For example, you can schedule a backup for a non-peak period, but in 3 hours the morning shift arrives. In this case, you can enter 03:00 as the interval time. This ensures that the backup does not take place when the morning shift arrives.

16 Click Save to schedule the backup.

17 For information on checking the status of a backup, see “Monitoring backups” on page 701.

Monitoring backups

Introduction

You can monitor the status of a scheduled or unscheduled backup using status windows on the client. You can also use view backup status in the log file at

d:\Nortel\data\backup\backuplogs

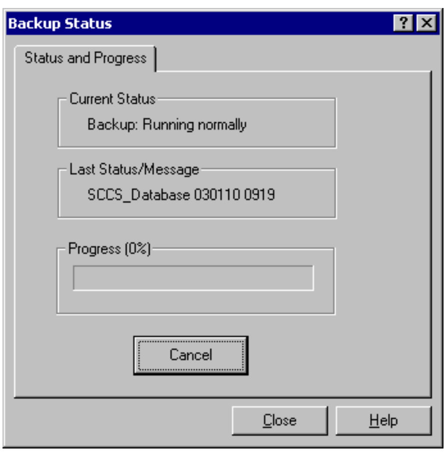
Viewing the status of a scheduled backup

Use the Backup Status window to view the status of a scheduled backup as it runs.

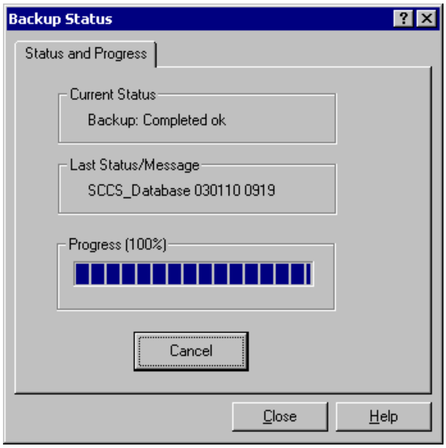
To view the status of a scheduled backup

From the Backup Scheduler window, select View → View backup status.

Result: The Backup Status window appears. The following example shows the contents of this window for a backup that has successfully started:



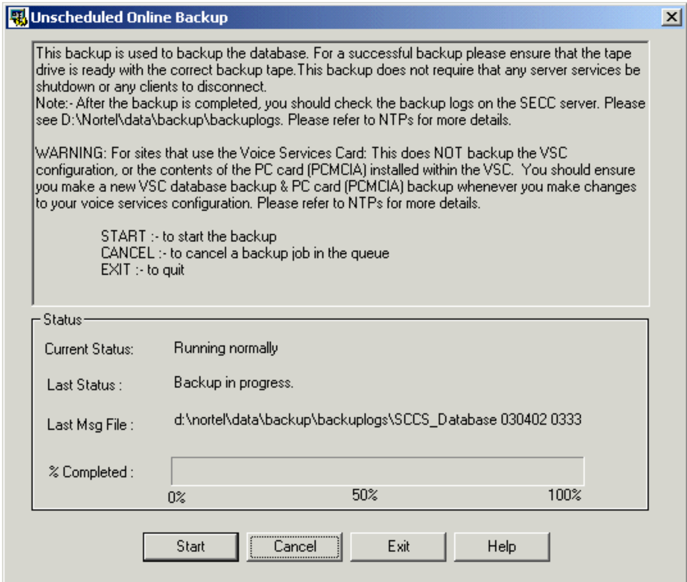
Once the backup has completed successfully, the Backup Status window looks like the example below:



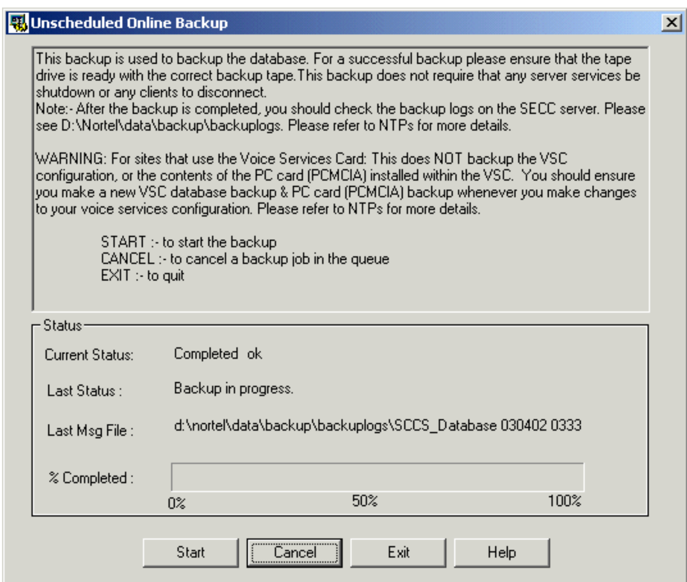
If any files are not copied successfully, a minor alarm is generated. Obtain the Event ID from the alarm in the Alarms Monitor for more information.

Viewing the status of an unscheduled backup

Use the lower half of the Unscheduled Online Backup window to view the status of an unscheduled backup as it runs. The following example shows the contents of the Status section of the window while a backup is progressing normally.



Once the backup has completed successfully, the Status section looks like the example below:



Using log files to verify the success of a backup

To verify that a backup was successful, use a text editor (such as Notepad or WordPad) to check the backup log. The backup log is generated at the end of the backup, and is stored on the server in the following directory:

d:\Nortel\data\backup\backuplogs

The file name for a backup log is SCCS_Database *yymmdd hhmm*.LOG, where *6* are the date and time of the backup (for example, 031117 1415 represents 2:15 p.m. on November 17, 2003).

Note: The contents of the backup log are the same whether you back up to tape or to a remote directory.

If a database backup is successful, the backup log contains all of the following messages:

```
[DATE/TIME] - Starting backup of 'SCCS_Database' to device
'PrimaryServerTape' ...


[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database cbc).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database blue).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database master).


[DATE/TIME] - The backup of 'SCCS_Database' was completed
successfully.
```

ATTENTION

The text `Starting backup of 'SCCS_Database' to device 'PrimaryServerTape'`appears for both tape backups and remote database backups.

Make sure that there are no error messages in the log file. The following example shows a log file with errors:

```
[DATE/TIME] - Starting backup of 'SCCS_Database' to device
'PrimaryServerTape' ...


[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database cbc).

Msg 408202, Level 2, State 41

This database backup has errors or warnings.


[DATE/TIME] - The backup of 'SCCS_Database' failed.
```

If your database backup produces error messages, repeat the backup. If it produces error messages again, contact Nortel Networks customer support.

Other procedures for scheduled backups

Introduction

You can change any detail of a scheduled backup using the Event Properties window. You can also delete backups from this window.

To change a scheduled backup

On the Backup Scheduler window, double-click the scheduled backup that you want to change.

For step-by-step instructions, press F1 to access the online Help.

To delete a scheduled backup

On the Backup Scheduler window, select the scheduled backup that you want to delete, and then choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

To cancel a backup

Unscheduled backups

You can cancel an unscheduled backup that has been queued but has not yet started running. You have 60 seconds, from the time you click Start, to cancel the backup. Once it has started running, you cannot cancel it.

Scheduled backups

You cannot cancel scheduled backups once they have started.

Section C: Performing Voice Services backups

In this section

Overview

Introduction

There are two steps to a full Voice Services backup:

- Voice Services PCMCIA card backup
- Voice Services database and configuration backup, which backs up treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on)

For information on when these are required, see “When to perform Voice Services backups” on page 659.

CAUTION

Risk of malfunction

You must ensure that the PCMCIA card backup and the Voice Services database and configuration backups are versioned correctly. In the event that you must restore, it is important that both are from the same version. A mismatched PCMCIA card and database can lead to Voice Services not functioning.

CAUTION

Risk of data loss

The Voice Services backup information will not reside on a DAT tape, so you must ensure that the backup files are stored in a secure location.

Labeling the Voice Services backups

If you must restore from Voice Services backups, it is important that you use a Voice Services PCMCIA card backup and a Voice Services database and configuration backup that were taken at the same time. Therefore, you must label the backups you take accordingly. Every time you take Voice Services backups, label them with the appropriate version or date, or both.

Performing Voice Services backups

Performing a Voice Services PCMCIA card backup

There are two ways to back up the Voice Services PCMCIA card:

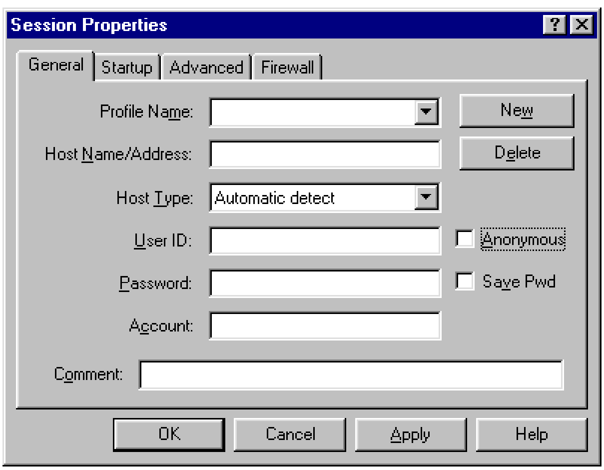
- using a third-party file transfer application
- using a computer with a PCMCIA card drive

Nortel Networks recommends that you use WS_FTP Pro to back up the Voice Services PCMCIA card. For instructions on how to do this, refer to "To back up the Voice Services PCMCIA card using the WS_FTP Pro application" below. For instructions on backing up the PCMCIA card using a computer with a PCMCIA card drive, refer to "To back up the Voice Services PCMCIA card using a computer with a PCMCIA card drive" on page 712.

To back up the Voice Services PCMCIA card using the WS_FTP Pro application

1 From the Symposium Express Call Center server PC, start the WS_FTP Pro application.

Result: The Session Properties window appears.



2 Click New.

3 In the Profile Name box, enter a name.

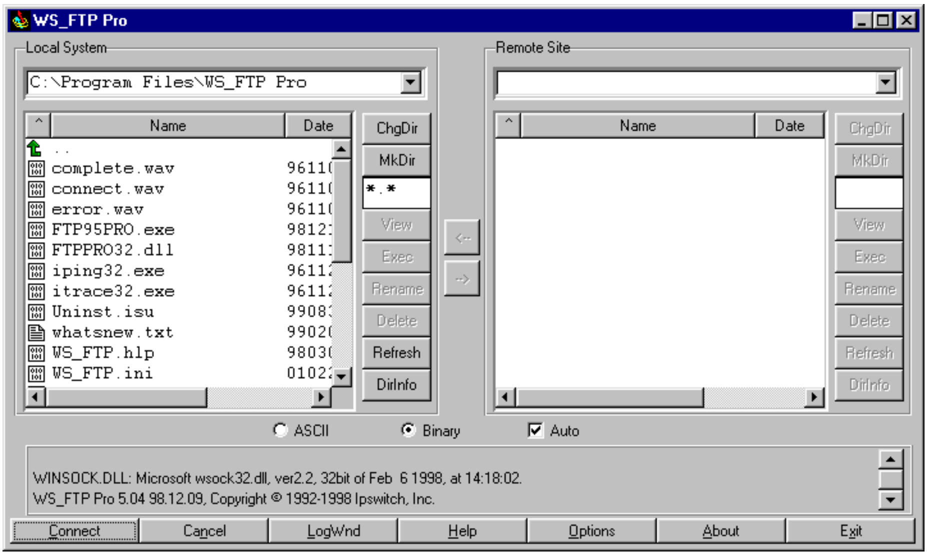
4 In the Host Name/Address box, type ***aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the Voice Services card.

5 In the User ID box, type **vpsdseuser**.

6 In the Password box, enter the appropriate password.

7 Click OK.

Result: The WS_FTP Pro window appears.



8 In the Local System panel, navigate to the directory where you will store the backup.

9 In the Remote Site panel, ensure that the root directory (/A: or /B:) appears in the drop-down list. If it does not appear, navigate to that directory.

10 Select all the directories located in this directory.

11 Ensure that Binary and Auto are checked.

12 Click the left transfer button (the left arrow) to copy the files from the PCMCIA card to the backup location.

Result: The message `Do you want to transfer the selected folders and their contents?` appears.

13 Click Yes.

Result: The Voice Services PCMCIA card backup is now complete. Ensure that all backed-up files are stored at a secure location.

To back up the Voice Services PCMCIA card using a computer with a PCMCIA card drive

This procedure assumes that you have the PCMCIA card in the faceplate slot (drive A). If this is not the case, you must disable the Voice Services card. For more information on disabling the Voice Services card, refer to the Distributor's Technical Reference (DTR).

1 Shut down the VS service using the Voice Services monitor.

2 Remove the PCMCIA card from the Voice Services card.

3 Insert the PCMCIA card into the PCMCIA adapter slot on your computer.

Result: The card appears as the next available drive in Windows Explorer. It can be accessed as any other drive on the computer.

4 Copy all files and directories from the PCMCIA card to the backup location on the computer. Ensure that the backed up files are held at a secure location.

5 Remove the PCMCIA card from your computer and replace it on the Voice Services card slot.

6 Restart the VS service.

Performing a Voice Services database and configuration backup

Nortel Networks recommends that you back up the Voice Services database and configuration to two separate floppy disks in case of a catastrophic failure. In addition, Nortel Networks recommends that you also back up the Voice Services database and configuration to an appropriate area of the Symposium Express Call Center server's hard disk.

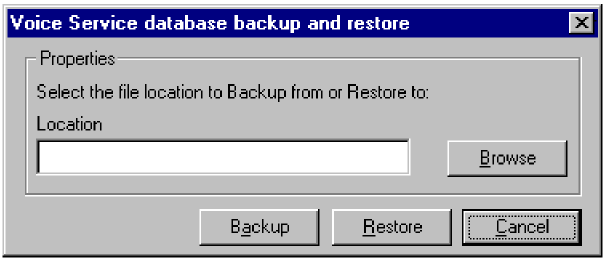
Note: This procedure backs up treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on). All this data is included on the .csv file that results from the following procedure.

To perform a Voice Service database and configuration backup

1 Log on to the server as **NgenSys**.

2 From the Windows Start menu, choose Programs → Symposium Express Call Center → Voice Services → Database Backup-Restore.

Result: The Voice Service database backup and restore dialog box appears.



3 Insert the preformatted disk for the backup. The backup is stored as a .csv file. It is highly unlikely that it will be too large to fit on a single disk.

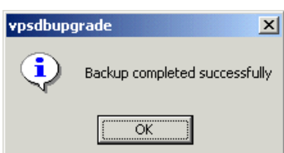
4 Click Browse and navigate to the location of the disk.

5 In the File name field of the Browse window, type a name for the backup file with the extension .csv, and then click Open.

6 Click Backup.

Result: The system backs up the Voice Services database and configuration data to the .csv file.

7 Wait until the following message appears:



8 Click OK.

9 Remove the disk and label it with the following information:

- date
- version

- customer name
- server name

10 Repeat steps 2 to 7 to make another copy of the backup on a separate disk.

CAUTION

Risk of data loss

Always back up the information on two separate disks. Never rely on a single disk for the backup. For disaster recovery, Nortel Networks recommends that you retain two Voice Services database and configuration backup disks in a secure off-site location.

11 Repeat steps 2 to 6, but this time back up the database to the server’s hard disk. This enables you to do a quick restoration of the Voice Services database and configuration. Ensure that you use an appropriate time stamping method when saving to the hard drive so that there is a record of when the backup was performed.

Section D: Backing up other kinds of data

In this section

Creating a server Platform Recovery Disk

Introduction

When you create a Platform Recovery Disk, the system saves both server and database configuration data into a series of text files. You must keep an up-to-date Platform Recovery Disk available in case you need to recover your server software or database, or both. You also need this disk for conversion and migration procedures. Nortel Networks recommends that you create a Platform Recovery Disk after any major modifications to the system.

You can create a Platform Recovery Disk on either a floppy disk or a remote directory on a network computer.

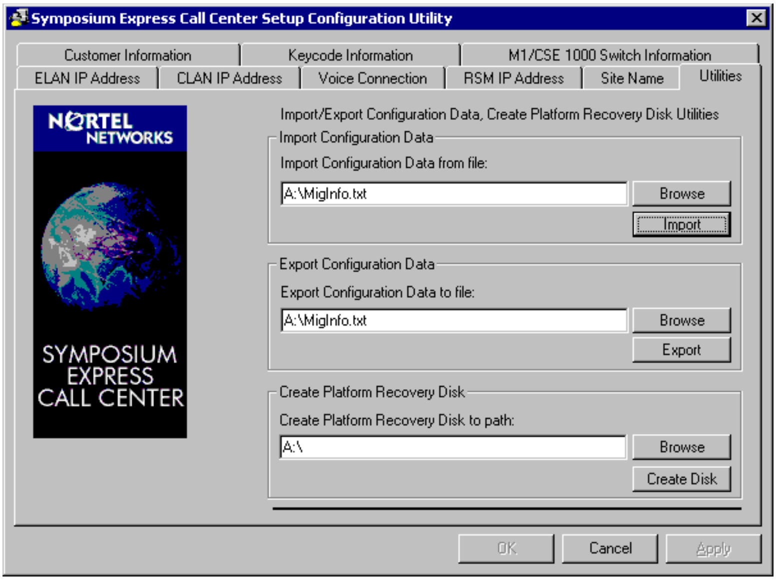
Note: If you want to use a remote computer, you must first map the directory on the network computer to a network drive on your server. The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

To create a Platform Recovery Disk

1. Log on to the server as **NGenSys**.
2. From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

   Result: The Symposium Express Call Center Setup Configuration Utility dialog box appears.

3 Click the Utilities tab to display the following:



4 In the Create Platform Recovery Disk section, do one of the following:

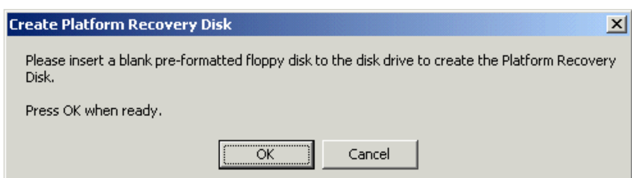
- If you want to create a Platform Recovery Disk on a floppy disk:

  a. Make sure the path shows A:\.

  b. Insert a blank floppy disk in drive A.

  c. Click Create Disk.

  Result: The following message appears:



  d. Click OK.

- If you want to create a Platform Recovery Disk in a directory on a network computer:

  a. Make sure you have mapped a network drive to the remote directory in which you want to save the Platform Recovery Disk.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

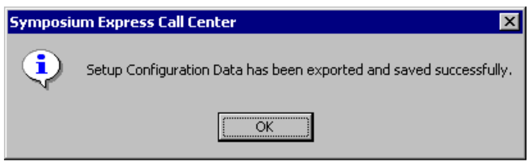
b. Click Browse and navigate to the mapped drive.

c. Select the directory, and then click OK.

Result: The drive you selected appears to the left of the Browse button.

d. Click Create Disk.

Result: The system exports files containing the server's setup record and database configuration to the disk or remote directory. When the process is complete, the following dialog box appears:



Note: The system also checks for database segmentation problems. If it finds any problems, it displays a message indicating the type of problem.

- If the system finds a database *data* segmentation overlapping problem, then it advises you to contact Nortel Networks customer support before proceeding. After customer support fixes the problem, you must create a new Platform Recovery Disk before proceeding.
- If the system finds a database *log* segmentation overlapping problem, then you can still use the Platform Recovery Disk that you have just created. The system prompts you to shut down the Symposium Call Center Server services so it can fix the problem. Follow the on-screen prompt to shut down the services.

5 Click OK. If you used a floppy disk, remove it from the drive, and make sure it is labeled clearly.

6 Close the Symposium Express Call Center Setup Configuration Utility window.

7 Store the Platform Recovery Disk in a safe place.

Exporting client data

Introduction

The Data Migration Utility allows you to export data (user-created and user-defined reports and, for Release 3.0 and Release 4.2 clients, SMI Workbench icons) from the existing client to a safe location. You can then use the utility to import that data to the new client when you have installed it.

Reports location management

It is important to understand how the Data Migration Utility manages the location of your user-created and user-defined reports.

When exporting client data, the Data Migration Utility asks you to select a location to store the client data. This must be a safe location that will still exist when you are ready to install the new client software. Nortel Networks recommends you use a mapped network shared location.

At the location you specify, the Data Migration Utility creates a subdirectory (client\en\rpt\UserCreated), and exports the data there. It also creates a file (UserCreatedReports.txt) and locates this file in the root directory of the export location you specified. This UserCreatedReports.txt file contains the location of all user-created and user-defined reports on the original client.

Later, after you have installed the new client software, you use the Data Migration Utility to import the data from the export location you specified onto the client. You must then copy all the user-created and user-defined reports to the exact location where they were located on the original client. Refer to the file UserCreatedReports.txt for the location.

To export client data

1 Ensure that no SMI workbench sessions are running on the client application before you start the exporting process.

ATTENTION

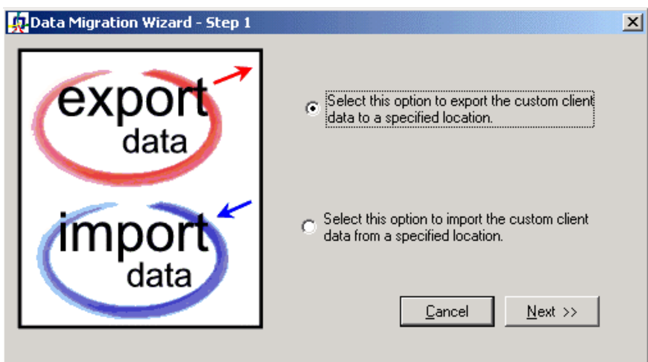
Ensure that all user-created and user-defined Crystal Reports have a unique name. If they do not have a unique name, they are overwritten during the exporting process and cannot function properly.

2 Decide where you want to store the exported client data. This must be a safe location that will still exist when you are ready to install the new client software.

3 Log on to the PC on which the client software is installed. If applicable, use the local administrator account.

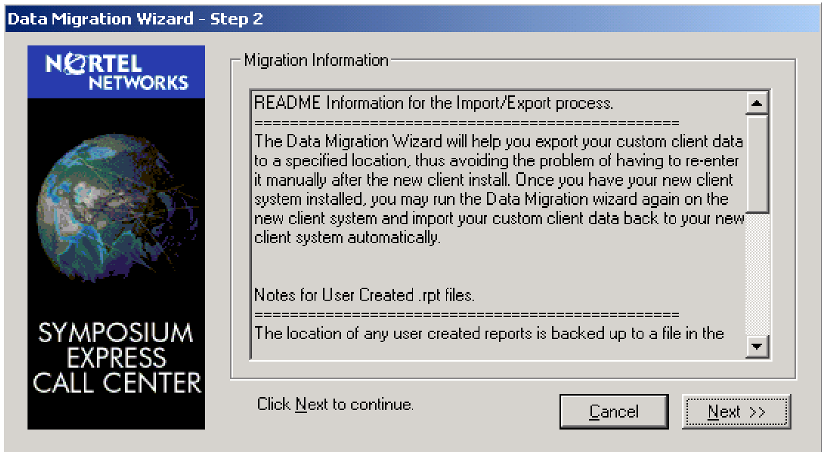
4 From the Windows Start menu, choose Programs → Symposium Express Call Center Client → Data Migration Wizard.

Result: The Data Migration Wizard window appears.



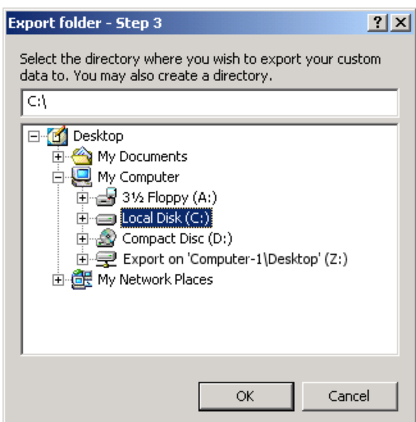
5 Ensure the export option button is selected, and then click Next.

Result: The next Data Migration Wizard window appears with general information concerning the import/export process.



6 Read the text, and then press Next to continue.

Result: The Export folder - Step 3 window appears.



7 Select the folder where you want to save your exported data.

ATTENTION

Ensure that the folder you select is in a safe location that will still exist when you are ready to install the new client software. Nortel Networks recommends you use a mapped network shared location.

a. In this folder, the Data Migration Utility creates a subdirectory: client\en\rpt\UserCreated.

b. The Data Migration Utility also creates a file called UserCreatedReports.txt, which is located in the root directory that you selected.

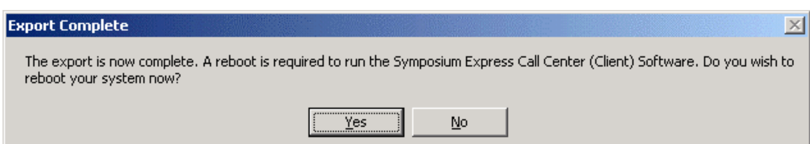
For example, if you selected z:\Export as the location for your exported data, the Data Migration Utility creates the subdirectory in z:\Export\client\en\rpt\UserCreated.
It also creates the file UserCreatedReports.txt in z:\Export.

8 Click OK.

Result: A dialog box appears stating that the data export may take a few minutes, and to wait until you are prompted to restart the computer.

9 Click OK.

Result: At this point, you may need to wait while the program completes its tasks. The system informs you when the export is complete and asks you to restart the computer.



10 Click Yes.

Section E: Using a third-party backup utility to create full backups

In this section

Overview

Introduction

You can create a full backup so that you can restore Symposium Express Call Center to its state at the time of the backup. This type of backup is useful for recovery from situations such as a catastrophic failure in the disk subsystem.

To perform a full backup in Symposium Express Call Center Release 4.2, you must use a third-party backup utility. This section provides guidelines for selecting the third-party backup software you will use, and describes the procedures you must complete before performing the third-party backup.

Nortel Networks recommends that you perform a full backup after

- the initial Symposium Express Call Center installation and configuration
- a major conversion to a new release
- any major hardware configuration changes

Guidelines for third-party backup software

Introduction

The third-party backup software must meet the requirements listed in this section.

Requirements for third-party backup software

- The third-party backup software must not reduce the hard disk space available to Symposium Express Call Center and the Windows 2000 operating system below the minimum required.
- The installation or uninstallation of the third-party backup software must not impact or conflict with Symposium Express Call Center software (for example, it must not cause .DLL conflicts). If such conflicts are discovered, a rebuild of the server may be necessary.
- If the third-party backup software has its own database, it must not impact the Symposium Express Call Center database.
- The third-party backup software must not interfere with Symposium Express Call Center services in any way (for example, causing improper or out-of-sequence shutdowns).
- During run-time, the third-party backup software must not degrade the Symposium Express Call Center system beyond an average 50 percent CPU utilization.
- You must run the third-party backup manually. Do not schedule the third-party backup to run in automatic mode.

ATTENTION Services associated with the third-party backup must not run while the server is running.

- If you are using a tape drive for your backups, the third-party backup system can use a dedicated tape drive, or it can share the tape drive used for Symposium Express Call Center database backups.

- If the third-party backup and the Symposium Express Call Center database backup have dedicated tape drives, the tape drive used for the database backup must be configured with the device name “Tape0.”
- If the third-party backup and the Symposium Express Call Center database backup share a tape drive, the drive must meet the requirements of Symposium Express Call Center.

- For backups to a remote directory, the third-party backup must not interfere with the server ports used for network connections by Symposium Express Call Center.
- Before putting Symposium Express Call Center in operation, perform comprehensive coresidency testing of the server and the third-party backup utility.

Preparing for third-party backups

Introduction

The customer must define a backup and restore process based on the third-party utility used (for example, Windows backup). This section describes procedures that must be completed before beginning a full backup using a third-party utility. Refer to your third-party documentation for information on the full backup procedure.

When performing a full backup, you must perform the following steps in the order listed below. Each step is detailed in the following pages.

1. Shut down the Symposium Express Call Center services using the Shutdown utility.
2. Stop the database services from running by using the Stop Sybase Services utility.
3. Perform the full backup using the third-party utility of your choice.
4. Start the database services using the Start Sybase Services utility.
5. Start the Symposium Express Call Center services using the Startup utility.

To prepare your server for a full backup

1 Shut down all Symposium Express Call Center services using the Shutdown utility as follows:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Shutdown.

Result: The Symposium Express Call Center Shutdown dialog box appears.

b. Click OK.

Result: The utility shuts down all services, and then the Service Status Log dialog box appears. This log displays any services that failed to shut down. Click Recheck to refresh the service statuses.

c. If any services are still running, in the control panel, click the Administrative Tools → Services icon to manually shut down the listed services. Then click Recheck to update the status log.

d. Click Accept to exit the utility.

2 Shut down the database services using the Stop Sybase Services utility as follows:

ATTENTION

You must shut down the Symposium Express Call Center Services as outlined in step 1 *before* shutting down the database services. Failure to do so can result in database corruption.

a. From the Windows Start menu, choose Programs → Sybase → Stop Sybase Services.

Result: The Symposium Express Call Center Shutdown window appears.

b. Click OK.

Result: The utility shuts down the Sybase backup server, monitor server, and the Sybase server. When all services are shut down, the Service Status Log appears.

c. Verify that all services have been successfully shut down. If any services cannot be shut down, contact Nortel Networks support personnel.

d. If all services have been successfully shut down, click Accept to exit the shutdown utility and proceed with the full backup.

3 Based on the type of backup you want to perform, you have the following choices:

- To do a full backup of only the database files, proceed to step 7.
- To do a full backup of the database files *and* all of the operating system files, continue with the following step.

4 To back up the entire system (for example, if you want to back up all of the operating system files in addition to the database files), then depending on the backup utility you are using, you may need to use the Services window in the Control Panel to make sure the services listed below are shut down.

Note: Some third-party backup utilities require that you manually shut down the following services. If you do not shut them down as follows, then some Windows files may not be backed up.

Click Start → Settings → Control Panel → Administrative Tools → Services.

Result: The following services are shown:

- Telephony
- TCP/IP NetBIOS Helper Service
- SNMP Service
- Simple TCP/IP Services
- Server
- Protected Storage
- Messenger
- License Logging Service

5 To shut down the services, select the service, and then press Stop.

6 Once complete, click Close on the Services control panel.

7 Back up the server. You must select the following options before starting the full backup:

- verify backup—This ensures that the backup was made successfully.
- back up local registry—This is a required option to back up all of the server’s configuration details. The third-party backup utility must support registry backups.

Note: You may want to use the compression option (if available) to make sure all of the data on the server can be backed up.

The following drives must be backed up:

- C:—Windows operating system, SysOps.log file, pcAnywhere
- D:—Symposium Express Call Center, Sybase executables
- all drives greater than and including F that are database drives
- the drive on which the coresident client software is installed

To perform the backup

1 Start the backup from the third-party utility.

2 When the backup is complete, restart your server.

3 When the server is restarted, use the Start Sybase Services utility to restart the database services, as follows:

ATTENTION

Do not attempt to restart the database services if the Symposium Express Call Center services are running. The Symposium Express Call Center services must be shut down before starting the database services. After starting the database services, then start the Symposium Express Call Center services.

a. From the Windows Start menu, choose Programs → Sybase → Start Sybase Services.

Result: The Symposium Express Call Center Startup window appears.

b. Click OK to start the Sybase services.

Result: The services start up. When all services have successfully started, the Startup Complete window appears.

c. Click OK to exit this window.

4 When the database services have been started, start the Symposium Express Call Center services as follows:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Startup.

Result: The Symposium Express Call Center Startup dialog box appears.

b. Click OK.

Result: After all services have started, the Startup Complete dialog box appears.

c. Click OK to exit the window.

Chapter 16

Restoring data

In this chapter

Overview of recovery procedures

Introduction

There are a number of recovery methods available for your Symposium Express Call Center. The method you choose depends on the problem you encounter and the backup data and media available to you.

Note: Before using these recovery procedures, check your regional Symposium Express Call Center technical web site for updated customer documentation and installation addenda.

Recovery using a database backup and Platform Recovery Disk

The following table lists the recovery methods that use database backups and Platform Recovery Disks, or both. If your server uses the Voice Services feature, a Voice Services backup may also be required in some of these methods. Use the table to determine which recovery scenario is appropriate for your situation. This chapter contains procedures for each method.

Recovery method	When to use (examples)	Backup data required
Full system recovery using a database backup and Platform Recovery Disk (plus Voice Services backup disk, if applicable) (See page 739.)	You suspect or experience ▪ file corruption that affects more than the Symposium Express Call Center database (for example, you cannot boot the system because the operating system is corrupted) ▪ hardware failure (for example, a hard disk failure)	Database backup and Platform Recovery Disk (plus Voice Services backup disk, if applicable) (these must exist prior to system failure)
Recovery of the server setup configuration (See page 748.)	You suspect problems with the setup configuration (for example, the Feature Report displays incorrect system configuration data or indicates a crash).	Platform Recovery Disk (must exist prior to configuration corruption)

Recovery method	When to use (examples)	Backup data required
Recovery of the database contents (See page 750.)	You suspect data in the database is corrupted (for example, the system produces database error messages, you observe incorrect customer data, or your Database Integrity Check fails).	Platform Recovery Disk and database backup (these must exist prior to database corruption)
Recovery (reinstallation) of Sybase ASE 12 and database software (See page 751.)	You suspect corruption in Sybase ASE 12 configuration or software (for example, your Sybase database server fails).	Platform Recovery Disk and database backup
Recovery (reinstallation) of the server software (See page 756.)	You suspect the server software is corrupted (for example, some Symposium Express Call Center services fail or crash and are not recoverable, or the system produces error messages indicating that software files are missing). **Note:** You can also use this method to return the system to its original software state if the installed PEPs/Service Update packs are causing problems or are unknown.	Platform Recovery Disk (plus Voice Services backup disk, if applicable)

Recovery of Voice Services data

If your system has the Voice Services feature, the following recovery procedure is available:

Recovery method	When to use (examples)	Backup data required
Recovery of Voice Services data (See page 779.)	You suspect that Voice Services information has been overwritten and you want to regress to a previous version, you suspect the Voice Services database has become corrupt, or the PCMCIA card is damaged.	Voice Services backup (PCMCIA card backup, or database and configuration backup, or both.)

Recovery using RAID backups or third-party backups

If your system is equipped with RAID, or if you use a third-party backup utility, the following additional restore options are available:

Recovery method	When to use (examples)	Backup data required
Recovery of a system equipped with RAID: ▪ full system recovery ▪ recovery of a faulty hard drive (See your hardware documentation for instructions.)	▪ You have performed a conversion or another maintenance activity on the system, and you need to rebuild or restore your split RAID drives. ▪ You suspect or experience hardware failure (for example, a hard disk failure).	RAID backup (for systems equipped with RAID)

Recovery method	When to use (examples)	Backup data required
Full system recovery using a third-party backup utility (See page 785.)	In the event of a catastrophic failure (for example, the operating system will not start, or the system crashes randomly in the operating system and application software). Use this method when the latest database backup and setup configuration data is not available for a Symposium Express Call Center reinstall.	Full backup of system using a third-party backup utility

If you do not have a backup

If you do not have a Platform Recovery Disk and database backup (and Voice Services backup, if applicable), a RAID system, or a full backup, you must do a fresh install of Symposium Express Call Center. When you do this, you lose all of the configuration and statistics information. To recover your configuration, you must reconfigure the server.

Nortel Networks does not recommend this method for recovery. If you are in this situation, contact Nortel Networks customer support for detailed information.

Section A: Recovery using a Platform Recovery Disk and database backup

In this section

Overview

Introduction

The procedures in this section provide instructions for recovering a Symposium Express Call Center server using a Platform Recovery Disk, a database backup, or both. If your server has the Voice Services feature, the recovery may also require a Voice Services backup. This section covers five types of recovery:

- full system recovery
- recovery of the system setup configuration
- recovery of the database contents
- recovery (reinstallation) of Sybase ASE 12 and database software
- recovery (reinstallation) of the server software

ATTENTION

If your recovery procedure involves restoring the database, make sure the database backup you use was created from the same server running the same software release of Symposium Express Call Center. If you attempt to restore a database backup created from a server running a different software release, the database restore will finish, but the system will not work properly. Make sure you label each database backup properly, including the software release of Symposium Express Call Center.

Common recovery procedures

Certain recovery procedures, such as restoring the database or importing database or configuration data from a Platform Recovery Disk, are used in more than one of the recovery scenarios listed above. These common procedures are located at the end of this section and are referenced where appropriate for each specific recovery scenario.

Full system recovery

Introduction

The full system recovery procedure provides instructions for recovering from system failure, such as

- file corruption that affects more than the Symposium Express Call Center database
- a hardware failure (for example, a hard drive failure)

If you have a current Platform Recovery Disk and recent database backup, you can use this recovery method. If your server has the Voice Services feature, you also need a backup of the Voice Services database and configuration data on a disk.

Requirements for full system recovery

Item	✔
CD containing Windows 2000 operating system (if you need to reinstall the operating system)	
Symposium Express Call Center Server Application CD and Symposium Express Call Center Client Application CD	
Supplementary CD containing the PEPs and Service Update packs installed on the original system. (The most recent PEPs and Service Update packs are available from the Meridian PEP Library web site.) **Note:** On the restored system, you must install all the PEPs that were installed on the original system.	
Platform Recovery Disk	
Latest database backup of the system	
Voice Services database and configuration backup (if your server uses this feature)	
Backup of user-created and user-defined reports (if your coresident client has these types of reports) **Note:** If you do not have your user-created and user-defined reports backed up in a safe location, or if you are unable to export them now due to the condition of the server, you must recreate the reports once you recover the server and reinstall the coresident client.	
Printout of the MigInfo.txt file, located on the Platform Recovery Disk This file contains the setup information for the system you are recovering, and is used during installation and configuration of the operating system and Symposium Express Call Center.	
Information about the original system ■ partition sizes ■ PEP and Service Update pack level	

Checklist for full system recovery

Complete the following steps to perform this recovery procedure. To keep on track during the procedure, make a photocopy of the checklist and check off each step as you complete it.

Description		✔
1	Prepare the base configuration of the server for the full system recovery procedure (see page 742).	
2	Install the product software (see page 744).	
3	Apply the latest Install-time PEP (see page 744).	
4	Import database information from the Platform Recovery Disk (see page 745).	
5	Install the product database (see page 745). **Note:** If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in “Installing server PEPs and SUs” on page 278. For a list of server language PEPs, see “Server language PEPs” on page 844.	
6	Restore the server’s database (see page 745).	
7	Perform a database integrity check on the restored server (see page 746).	
8	Configure the software and database (see page 746).	
9	Apply any required Service Update packs or PEPs (see page 746).	
10	(If applicable) Restore the Voice Services database and configuration data (see page 746).	
11	Reinstall the coresident client software (and import user-created and user-defined reports, if applicable) (see page 747).	
12	Complete the full system recovery (see page 747).	

Preparing the base configuration of the server for the full system recovery procedure

Before you can reinstall the Symposium Express Call Center software and restore your database and configuration, you must ensure that the base configuration of your system is in a proper state. In other words, you must ensure that

- the operating system is installed and correctly configured on drive C
- pcAnywhere is installed and configured on drive C
- the additional drives (D, F, and any additional database partitions) are empty and partitioned in exactly the same way as they were before the system failure

How you achieve this depends on the state of your system before you begin the recovery steps. You can choose one of the following approaches:

- Option A: Reinstall the operating system and pcAnywhere, and repartition the drives on the system.
- Option B: Leave the operating system, pcAnywhere, and drive partitions intact, and then
  - uninstall the coresident client software
  - remove the Symposium Express Call Center server software, Sybase ASE 12, and the database files

See the guidelines below for both these options.

ATTENTION

If your coresident client has user-created and user-defined reports that you want to restore after you recover the server, you must export these reports to a safe location *before* you proceed with this recovery procedure. For instructions, see“Exporting client data” on page 719. If you are unable to export the data because of the condition of the server, and if you do not have a copy of the reports already exported to a safe location, you must recreate these reports once you complete the recovery procedure.

Option A: Reinstalling the operating system and repartitioning the drives

If you suspect that the operating system is unstable, or if you cannot boot the system, you may need to do a fresh installation of the operating system and pcAnywhere, and then repartition all remaining drives. Complete the following steps.

1. Follow the instructions in Section A: “Configuring the operating system” on page 99 to create a drive C partition, and install the Windows 2000 operating system. The file MigInfo.txt on your Platform Recovery Disk provides most of the data that you need to reconfigure your operating system. Ensure that the operating system is configured correctly, as described in the section referenced above.

2. Configure the LAN network cards with the same network IP configuration (for example, IP address, subnet mask, default gateway, and so on) as on the original system. Use the TCP/IP parameter information in the file MigInfo.txt.

3. Partition the remaining disks in exactly the same way as they were partitioned before the system failure. This information is also available in the file MigInfo.txt.

4. If you are restoring your database from tape, make sure the system is installed with tape driver software that is compatible with Windows 2000.

5. Install pcAnywhere, as described in Section C: “Installing and configuring pcAnywhere” on page 171.

Option B: Uninstalling the Symposium Express Call Center client and server software, and removing the database

If you suspect that the problem with the system does not affect the operating system, you may only need to uninstall all software and files related to Symposium Express Call Center, thereby leaving the operating system and drive partitions intact.

1 To uninstall the coresident client software, follow the procedures in Section C: “Uninstalling a coresident client” on page 229 of Chapter 5, “Coresident client software.”

2 To remove the server software, Sybase ASE 12, and the database, follow the procedures for a “Complete uninstall” on page 193 of Chapter 4, “Server software.”

Installing the Symposium Express Call Center server software

Once you have completed the base configuration of your system, you can proceed to install the Symposium Express Call Center server software.

To install the software

1. Locate the Server Application CD containing the Release 4.2 software for Symposium Express Call Center.
2. Install the server software as described in "Installing the product software (phase 1)" on page 147 in Chapter 4, "Server software."

   Note: When you have installed the software, do not continue to the next procedure in the referenced chapter. Instead, return to this chapter and continue to the procedure below.

Applying the latest Install-time PEP

Apply the latest Install-time PEP. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue through the next steps.

Note: The latest Install-time PEP is critical for installation and conversion.

The latest Install-time PEP is available on the Supplementary CD-ROM and from the Meridian PEP Library web site.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

For instructions on installing PEPs, see Chapter 7, "Installing and uninstalling PEPs and Service Update packs."

Then continue to the following procedure.

Importing database information from the Platform Recovery Disk

Once the server software is installed, you must import database information from the original system from a current Platform Recovery Disk.

For instructions, see "Importing database information from a Platform Recovery Disk" on page 765. Then continue to the following procedure.

Installing the database software

Before you can restore the database on your system, you must first install and initialize the database software.

To install and initialize the database software

1 If it is not already running, locate the Server Application CD containing the Release 4.2 software for Symposium Express Call Center and insert the CD-ROM in the drive.

2 Install the database software as described in "Installing the product database (phase 2)" on page 150 in Chapter 4, "Server software."

Note: If you are installing an Asian version of Symposium Express Call Center, install the appropriate language PEP before proceeding. Follow the instructions in "Installing server PEPs and SUs" on page 278. For a list of server language PEPs, see "Server language PEPs" on page 844.

When you finish the database installation, do not continue on to the next procedure in the referenced chapter. Instead, continue to the procedure below.

Restoring the server's database

You can restore the database either from a tape or from a remote directory, depending on which of these options you used to create the database backup.

Use one of the following procedures:

- "To restore the database from a tape backup" on page 767
- "To restore the database from a remote directory backup" on page 769

Then continue to the following procedure.

Performing a database integrity check on the restored server

To ensure the integrity of the databases after you restore them, Nortel Networks recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems.

For instructions, see "Performing a Database Integrity Check" on page 600. Then continue to the following procedure.

Configuring the server's software and database

Import configuration data from your Platform Recovery Disk to restore the configuration of your server's software and database.

For instructions, see "Configuring your server's software and database by importing configuration data from the Platform Recovery Disk" on page 772. Then continue to the following procedure.

Applying Service Update packs and PEPs to the restored server

Apply the same Service Update packs and PEPs to the restored server that were installed on the original system.

For information on installing Service Update packs or PEPs, see "Installing server PEPs and SUs" on page 278. Then continue to the following procedure.

Restoring the Voice Services database and configuration data

If your server uses the Voice Services feature, you must restore the database and configuration data from an existing Voice Services backup disk. This data is contained in a file on the backup disk with the extension .csv.

For instructions, see "Performing a Voice Services database and configuration restore" on page 784. Then continue to the following procedure.

Reinstalling the coresident client software (and importing user-created and user-defined reports, if applicable)

Complete the following steps:

1 Reinstall the client software by following the procedures in "Installing the coresident client software" on page 214 of Chapter 5, "Coresident client software." Then continue to the next step below.

2 If you exported user-created and user-defined reports to a safe location and you want to import them to the reinstalled client, follow the procedures in "Restoring client data" on page 761. Then continue to the following procedure.

Completing the full system recovery

Check that the system services start up successfully as follows:

From the Start menu, choose Programs → Symposium Express Call Center → System Monitor.

Result: The SMonW window appears and Symposium Express Call Center services begin the startup process. The services take approximately 15 to 20 minutes to start up.

When you are satisfied with the proper operation of the restored system, create a database backup. For instructions, see Chapter 15, "Backing up data." You may also want to perform a third-party backup, if available.

Recovery of the server setup configuration

Introduction

If you suspect corruption in your server setup configuration, you can recover an earlier version if you have an up-to-date copy of your system's configuration data file, MigInfo.txt. This file is created when you create a Platform Recovery Disk or when you use the Export Configuration Data utility in the Server Setup Configuration Utility.

To recover the server setup configuration

1 Make sure you have an up-to-date copy of your system's Platform Recovery Disk, or a copy of the file MigInfo.txt on a disk or in a directory that your system can access.

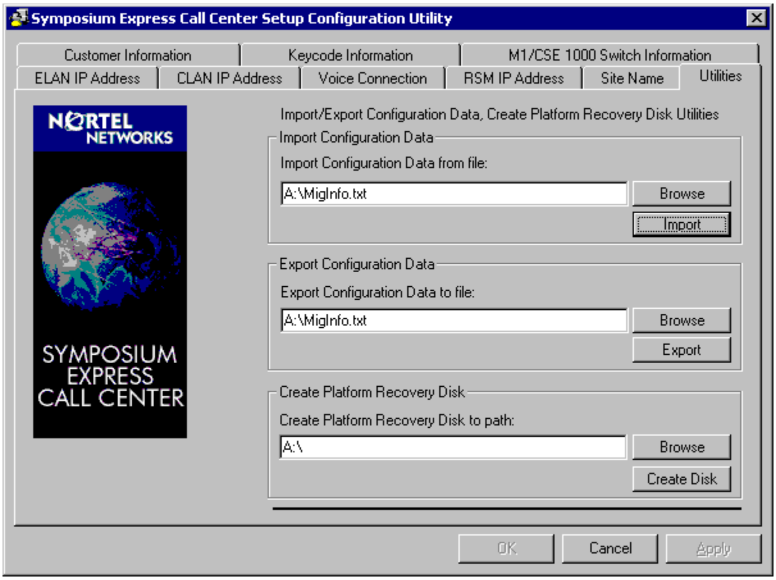
2 If your MigInfo.txt file is on a disk, insert it into the floppy drive.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Server Setup Configuration.

Result: The Server Setup Configuration Utility appears.

4 Click the Utilities tab.

Result: The following window appears:



5 In the Import Configuration Data from file section, make sure that the displayed path is the correct location of your file MigInfo.txt. If the path is not correct, use Browse to navigate to the location of the file.

6 When the path shown is correct, click Import.

Result: The system imports your configuration data.

7 Complete steps 9 through 21 in the procedure “Configuring your server’s software and database by importing configuration data from the Platform Recovery Disk” on page 772. Then continue to the procedure below.

To check that the server’s services start up successfully

From the Start menu, choose Programs → Symposium Express Call Center → System Monitor.

Result: The SMonW window appears and Symposium Express Call Center services begin the startup process. The services take approximately 15 to 20 minutes to start up.

Recovery of the database contents

Introduction

If you suspect that data in your Symposium Express Call Center database is corrupt, you can restore an existing backup of the database to the system using the Database Restore utility.

Use one of the following procedures:

- “To restore the database from a tape backup” on page 767
- “To restore the database from a remote directory backup” on page 769

Then continue to the procedure below.

Note: The restore process causes the connection between the client PC and server to be lost, and the services on the server to be shut down. After the restore process is finished, restart the system, and reconnect the client PC.

Performing a Database Integrity Check

To ensure the integrity of the databases after you restore them, Nortel Networks recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems.

For instructions, see “Performing a Database Integrity Check” on page 600.

Then continue to the following procedure.

Reapplying any PEPs or Service Update packs

If you applied any PEPs or Service Update packs since you created the database backup used for the restore, you must uninstall them and then reinstall them. This ensures that your restored database is properly updated. For instructions, see “Installing server PEPs and SUs” on page 278. If your database backup was created after you applied any PEPs or Service Update packs, then you do not need to uninstall and reinstall these PEPs.

Recovery (reinstallation) of Sybase ASE 12 and database software

Introduction

If you suspect that the Sybase ASE 12 server configuration or software is unstable, you can uninstall the database software and configuration, and then reinstall it while leaving the system software and configuration intact. You need a database backup and a Platform Recovery Disk to perform this procedure.

How this affects a coresident client

If you have a coresident client, you must export your client data and uninstall the client software before starting the reinstallation of the server. Once the server is reinstalled, you must reinstall the coresident client software and import your client data. These steps are built into the procedures that follow.

Checklist for recovering (reinstalling) the Sybase ASE 12 and database software

Complete the following steps to perform this reinstallation procedure. To keep on track during the procedure, take a photocopy of the checklist and check off each step as you complete it.

Description	✔
1 Prepare the system for reinstallation (see page 752).	
2 Import database information from the Platform Recovery Disk (see page 753).	
3 Reinstall and initialize the database software, including Sybase ASE 12 (see page 753).	
4 Restore the server's database (see page 753).	
5 Perform a Database Integrity Check on the restored server (see page 754).	
6 Configure the software and database (see page 754).	

Description	✔
7 Reapply any required Service Update packs or PEPs (see page 754).	
13 Reinstall the coresident client software (and import user-created and user-defined reports, if applicable) (see page 754).	
14 Complete the recovery (see page 755).	

Preparing the system for reinstallation

Before you can reinstall the database software and restore the database, you must uninstall the existing database software that you suspect is corrupted. You can also prepare your backup data, if you do not already have it available.

To prepare the system for reinstallation

1 If you do not already have a Platform Recovery Disk, create one as described in “Creating a server Platform Recovery Disk” on page 716. Then continue to the next step below.

2 If you do not already have a current database backup, create one as described in Chapter 15, “Backing up data.” Then continue to the next step below.

3 If you have a coresident client, do the following:

a. If you want to retain your user-created and user-defined reports, export this data to a safe location. For more information, see “Exporting client data” on page 719.

b. Uninstall the client software. For more information, see “Uninstalling coresident client software” on page 231 of Chapter 5, “Coresident client software.”

Then continue to the next step below.

4 Remove the database, as described in “Removing the database” on page 195 of Chapter 4, “Server software.” Then continue to the next step below.

5 Uninstall the Sybase ASE 12 software, as described in “Uninstalling Sybase ASE 12.0” on page 198 of Chapter 4, “Server software.” Then continue to the next step below.

6 Continue to the next procedure.

Importing database information from the Platform Recovery Disk

Once you have prepared the system for reinstallation, you must import database information from a current Platform Recovery Disk.

For instructions, see "Importing database information from a Platform Recovery Disk" on page 765. Then continue to the following procedure.

Reinstalling and initializing the database software, including Sybase ASE 12

You must install a fresh copy of the Symposium Express Call Center database software and Sybase ASE 12 software supplied on the Server Application CD.

To reinstall and initialize the database software

1 Locate the Server Application CD containing the Release 4.2 software for Symposium Express Call Center and insert the CD-ROM in the drive. Wait for it to autorun.

2 Reinstall the database, as described in "Installing the product database (phase 2)" on page 150 of Chapter 4, "Server software."

Note: When you have finished the database installation, do not continue in the referenced section. Instead, continue to the following procedure.

Restoring the server's database

Once you have reinstalled the database software, you must restore the database contents, either from a tape or from a remote directory, depending on which of these options you used to create the database backup.

Use one of the following procedures:

- "To restore the database from a tape backup" on page 767"
- "To restore the database from a remote directory backup" on page 769

Then continue to the next procedure in the checklist.

Performing a database integrity check on the restored server

To ensure the integrity of the databases after you restore them, Nortel Networks recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems.

For instructions, see "Performing a Database Integrity Check" on page 600. Then continue to the following procedure.

Configuring the software and database

Import configuration data from your Platform Recovery Disk to restore the configuration of your server's software and database.

For instructions, see "Configuring your server's software and database by importing configuration data from the Platform Recovery Disk" on page 772. Then continue to the following procedure.

Reapplying any required Service Update packs or PEPs to the server

If you applied any PEPs or Service Update packs since you created the database backup used for the restore, you must uninstall them and then reinstall them. This ensures that your restored database is properly updated. For instructions, see "Installing server PEPs and SUs" on page 278. If your database backup was created after you applied any PEPs or Service Update packs, then you do not need to uninstall and reinstall these PEPs.

Reinstalling the coresident client software (and importing user-created and user-defined reports, if applicable)

Complete the following steps.

To reinstall the coresident client software

1 Reinstall the client software by following the procedures in "Installing the coresident client software" on page 214 of Chapter 5, "Coresident client software." Then continue to the next step below.

2 If you exported user-created and user-defined reports to a safe location and you want to import them to the reinstalled client, follow the procedures in “Restoring client data” on page 761. Then continue to the procedure below.

Completing the recovery

Check that the system services start up successfully as follows.

To complete the recovery

From the Start menu, choose Programs → Symposium Express Call Center → System Monitor.

Result: The SMonW window appears and Symposium Express Call Center services begin the startup process. The services take approximately 15 to 20 minutes to start up.

When you are satisfied with the proper operation of the restored system, create a database backup. For instructions, see Chapter 15, “Backing up data.” You may also want to perform a third-party backup, if available.

Recovery (reinstallation) of the server software

Introduction

If you suspect that your Symposium Express Call Center server software is corrupted, you can uninstall and then reinstall it while leaving the database intact. You must also restore your server's setup configuration using a Platform Recovery Disk. This is because all system configuration details are lost when you uninstall the software.

How this affects a coresident client

If you have a coresident client, you must export your client data and uninstall the client software before starting the reinstallation of the server. Once the server is reinstalled, you must reinstall the coresident client software and import your client data. These steps are built into the procedures that follow.

Reinstalling the server software on a system with the Voice Services feature

If your system has the Voice Services feature, you must back up the Voice Services data and configuration using the Voice Services Database Backup-Restore facility, and then restore it once you have reinstalled the software. These steps are built into the procedures that follow.

Note: If you do not back up and restore Voice Services data, all Voice Services information and configuration will be lost in these procedures.

Checklist for recovering (reinstalling) the server software

Complete the following steps to perform this reinstallation procedure. To keep on track during the procedure, take a photocopy of the checklist and check off each step as you complete it.

Description	✔
1 Prepare the system for reinstallation (see below).	
2 Reinstall the Symposium Express Call Center server software (see page 758).	
3 Apply the latest Install-time PEP (see page 758).	
4 Configure the software and database (see page 759).	
5 Reapply any required Service Update packs or PEPs (see page 759).	
6 (If applicable) Restore the Voice Services database and configuration data (see page 759).	
7 Reinstall the coresident client software (and import user-created and user-defined reports, if applicable) (see page 760).	
8 Complete the recovery (see page 760).	

To prepare the system for reinstallation

1. If you do not already have a Platform Recovery Disk, create one as described in “Creating a server Platform Recovery Disk” on page 716. Then continue to the next step below.
2. If you do not already have a Voice Services backup disk, create one as described in “Performing a Voice Services database and configuration backup” on page 712 in Chapter 15, “Backing up data.”
3. If you have a coresident client, do the following:
   a. If you want to retain your user-created and user-defined reports, export this data to a safe location. For more information, see “Exporting client data” on page 719.

b. Uninstall the client software. For more information, see “Uninstalling coresident client software” on page 231 of Chapter 5, “Coresident client software.”

Then continue to the next step below.

4 Uninstall any PEPs or Service Update packs on the server. For instructions, refer to “Uninstalling server PEPs and SUs” on page 285. Then continue to the next step below.

5 Uninstall the server software, as described in “Uninstalling the server software” on page 199 of Chapter 4, “Server software.” *Do not uninstall the database software or Sybase ASE 12.* Then continue to the next step below.

6 Continue to the following procedure.

To reinstall the Symposium Express Call Center server software

1 When the system has restarted after the uninstall, log on to the server as **Administrator**.

2 Locate the Server Application CD containing the Release 4.2 software for Symposium Express Call Center.

3 Install the server software as described in “Installing the product software (phase 1)” on page 147 of Chapter 4, “Server software.”

Note: When you have installed the software (phase 1), do not continue in the referenced section. Instead, continue to the following procedure.

Applying the latest Install-time PEP

Apply the latest Install-time PEP. Install-time PEPs update the server software to take care of any known issues with the installation or configuration before you continue through the next steps.

Note: The latest Install-time PEP is critical for installation and conversion.

The latest Install-time PEP is available on the Supplementary CD-ROM and from the Meridian PEP Library web site.

You can distinguish Install-time PEPs from General PEPs by the PEP ID as follows:

- For Install-time PEPs, the second character is an I (for example, NI040206E001S).
- For General PEPs, the second character is an S (for example, NS040206E004S).

For instructions on installing PEPs, see Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”

Then continue to the following procedure.

Configuring the software and database

Import configuration data from your Platform Recovery Disk to restore the configuration of your server’s software and database.

For instructions, see “Configuring your server’s software and database by importing configuration data from the Platform Recovery Disk” on page 772. Then continue to the following procedure.

Reapplying PEPs or Service Update packs to the server

Reapply any required PEPs or Service Update packs to the server.

For information on installing Service Update packs or PEPs, see “Installing server PEPs and SUs” on page 278. Then continue to the following procedure.

Restoring the Voice Services database and configuration data

If your server uses the Voice Services feature, you must restore the database and configuration data from an existing Voice Services backup disk. This data is contained in a file on the backup disk with the extension .csv.

For instructions, see “Performing a Voice Services database and configuration restore” on page 784. Then continue to the following procedure.

Reinstalling the coresident client software (and importing user-created and user-defined reports, if applicable)

Complete the following steps.

To reinstall the coresident client software

1 Reinstall the client software by following the procedures in “Installing the coresident client software” on page 214 of Chapter 5, “Coresident client software.” Then continue to the next step below.

2 If you exported user-created and user-defined reports to a safe location and you want to import them to the reinstalled client, follow the procedures in “Restoring client data” on page 761. Then continue to the following procedure.

Completing the recovery

Check that the system services start up successfully as follows.

To complete the recovery

From the Start menu, choose Programs → Symposium Express Call Center → System Monitor.

Result: The SMonW window appears and Symposium Express Call Center services begin the startup process. The services take approximately 15 to 20 minutes to start up.

When you are satisfied with the proper operation of the restored system, create a database backup. For instructions, see Chapter 15, “Backing up data.” You may also want to perform a third-party backup, if available.

Restoring client data

Introduction

If you have exported your client data to a safe location during a recovery, migration, or reinstallation procedure, you can use the Data Migration Utility to import this data back to the client. You must then copy the user-created and user-defined reports back to their original locations. For information on where these reports were on the original client, refer to the file UserCreatedReports.txt that is in the root of the directory to which you exported the client data.

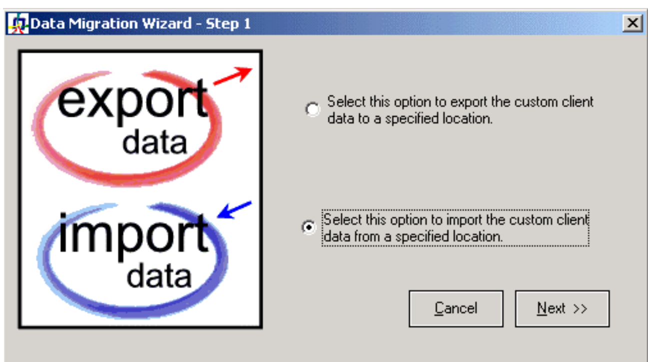
To import client data

1 Log on to the PC on which the client is installed using the local Administrator account.

Note: You must be logged on with administrative privileges to run the Data Migration Utility.

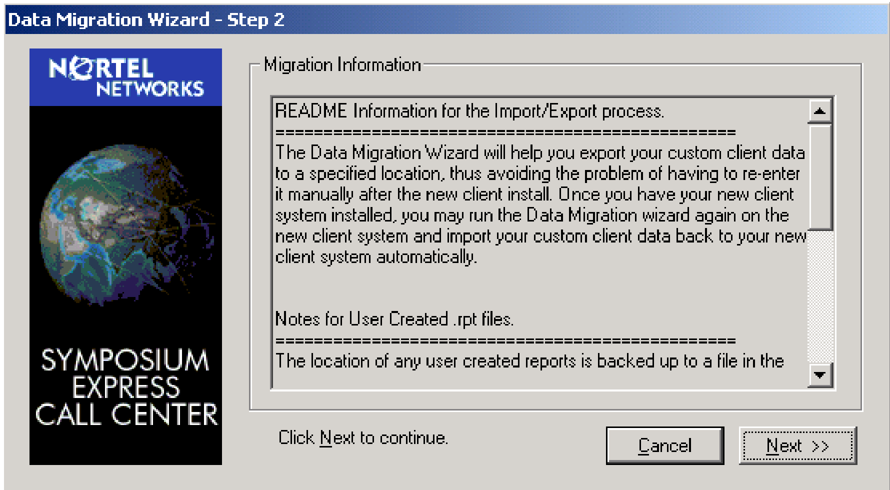
2 Click Start → Programs → Symposium Express Call Center → Data Migration Wizard.

Result: The Data Migration Wizard - Step 1 dialog box appears.



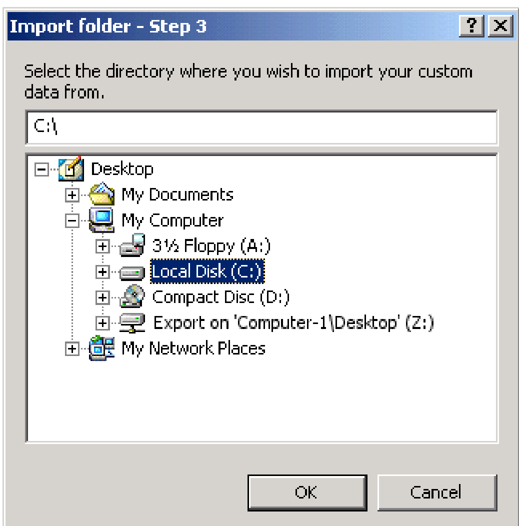
3 Select the import data button, and then click Next.

Result: The Data Migration Wizard - Step 2 window appears with general information concerning the import/export process.



4 Read the text, and then press Next to continue.

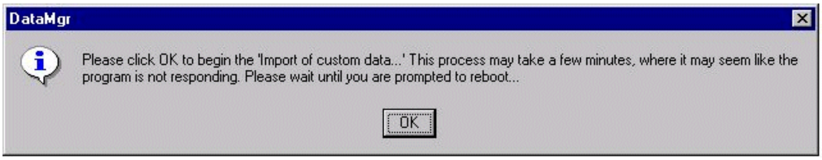
Result: The Import folder - Step 3 window appears.



5 Select the folder from which you want to import your data, and then click OK. This is the location to which you exported the data earlier.

6 Click OK to continue.

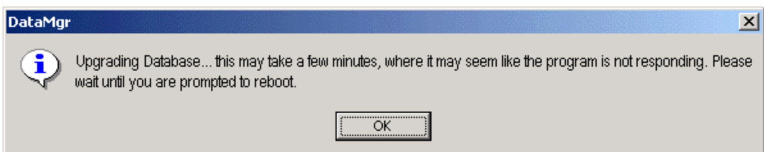
Result: A confirmation dialog box appears informing you that the import may take a few minutes.



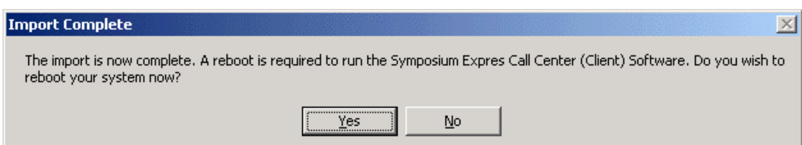
7 Click OK to continue.

At this point, you may need to wait while the program completes its tasks.

Note: If you are importing data from Symposium Express Call Center Release 2.0 or Release 3.0, the dialog box below appears. This dialog box appears during the reports database conversion phase. Click OK to continue.



Result: The data is imported. When the import is complete, the system informs you that you must restart the computer.



8 Click Yes to restart.

Result: The system restarts.

9 When the operating system has restarted, copy all user-created report files from the location to which they were imported (that is, <*install directory*>\client\en\rpt\UserCreated\..) to the exact location where they were on the previous system. (<*install directory*> is the folder where you installed the coresident client.) For information about where the reports

were located on the previous system, refer to the file UserCreatedReports.txt, which is in the root directory of the safe location where you exported the client data.

Result: The data is now imported from the backup location to the client.

Common recovery procedures used in this guide

Introduction

This section contains recovery procedures that are used in more than one recovery scenario. Refer to this section for specific restore procedures that are referenced from other sections in this chapter.

Importing database information from a Platform Recovery Disk

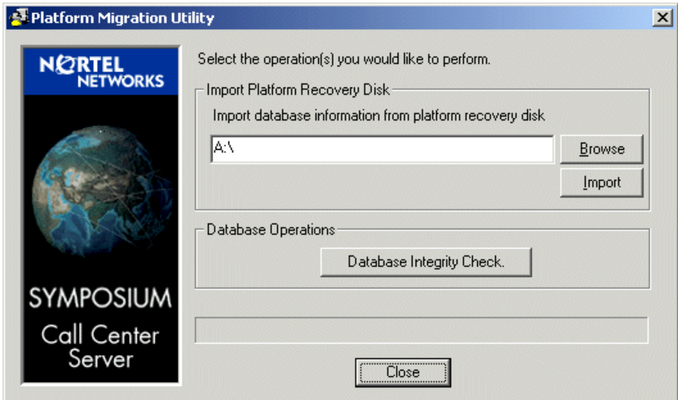
This procedure imports database information from a Platform Recovery Disk into your Symposium Express Call Center server.

To import database information from the Platform Recovery Disk

1. Log on to the server as **Administrator** or **NGenSys**.
2. Do one of the following:
   - **a.** If your Platform Recovery Disk is on a floppy disk, insert it into drive A.
   - **b.** If your Platform Recovery Disk is in a directory on a remote computer, map a network drive to that directory.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Migration.

Result: The Platform Migration Utility window appears.

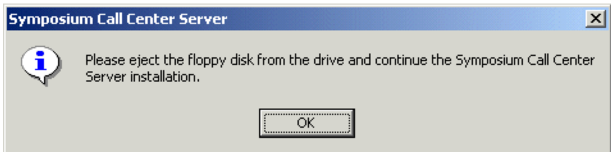


4 In the Import database information from platform recovery disk section, do one of the following:

- If your Platform Recovery Disk is on a floppy disk:
  - **a.** Make sure the drive shown is A:\.
  - **b.** Insert the floppy disk into the drive.
- If your Platform Recovery Disk is on a remote directory:
  - **a.** Click Browse and navigate to the mapped drive for the remote directory.
  - **b.** Click the drive, and then click OK.
  - **c.** Make sure the mapped drive appears in the Platform Migration Utility window.

5 Click Import.

Result: The system imports the files from your Platform Recovery Disk. A DOS window appears during the import with the text `Importing database information.` When the import is done, the DOS window displays the following confirmation message:



6 Click OK.

7 Close the Platform Migration Utility window.

8 If you used a floppy disk, remove it from the drive.

9 Return to the procedure that referenced this procedure.

Restoring a system's database from tape or from a remote directory

These procedures restore a database backup from either a tape or from a remote directory. Use the relevant procedure below.

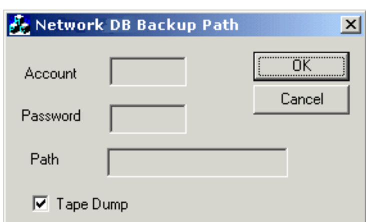
To restore the database from a tape backup

1 Log on to the server as **NGenSys**.

2 Make sure the system is set to restore the database from a tape by doing the following:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears.

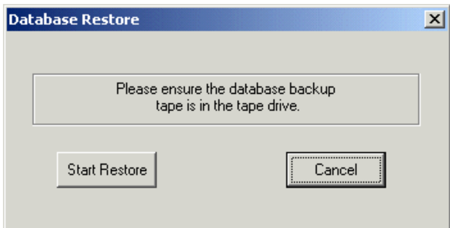


b. Make sure Tape Dump is checked, and then click OK.

Note: If this dialog box did not have Tape Dump checked, and there were values in the Account and Path boxes, then the system was configured for remote directory backup. If you want to reset the remote directory backup on the system *after* you have restored from tape, you must reenter the Account, Password, and Path information later.

3 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears.

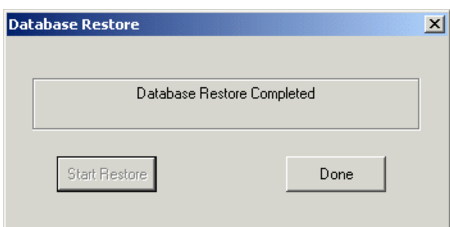


4 Insert the tape containing the database backup.

5 When the tape in the drive stops moving, click Start Restore to begin the database restore process.

Result: The system first shuts down the Symposium Express Call Center services that you have installed. Then the database restore process begins. This can take at least 1 to 3 hours, depending on the amount of data. During this time, the Database Restore window remains visible and displays numerous status messages about the progress of the restore.

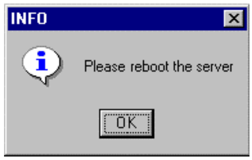
6 Wait until the following message appears:



Note: A log file is created with the following path name after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

7 Click Done.

Result: The following dialog box appears:



8 Eject the backup tape from the tape drive.

9 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem like there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel Networks recommends that you do not restart the server at this time. (You do not need to restart the server until after you configure the server software and database.) Instead, continue to the next procedure according to the checklist you are following.

To restore the database from a remote directory backup

ATTENTION

- If you have reinstalled the operating system as part of the recovery scenario, you must reconfigure the remote backup settings in the operating system on your server before proceeding. This includes creating a local Windows user account that is identical to the one that exists on the network computer, and adding the account to the policy "Log on as a service." Follow the instructions in "Preparing the Symposium Express Call Center server for remote directory backup" on page 684.
- Before restoring your database from a remote directory, check your remote folder configuration by following the guidelines listed in the section "Testing the remote directory backup and restore configuration" on page 688.

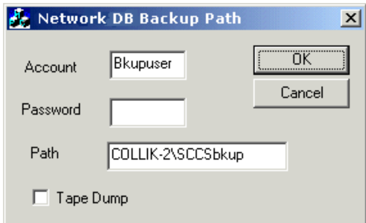
1 Log on to the system as **NGenSys**.

2 Ensure that you have a network connection to the computer containing the remote directory backup.

3 Make sure the system is set to restore the database from a remote directory by doing the following:

a. From the Windows Start menu, choose Programs → Symposium Express Call Center → Network DB Backup Path.

Result: The Network DB Backup Path dialog box appears.



b. Ensure that Tape Dump is unchecked, and check that the boxes in the dialog box are correct for the directory on the network computer containing the database backup files.

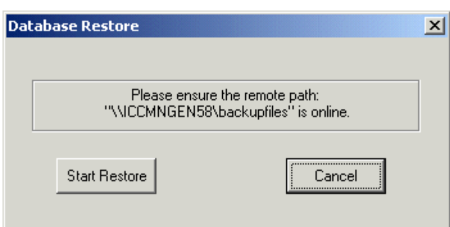
Note: For security reasons, you cannot see the password.

c. If you did not make changes to this window, click Cancel to close the window.

Note: If you are logged on as **Administrator**, the system may display a warning message telling you that the password cannot be verified. You can ignore this message if you are sure that the password entered on this window is the same as the password set up on this server for the user account.

4 From the Windows Start menu, choose Programs → Symposium Express Call Center → Database Restore.

Result: The Database Restore dialog box appears, showing the path for the remote directory containing the database files, as in the following example:

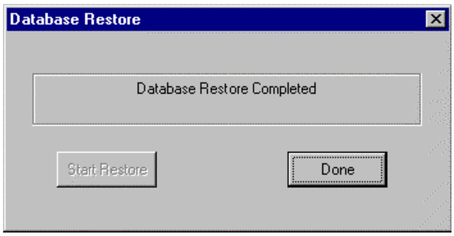


5 Check that the path is correct.

6 Click Start Restore to begin the database restore process.

Result: The database restore process begins. This can take 1 to 3 hours, depending on the amount of data, network traffic, and the CPU speed of the server. During this time, the Database Restore window remains in view and displays numerous status messages about the progress of the restore.

7 Wait until the following dialog box appears, indicating that the restore is complete:



Note: A log file with the following path name is created after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

8 Click Done.

Result: The following dialog box appears:

9 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem as if there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel Networks recommends that you do not restart the server at this time. (You do not need to restart the server until after you configure the server software and database.) Instead, continue to the next procedure according to the checklist you are following.

Configuring your server's software and database by importing configuration data from the Platform Recovery Disk

The file MigInfo.txt on your Platform Recovery Disk contains all configuration data for your Symposium Express Call Center server. To configure your server software and database, you can import this information directly into the Server Setup Configuration Utility using a command, as described in the following procedure.

To configure your server's software and database by importing configuration data from the Platform Recovery Disk

1 Make sure you are logged on to the server as **Administrator** or **NGenSys**.

2 Do one of the following:

- If your Platform Recovery Disk is on a floppy disk, insert it into the floppy drive.
- If your Platform Recovery Disk is in a remote directory, map a network drive to the remote directory.

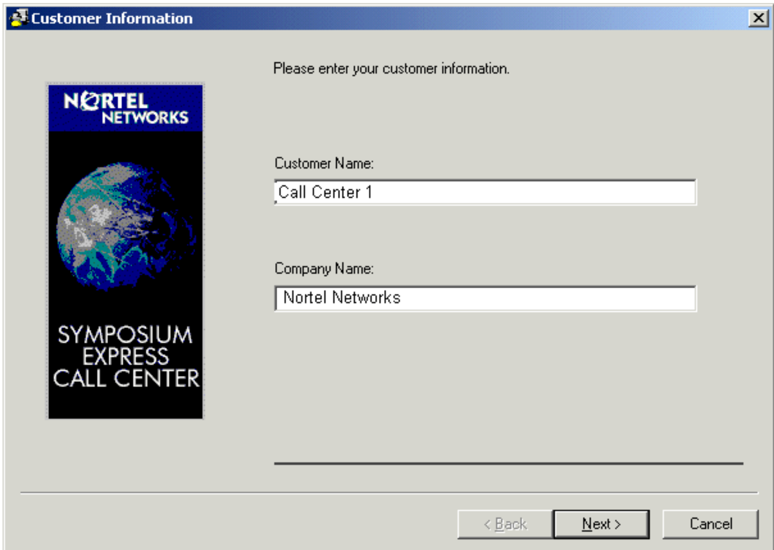
3 From the Start menu, choose Run.

4 Do one of the following:

- If your Platform Recovery Disk is on a floppy disk, type **d:\nortel\iccm\bin\svrconfig_secc.exe -i -w a:\MigInfo.txt**.
- If your Platform Recovery Disk is in a remote directory, type **d:\nortel\iccm\bin\svrconfig_secc.exe -i -w *x*:\MigInfo.txt**, where *x* is the letter of the mapped remote directory.

5 Click OK.

Result: The Customer Information window appears.



This is the first of several windows in the Setup Configuration Utility into which you enter your system configuration. However, because you have imported your Platform Recovery Disk, each window in this utility is already filled with the original system's configuration data, as in the example above.

6 Check the information in the Customer Information window, and then click Next to move to the next window.

7 Check the information in each subsequent window, and then click Next to move through the configuration utility.

8 When you reach the Site Name window, check the data, and then click Finish.

Result: The Server Setup Configuration Utility window appears. Each tab represents a window that you just viewed.

9 When you are satisfied with the configuration details, click OK.

Result: A window appears asking you to verify your keycode information.

10 Check that the features listed match the product you purchased, and then do one of the following:

- If the information is not correct, you may have entered the keycode and serial number incorrectly.
  a. Click No.
  b. Click the Keycode Information tab, and then make any necessary changes to your entries.
  c. Click OK, and then repeat step 9.
- If the information is correct, click Yes to continue.

Result: The Server Configuration Utility configures your server using the data you entered. It displays a status of each stage that the configuration passes through.

Note: This process can take 20 to 30 minutes to complete, depending on your system's CPU and database size. Do not close any windows during the configuration.

11 Wait until you see the following message:

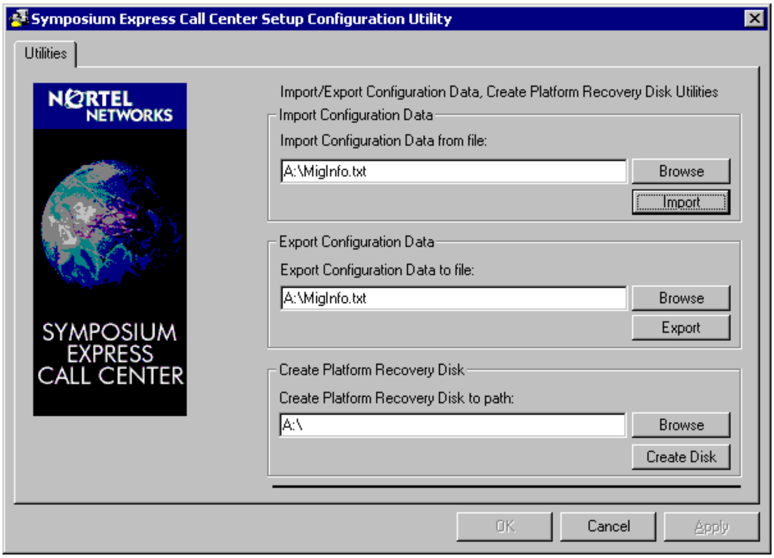
12 Click OK.

Result: The following message appears:

13 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in step 18.

Result: The Utilities tab appears.



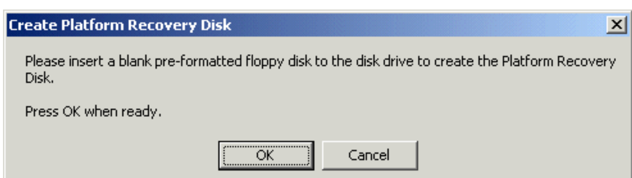
14 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:

  a. Insert a blank floppy disk in drive A.

  b. Click Create Disk.

  Result: The following message appears:



  c. Click OK.

- To save the Platform Recovery Disk to a remote directory:

a. Click Browse and navigate to the directory in which you want to store the data.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

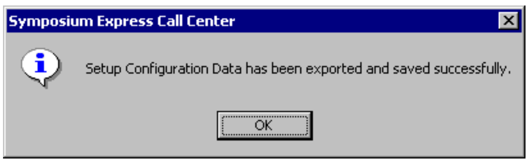
b. Select the directory, and then click OK.

Result: The path you selected appears to the left of the Browse button.

c. Click Create Disk.

Result: The system creates the Platform Recovery Disk.

15 Wait until the following message appears:

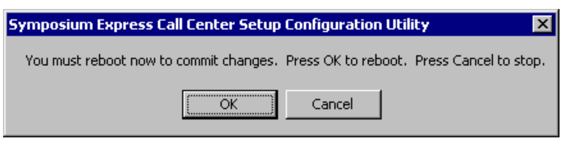


16 Click OK.

17 If you used a floppy disk, remove it from the drive. Make sure the Platform Recovery Disk is labeled appropriately and stored in a safe place.

18 Click OK to close the Symposium Express Call Center Setup Configuration Utility dialog box.

Result: The following message appears:



19 Click OK.

Result: The system automatically restarts.

20 Log on as **NGenSys**.

Note: It may take several minutes for the desktop to appear.

Result: The MAS Trace Window appears. The server and database configuration is complete, and the Symposium Express Call Center software is ready for use.

21 Return to the procedure that referenced this procedure.

Section B: Restoring Voice Services data

In this section

Overview

Introduction

Note: Voice Services is a keycode-enabled feature. You only need to perform Voice Services restores if you have this option.

If you discover that Voice Services information is overwritten and you want to go back to a previous version, or if the Voice Services database becomes corrupt, you can use the restore procedures in this chapter to recover the data.

There are two types of Voice Services data that you may need to restore:

- PCMCIA card data
- Voice Services database and configuration data

A full Voice Services restore includes both the above types; however, most restore procedures require only a restore of the Voice Services database and configuration data. The PCMCIA card backup is required only if the PCMCIA card is damaged or if its contents have been accidentally erased.

CAUTION

Risk of malfunction

When doing a full Voice Services restore, you must ensure that the PCMCIA card backup and the Voice Services database and configuration backup are from the same date to ensure that the correct files are referenced. A mismatched PCMCIA card and database can lead to Voice Services not functioning.

For Voice Services troubleshooting information, refer to “Troubleshooting Voice Services problems” on page 639.

Performing a Voice Services PCMCIA card restore

Introduction

There are two ways to restore a Voice Services PCMCIA card:

- using a third-party file transfer product
- using a computer with a PCMCIA card drive

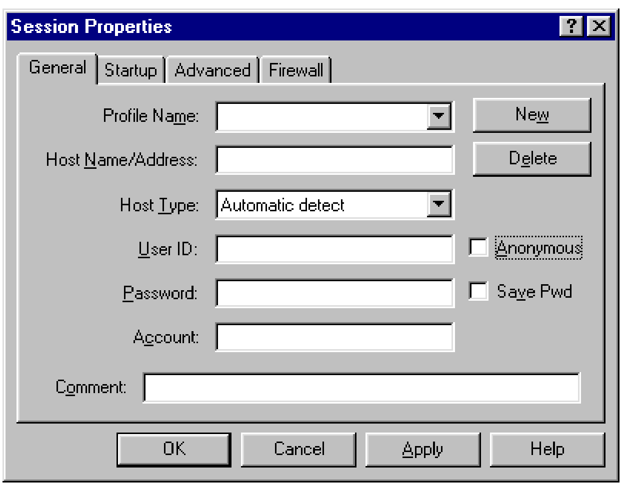
Procedures for both are included below.

To perform a Voice Services restore using the WS_FTP Pro application

The minimum release required for WS_FTP Pro is Release 5.1.

1. From the Symposium Express Call Center server, start the WS_FTP Pro application.

   Result: The Session Properties window appears.



2. Click New.
3. In the Profile Name box, enter a name.

4 In the Host Name/Address box, enter ***aaa.bbb.ccc.ddd***, where *aaa.bbb.ccc.ddd* is the IP address of the Voice Services card.

5 In the User ID box, type **vpsdseuser**.

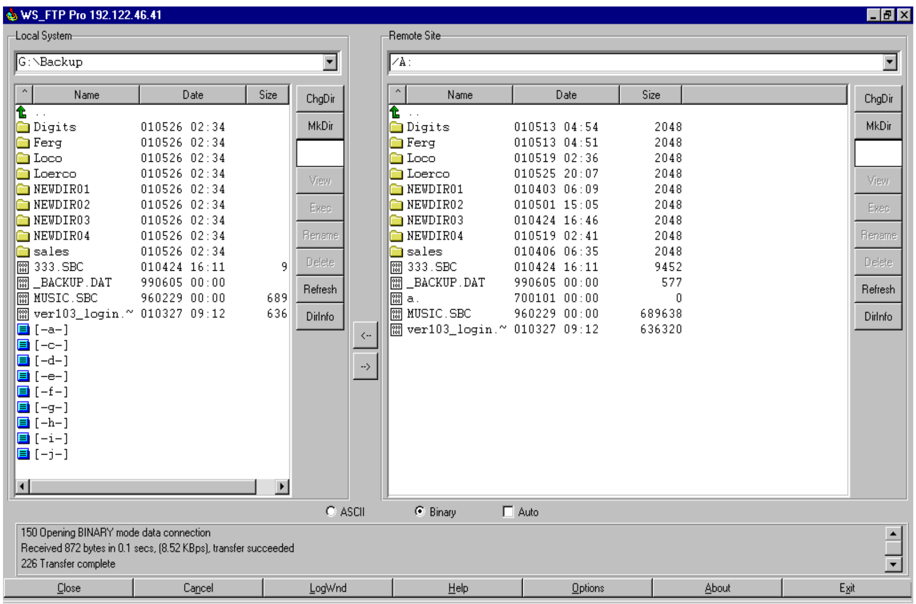
6 In the Password box, enter the appropriate password.

ATTENTION

This password is the default. It should have been changed by the system administrator. If it has been changed, contact your system administrator for the correct password. If it has not been changed, contact your system administrator to change it.

7 Click OK.

Result: The WS_FTP Pro window appears.



8 Navigate to the directory where the backup is stored on the Local System panel.

9 In the Remote Site panel, ensure that the root directory (/A:) appears on the drop-down list. If it does not appear, navigate to that directory.

10 Select all the directories located in this directory.

11 Ensure that Binary and Auto are checked.

12 Click the right transfer button (the right arrow) to copy the files from the backup location to the PCMCIA card.

Result: The message `Do you want to transfer the selected folders and their contents?` appears.

13 Click Yes.

To perform a Voice Services PCMCIA card restore using a computer with a PCMCIA card drive

This procedure assumes that the PCMCIA card is in the faceplate slot (drive A) of the Voice Services card. If this is not the case, then the Voice Services card must be disabled. For more information on disabling the Voice Services card, refer to the DTR.

1 Shut down the VS service using the Voice Services monitor.

2 Remove the PCMCIA card from the Voice Services card.

3 Insert the PCMCIA card into the PCMCIA adapter slot in your computer.

4 Ensure that a backup location is available on your computer.

Note: The PCMCIA card appears as the next available drive in Windows Explorer, and it can be accessed as any other drive on the computer.

5 Delete the contents of the PCMCIA card, and copy all files and directories from the backup location to the root of the card.

6 Remove the PCMCIA card from your computer and replace it in the Voice Services card slot.

Performing a Voice Services database and configuration restore

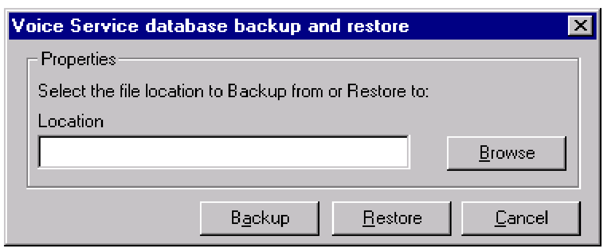
This procedure restores treatment and switch map information, as well as configuration details defined in the Voice Services configuration utility (keycode, IP address, default directory number, and so on).

1 Log on to the server as **NGenSys**.

2 Insert the floppy disk that contains the Voice Services database and configuration backup file.

3 From the Windows Start menu, choose VS Database Backup-Restore.

Result: The Voice Service database backup and restore dialog box appears.



4 Click Browse to locate the previously backed up .csv file, and then click Restore.

5 When the system indicates the restore is successful, remove the disk from the drive, and then close the Voice Service database backup and restore dialog box.

Section C: Recovery using a third-party backup

In this section

Recovering the database with a third-party backup

Customers must define their own full backup and restore process based on the third-party backup utility of their choice.

You can use a full restore in the event of catastrophic failure when the latest database backup and the initial system setup data records and database configuration are not available for reinstallation of Symposium Express Call Center.

Note: Do not use a restore from a full backup without a reinstallation of Symposium Express Call Center in the following situations:

- A full backup tape is not available.
- The failed system is replaced with a new system that may have a slightly different hardware configuration.
- The failed system is replaced with a different platform.

Appendix A

Comparisons with Symposium Call Center Server

In this appendix

Overview

Introduction

This chapter describes the differences between Symposium Call Center Server Release 4.2 and Symposium Express Call Center Release 4.2.

Symposium Express Call Center

Symposium Express Call Center is designed for call centers with 150 or fewer agents who want the functionality of Symposium Call Center Server with a simplified interface.

Features

All features, with the exception of scripting from Symposium Call Center Server, are visible with Symposium Express Call Center when you log on with the system administrator ID and password. In addition, the Administration window provides access to these features through a series of drop-down menus.

Customer access

Customer administrators do not have access to all of the features displayed in the Administration window. If customer administrators require customization that is not available from the Symposium Express Call Center Administration window, they must request support from their distributor or support personnel.

For more information

For complete information on Nortel Networks Symposium Call Center Server Release 4.2, refer to the documentation for that product.

Installation differences

Introduction

Symposium Express Call Center and Symposium Call Center Server have similar installation requirements for Release 4.2, and a similar installation process. Both applications run on the Windows 2000 Server or Advanced Server operating systems and have the same disk partitioning requirements. Installation differences are outlined in the table below.

Installation differences

Item	Symposium Call Center Server Release 4.2	Symposium Express Call Center Release 4.2
Client/server coresidency	Not available	Client is always coresident with the server. Optionally, additional PCs can have client software only.
Client operating systems supported	Windows 98, Windows NT 4.0 Workstation, Windows XP and Windows 2000 Professional	Windows 2000 Server and Windows 2000 Advanced Server (coresident clients only); Windows XP and Windows 2000 Professional (stand-alone clients only).
Meridian Mail ACCESS	Supported	Not supported; no Voice Prompt Editor functionality exists.
Option 11C Compact	Not supported	Supported (North America only).

Configuration differences

Introduction

Symposium Express Call Center has several system configuration differences. These include configuration utilities described in this guide.

Configuration differences

Item	Nortel Networks Symposium Call Center Server Release 4.2	Nortel Networks Symposium Express Call Center Release 4.2
Offline mode	Not available	Available; allows offsite configuration of users, skillsets, call presentation classes, or agent to skillset assignments.
Import wizard	Not available	Available; supports automatic configuration of switch resources and users, skillsets, agent to skillset assignments, and call presentation classes. Automatically acquires switch resources.
Script creation	Create and edit scripts with the Script Editor, and validate them manually.	Run Call Treatment and Routing wizards to configure and validate the scripts.
Script activation	Scripts activated manually after you create them	Master scripts are automatically activated after installation. All others are activated once configured in the Call Treatment and Routing wizards.

Item	Nortel Networks Symposium Call Center Server Release 4.2	Nortel Networks Symposium Express Call Center Release 4.2
Script checker	Optional tool that provides warnings of poor scriptwriting practices	Not available
Script	Scripts and script variables	No modification except through Call Treatment and Routing wizards. Read-only access only from the System window.
Switch resource configuration	Can be performed by customers from the System window	Cannot be performed by customers, as they do not have access to Advanced Functions.
Access classes	Customer-defined and configurable	Four predefined access classes: system administrator, customer administrator, supervisors, and senior supervisor. System administrators and customer administrators can create additional supervisor and senior supervisor user types. Only one customer administrator logon ID.

System window differences

Introduction

Symposium Express Call Center includes a simplified interface containing applications that are launched by selecting choices from a series of drop-down menus in the Administration window.

If you log on as a system administrator, all menus representing the features of Symposium Express Call Center are visible. If you log on as a customer administrator, supervisor, or senior supervisor user type, some of the menus are hidden.

Chart of system window differences

The following chart lists the applications available in the client for Symposium Express Call Center and shows the applications in the client for Symposium Call Center Server that provide similar functionality. If you are already familiar with Symposium Call Center Server, this chart can help you locate the equivalent application in the Administration window of Symposium Express Call Center.

Symposium Express Administration window	**Symposium Call Center Server SMI window**
Reports and Displays menu: ■ Real-time Displays ■ Reports	Reports & Displays group: ■ Real-Time Displays ■ Reports
User Administration menu: ■ Agent/Supervisor Administration ■ Agent/Skillset Assignment ■ Call Presentation	User Administration group: ■ Users Assignments group: ■ Agent to Skillset Assignments Call Flow Administration group ■ Call Presentation Classes
Call Administration menu: ■ Call Treatment ■ Call Routing ■ Voice Services	Call Flow Administration group: ■ Scripts ■ Scripts, Script Variables ■ The Voice Services card is not supported in Symposium Call Center Server Release 4.2.

Symposium Express Administration window	**Symposium Call Center Server SMI window**
Switch Administration menu: ■ CDNs ■ DNISs ■ Phonesets ■ Activity Codes	Switch Administration group: ■ CDNs ■ DNISs ■ Phonesets ■ Activity Codes
System Administration menu: ■ Backup ■ Import Utility ■ Advanced Functions (This is an SMI window similar to the Symposium Call Center Server version that provides access to functions that are not available through the Symposium Express Administration window.)	System Administration group: ■ Server Backup ■ Import utilities are not integrated with the client ■ SMI window

Appendix B

Engineering and capacity guidelines

In this appendix

Overview

Introduction

All Symposium Express Call Center components must be engineered to ensure that Symposium Express Call Center meets the customer's requirements, and that the customer benefits from the huge flexibility in call treatment provided by Symposium Express Call Center.

To engineer the Symposium Express Call Center components, you must consider information about the following operations:

- call flow
- call rate per hour
- supervisor displays
- the number of agents
- busy hour call attempts

This section describes Symposium Express Call Center Release 4.2 performance and capacity measurement and analysis, considering

- the test procedure, including
  - an overview of system architecture
  - the performance testing configuration
  - test features
  - configuration parameters
  - workload parameters and definitions
- performance and capacity analysis results for
  - memory and CPU utilization
  - Real-time Displays (RTDs), Graphical Real-time Displays (GRTDs), and CPU performance
  - Meridian Mail and CallPilot
  - Voice Services
  - pcAnywhere
  - treatment script sizes

Note: This document does not include performance analysis for the Meridian 1 (M1), Meridian 1 Internet Enabled (M1 IE), or the Succession Communication Server for Enterprise (CSE) 1000 (Succession CSE 1000) switches to which Symposium Express Call Center Server is connected. Refer to the customer documentation for the relevant switch.

Planning and capacity issues

For Symposium Express Call Center 4.2 to function at maximum performance and provide optimum flexibility, you must consider planning and capacity issues for the following:

- RTDs
- GRTDs
- Meridian Mail and CallPilot
- Voice Services and Prompt/Collect Digits
- pcAnywhere
- treatment scripts

In addition, depending on how the above components are configured, you must consider planning and capacity for

- memory
- CPU

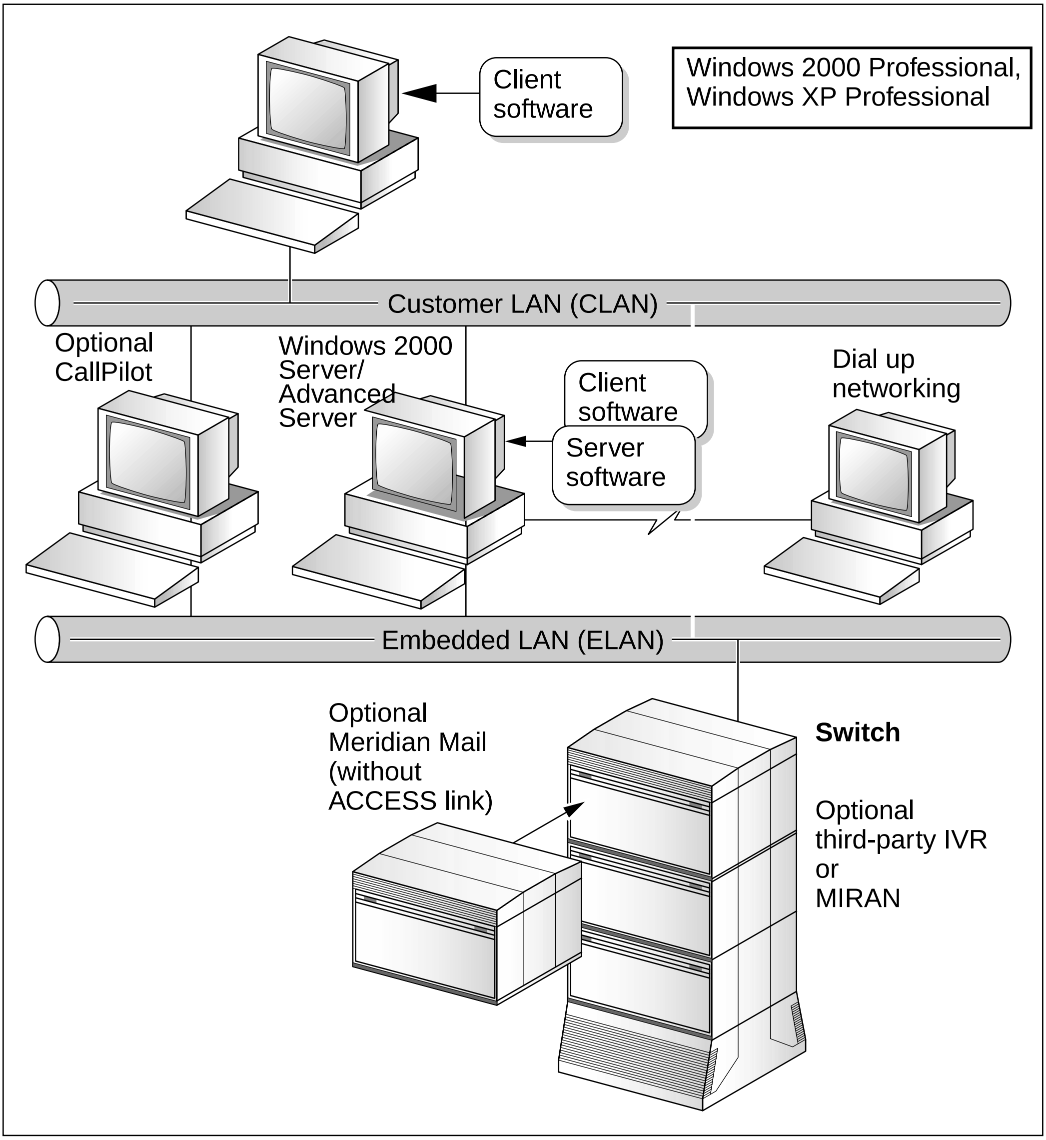
Test procedure

Introduction

This section describes the configuration setup in which performance testing and capacity measurement were carried out.

The impact that various features have on system performance is best understood through an overview of the system architecture.

The following diagram illustrates the system architecture:


Client
software
Windows 2000 Professional,
Windows XP Professional
Customer LAN (CLAN)
Optional
CallPilot
Windows 2000
Server/
Advanced
Server
Client
software
Server
software
Dial up
networking
Embedded LAN (ELAN)
Optional
Meridian Mail
(without
ACCESS link)
Switch
Optional
third-party IVR
or
MIRAN

G101185

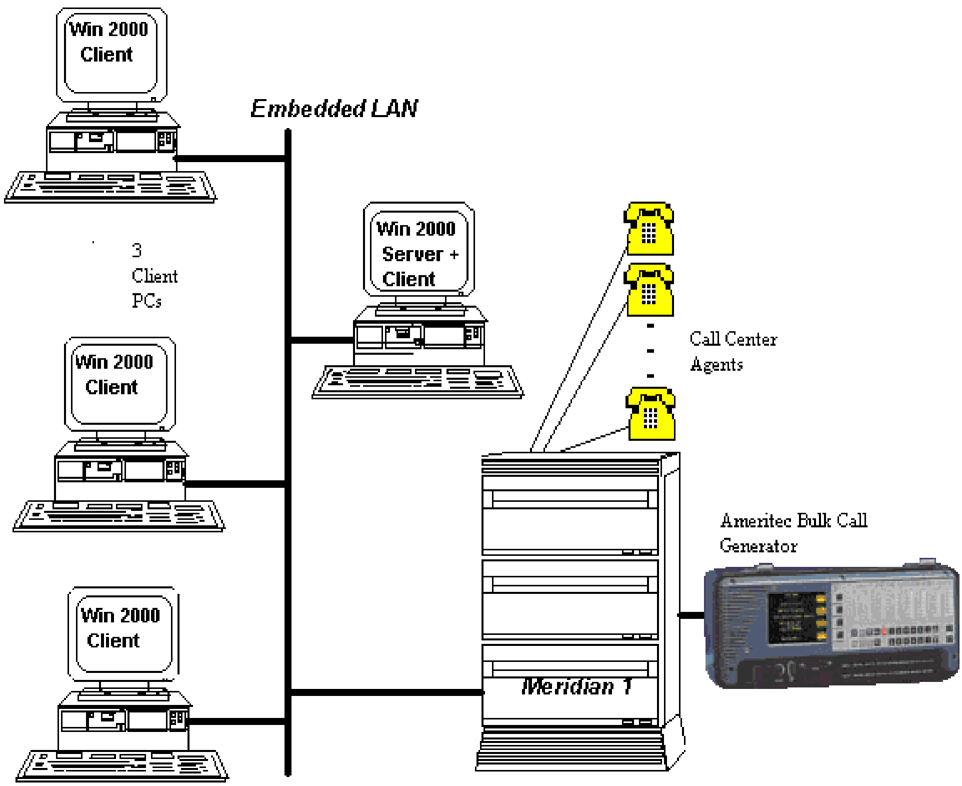
As calls come into the call center through the switch, the switch notifies the Symposium Express Call Center server. The server relays instructions to the switch on what to do with the call. If there is an agent free to answer a call, the server instructs the switch to present the call to the agent's phoneset.

As the switch is a real-time system, it does not wait indefinitely for the Symposium Express Call Center server to respond with instructions. A 4-second time-out is enforced by the switch. If there is no reply within 4 seconds, the switch gives the call a predefined default treatment so that call processing continues. In this way, there is a backup behavior for the call treatment if the Symposium Express Call Center server goes down or is disconnected from the switch.

This backup behavior operates only in particular circumstances. In normal operations, the Symposium Express Call Center server is expected to handle all calls coming into the call center. If there is a slowdown on the server, such that the server cannot respond back to the switch in the 4-second time limit, calls get the default treatment. There are a number of conditions in which the server may experience performance problems and may not respond back to the switch within the timeout limit. It is these situations that must be identified and avoided.

Performance testing configuration

The following setup was used for performance testing:



Test features

- An Ameritec Bulk Call Generator was set up with 40 channels connected to the M1 Option 11C. To generate 5000 calls per hour, the talk time was set to 62 seconds, and the wait time after disconnect was set to 46 seconds. Calls were started in groups of five channels.
- The Call Presentation for the 150 agent phonesets was set with call force so that calls would connect once they were presented to the phone.
- The calls generated by the Call Generator dialed different CDNs, so that depending on the CDN dialed, the call was queued to specific skillsets. Channels were divided into groups of five, and each one in the group dialed

the same CDN. With 30 groups of five channels, the calls were evenly distributed to 30 skillsets.

- Agents were divided into groups of five, and each agent in the group possessed the same skillset, as well as the Default_Skillset.

Workload parameters and definitions

Workloads were measured to analyze system performance at different capacity levels. The following definitions were used throughout the process:

- **call rate:** The average rate per hour of call arrivals to the Symposium Express Call Center system. The call arrival rate was measured in calls per hour, and is based on a uniform distribution of the calls (that is, constant inter-arrival times).
- **call duration:** The call duration related to how many agents are available to handle the specified call rate. For example, if the call rate is 60 calls per hour and there is only one agent, the call duration cannot be more than one minute or else calls begin to accumulate. On the other hand, if there were 60 agents, each agent can handle a call for up to an hour. In the tests, for 5000 calls per hour and 150 available agents, the call duration was 108 seconds.

There were two variable parameters:

- The call rate was varied by changing the wait time after disconnect on the Call Generator. This was to observe the effect of call rate on CPU usage.
- The number of sets of RTDs was increased with the first set run on the server. Each subsequent set of RTDs added was on a remote Windows 2000 PC.

Configuration parameters

Capacity and performance were measured on Symposium Express Call Center by using the following parameters:

- the maximum capacity workload
- the minimum hardware requirements

Table 1. Maximum possible configurations for Symposium Express Call Center 4.2

Maximum amount	Functionality
150	active agents
75 (Total Supervisor or RTD sessions)	active client sessions
32	call treatments
100	skillsets
75	CDNs
500	DNIS
2000	CLID
18 (3 per supervisor)	active Real-time Displays
5000	calls per hour

The call duration set for the call generator included

- talk time
- wait time between calls

The call routing measured was routed by CDN with no announcements.

It was anticipated that the RTDs running against the server would place a significant load on the CPU. Therefore, a series of measurements were made while varying the number of sets of RTDs. A set of RTDs consisted of

- an Agent Performance Display
- a Skillset Performance Display
- a Call Center Summary Display

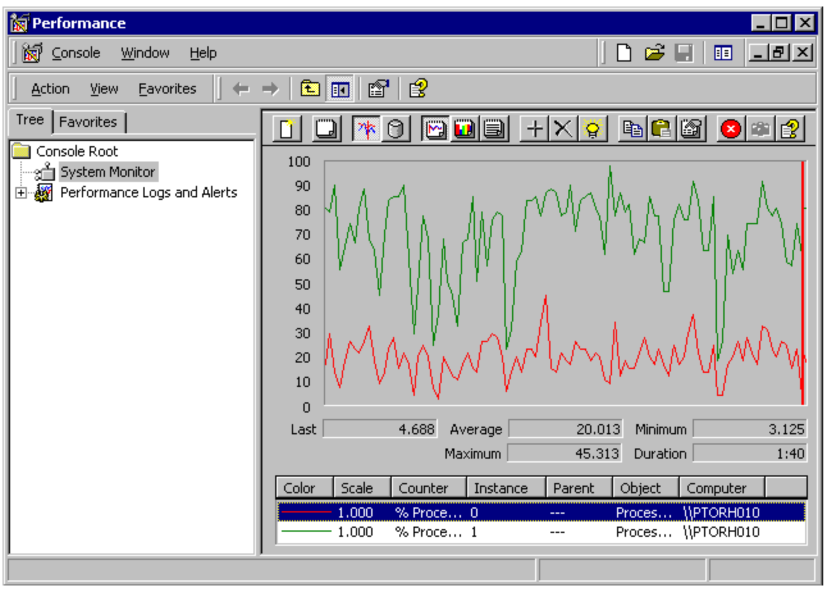
The performance impact of GRTDs running against the Symposium Express Call Center server also needed to be gauged. A series of measurements were done while varying the number of GRTDs connected to the Symposium Express Call Center server. Each GRTD consisted of one collection of 7 data windows. The seven data windows were

- three charts
- four billboards
- zero maps
- zero grids

The Data Update Rate was set to 2 seconds, and the Time Chart Period was set to 0.5 seconds. For more information on GRTD, refer to page 823.

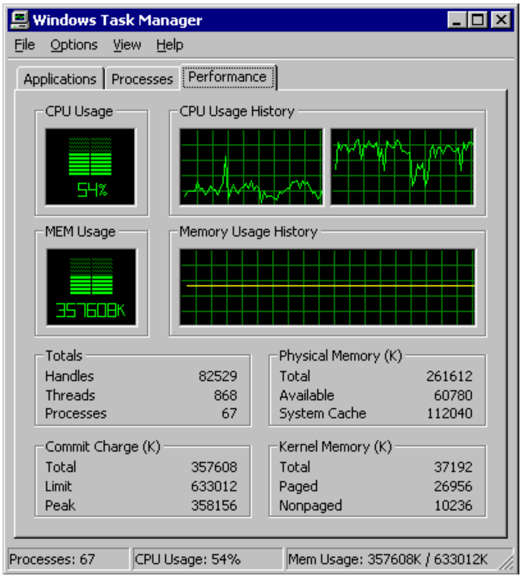
Performance monitor

The Performance monitor was used to log performance statistics during the sustained traffic tests. The tool was set to log System, Memory, and Process objects over the duration of the tests. The following diagram illustrates the Performance monitor:



Task Manager

Initial memory measurements were taken using the Task Manager as illustrated in the following diagram:



The counter used for analysis was the Total Commit Charge. This counter indicates the virtual memory in use by all processes.

Analysis and results

Memory and CPU utilization

This section details performance results for specific configurations using the test procedures outlined on pages 799 to 805. To start, a configuration was set up and a base reading was taken.

Platform Configuration 1 (Server) and Platform Configuration (Client) show the base configuration:

Platform Configuration 1 (Server)

- Dell PowerEdge 2300
- 500 MHz Pentium III Processor
- 256 Mbytes RAM
- two 8 Gbyte IDE hard drives
- Integrated 10/100 NIC Card and 3Com Network Card
- Dell 17" monitor
- 24-speed CD-ROM
- Windows 2000 Server with Service Pack 3
- Symposium Express Call Center Client and Server software build 04.02.06 with PEPs

Platform Configuration 2 (Client)

- Dell OptiPlex GX1
- 500 MHz Pentium III Processor
- 256 Mbytes RAM
- 4 Gbyte IDE hard drive
- Integrated 10/100 NIC Card and 3Com Network Card
- Dell 17" monitor
- ATAPI 32X CD-ROM
- ATI 3D Rage Pro video card

- Windows 2000 Professional
- Symposium Express Call Center client software
- Symposium GRTD software

Base reading

This section shows the base reading for memory and CPU utilization taken before any applications were initiated. See Table 2 below.

Table 2. Base reading for memory and CPU utilization

Totals		**Physical memory (K)**	
handles	N/A	total	N/A
threads	N/A	available	N/A
processes	N/A	file cache	N/A
Commit charge (K)		**Kernel memory (K)**	
total	N/A	total	N/A
limit	N/A	paged	N/A
peak	N/A	non-paged	N/A

Applications were gradually added to the base configuration and launched. The difference between the base reading and the new reading with the additional application indicated the virtual memory requirement of individual applications. This process is detailed in the following sections, and the results appear in the tables that follow.

Note: Recommendations for non-coresident client configurations are based on measurements done on the client/server coresident configuration.

Symposium Express Call Center Server (1)

On Platform Configuration 1 (see page 807), the following was installed:

- Symposium Express Call Center server software, build 04.02.06

Notes:

- There was no switch connection. The server was rebooted with all services started.
- Voice services were running.
- Scripts were activated.

Table 3. Results for Platform Configuration 1 - Symposium Express Call Center Server (1)

Totals		**Physical memory (K)**	
handles	12 065	total	261 492
threads	654	available	108 696
processes	59	file cache	15 060
Commit charge (K)		**Kernel memory (K)**	
total	289 080	total	14 652
limit	505 168	paged	8600
peak	383 152	non-paged	6052

Measured Average CPU Utilization was 2.7%.

Symposium Express Call Center Server (2)

On Platform Configuration 1 (see page 807), Symposium Express Call Center server software, build 04.02.06, was already installed (see Symposium Express Call Center Server [1] on page 807).

Notes:

- Voice Services were running.

- Scripts were activated.

The following changes were made to the existing configuration:

- The switch was connected but there was no call activity.

Table 4. Results for Platform Configuration 1 - Symposium Express Call Center Server (2)

Totals		**Physical memory (K)**	
handles	12 512	total	261 492
threads	648	available	138 724
processes	58	file cache	14 436
Commit charge (K)		**Kernel memory (K)**	
total	289 028	total	14 664
limit	505 168	paged	8592
peak	383 152	non-paged	6072

Measured Average CPU Utilization was 2.4%.

Note: The CPU Utilization is lower in Table 2 than in Table 1 because, in the Table 1 configuration, the server is constantly trying to make a connection to the switch.

Symposium Express Call Center Server (3)

On Platform Configuration 1 (see page 807), Symposium Express Call Center server software, build 04.02.06, was already installed (see Symposium Express Call Center Server [1] on page 807).

Notes:

- The switch was connected but there was no call activity.
- Voice Services were running.
- Scripts were activated.

The following changes were made to the existing configuration:

- pcAnywhere was launched with a remote control client connected on the CLAN.

Table 5. Results for Platform Configuration 1 - Symposium Express Call Center Server (3)

Totals		**Physical memory (K)**	
handles	12 720	total	261 492
threads	670	available	133 176
processes	59	file cache	14 404
Commit charge (K)		**Kernel memory (K)**	
total	293 976	total	14 716
limit	505 168	paged	8644
peak	383 152	non-paged	6072

Measured Average CPU Utilization was 6.8%.

Symposium Express Call Center Client/Server (1)

On Platform Configuration 1 (server) (see page 807), Symposium Express Call Center server software was already installed. On Platform Configuration 2 (client) (see page 807), Symposium Express Call Center client software was already installed.

Notes:

- Symposium Express Call Center client software, build 04.02.06, was installed.
- The switch was connected but there was no call activity.
- Voice Services were running.
- Scripts were activated.

- pcAnywhere was launched with a remote control client connected on the CLAN.

The following changes were made to the existing configuration:

- Symposium Express Call Center client was launched with the Main Window, the Alarm Monitor and three RTDs were running coresident on the server.

Table 6. Results for Platform Configuration 1 - Symposium Express Call Center Client/Server (1)

Totals		**Physical memory (K)**	
handles	14 211	total	261 492
threads	723	available	108 592
processes	69	file cache	14 592
Commit charge (K)		**Kernel memory (K)**	
total	371 064	total	15 028
limit	505 168	paged	8956
peak	383 152	non-paged	6072

Measured Average CPU Utilization was 13%.

Symposium Express Call Center Client/Server (2)

On Platform Configuration 1 (server) (see page 807), Symposium Express Call Center server software was already installed. On Platform Configuration 2 (client) (see page 807), Symposium Express Call Center client software was already installed.

Notes:

- Symposium Express Call Center client software, build 04.02.06, was installed.
- Voice Services were running.

- Scripts were activated.

The following changes were made to the existing configuration:

- The switch was connected with 1 call active and 24 agents logged on.
- pcAnywhere was not running.
- Symposium Express Call Center client was launched with the Main Window. The Alarm Monitor was running coresident on the server. There were no RTDs.

Table 7. Results for Platform Configuration 1 - Symposium Express Call Center Client/Server (2)

Totals		**Physical memory (K)**	
handles	12 541	total	261 492
threads	675	available	49 788
processes	62	file cache	14 144
Commit charge (K)		**Kernel memory (K)**	
total	265 164	total	13 654
limit	505 168	paged	8008
peak	319 076	non-paged	5644

Measured Average CPU Utilization was 2%.

Symposium Express Call Center Client/Server (3)

On Platform Configuration 1 (server) (see page 807), Symposium Express Call Center server software was already installed. On Platform Configuration 2 (client) (see page 807), Symposium Express Call Center client software was already installed.

Notes:

- Symposium Express Call Center client software, build 04.02.06, was installed.

- The switch was connected with 1 call active and 24 agents logged on.
- Voice Services were running.
- Scripts were activated.
- pcAnywhere was not running.

The following changes were made to the existing configuration:

- Symposium Express Call Center Client was launched with the Main Window, the Alarm Monitor was running, and there were three RTDs running coresident on the server.

Table 8. Results for Platform Configuration 1 - Symposium Express Call Center Client/Server (3)

Totals		**Physical memory (K)**	
handles	13 102	total	261 492
threads	706	available	43 948
processes	65	file cache	13 976
Commit charge (K)		**Kernel memory (K)**	
total	302 300	total	13 804
limit	505 168	paged	8160
peak	319 076	non-paged	5644

Measured Average CPU Utilization was 3.6%.

Symposium Express Call Center Client/Server (4)

On Platform Configuration 1 (server) (see page 807), Symposium Express Call Center server software was already installed. On Platform Configuration 2 (client) (see page 807), Symposium Express Call Center client software was already installed.

Notes:

- Symposium Express Call Center client software, build 04.02.06, was installed.
- Voice Services were running.
- Scripts were activated.
- pcAnywhere was not running.
- Symposium Express Call Center Client was launched with the Main Window, the Alarm Monitor was running, and there were three RTDs running coresident on the server.

The following changes were made to the existing configuration:

- The switch was connected with no call activity.

Table 9. Results for Platform Configuration 1 - Symposium Express Call Center Client/Server (4)

Totals		**Physical memory (K)**	
handles	13 133	total	261 492
threads	703	available	43 720
processes	66	file cache	13 916
Commit charge (K)		**Kernel memory (K)**	
total	309 904	total	13 856
limit	505 168	paged	8168
peak	319 076	non-paged	5688

Measured Average CPU Utilization was 2.5%.

Symposium Express Call Center Client/Server (5)

On Platform Configuration 1 (server) (see page 807), Symposium Express Call Center server software was already installed. On Platform Configuration 2 (client) (see page 807), Symposium Express Call Center client software was already installed.

Notes:

- Symposium Express Call Center client software, build 04.02.06, was installed.
- Voice Services were running.
- Scripts were activated.
- pcAnywhere was not running.
- Symposium Express Call Center Client launched with the Main Window, the Alarm Monitor was running, and three RTDs were running coresident on the server.

The following changes were made to the existing configuration:

- The switch was connected with 2400 calls per hour.

Table 10. Results for Platform Configuration 1 - Symposium Express Call Center Client/Server (5)

Totals		**Physical memory (K)**	
handles	13 640	total	261 492
threads	705	available	91 800
processes	67	file cache	14 120
Commit charge (K)		**Kernel memory (K)**	
total	315 532	total	14 588
limit	505 168	paged	8584
peak	320 616	non-paged	6004

Measured average CPU Utilization was 14%.

RTD, GRTD, and CPU performance

Introduction

The performance impact of Symposium Call Center RTDs and GRTDs running on the Symposium Express Call Center server was measured.

RTDs

A series of measurements were made while varying the number of sets of RTDs. A set of RTDs consisted of

- an Agent Performance Display
- a Skillset Performance Display
- a Call Center Summary Display

GRTDs

A series of measurements were done while varying the number of GRTDs connected to the Symposium Express Call Center server. Each GRTD consisted of one collection of seven data windows. The seven data windows were

- three charts
- four billboards
- zero maps
- zero grids

The Data Update Rate was set to 2 seconds, and the Time Chart Period was set to 0.5 seconds.

Formulas

The following formulas were used for calculating CPU utilization based on the number of RTD and GRTDs running, plus the server specification:

nRTD =number of sets of RTDs not including the set on the server node

nGRTD =number of sets of GRTDs

RTD_CPU =percentage CPU used by non-coresident RTDs = 3% * nRTD

GRTD_CPU =percentage CPU used by GRTDs = 4% * nGRTD

Calls_CPU =percentage CPU used by the load traffic of incoming calls = 5 % for 5000+ call/hr

CoResRTD_CPU =percentage CPU used by the set of RTDs running on the server node = 5%

Based on the measurements (see pages 808–816), and the recommendation that the CPU utilization remain under 50%:

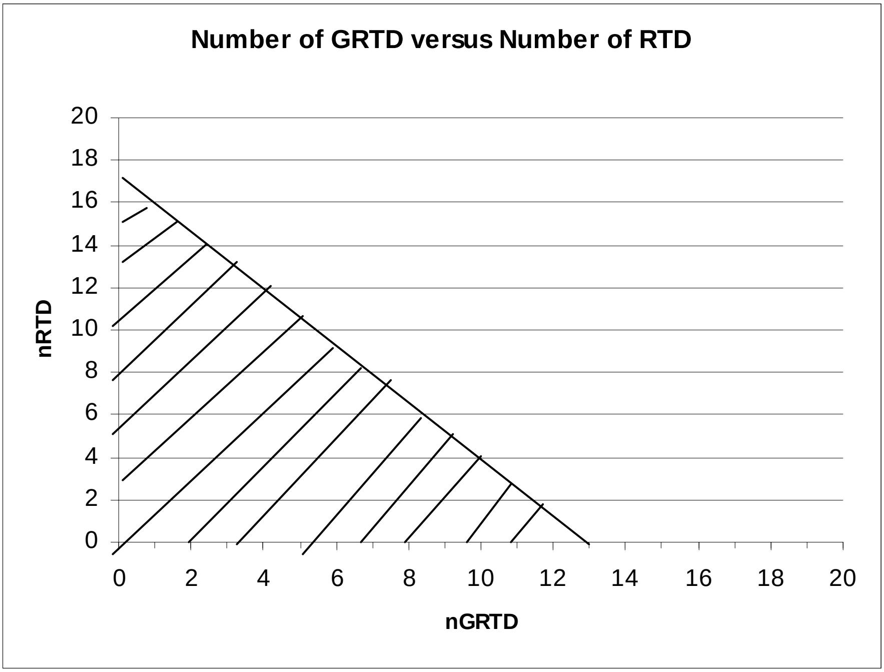
RTD_CPU + GRTD_CPU + Calls_CPU + CoResRTD_CPU <= 50%

2 * nRTD + 4 * nGRTD + 5 + 5 <= 50

There is also an imposed limit of 75 client sessions that determines the number of possible RTDs and GRTDs:

nRTD + nGRTD <= 75

However, this formula is redundant for the specified computer on which the tests were carried out, as the limits imposed by the previous formula are lower.



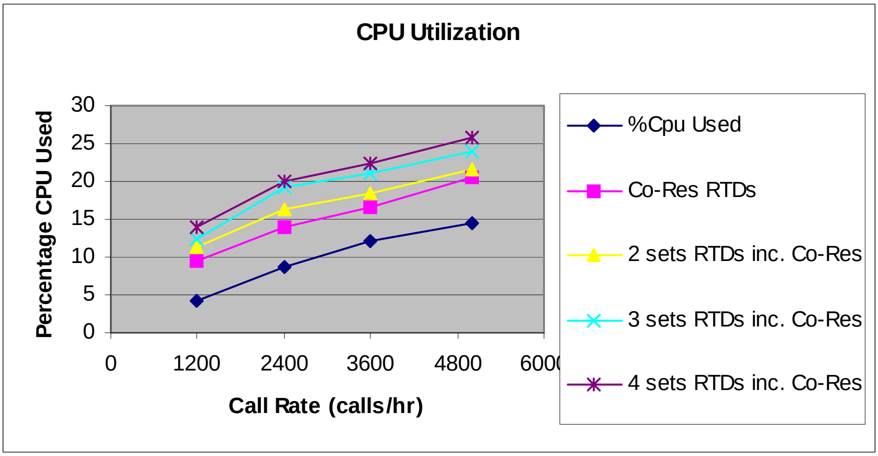
CPU performance

The effect of the following components on CPU performance are described:

- call rate
- RTDs
- call rate with GRTD
- GRTDs

Call rate

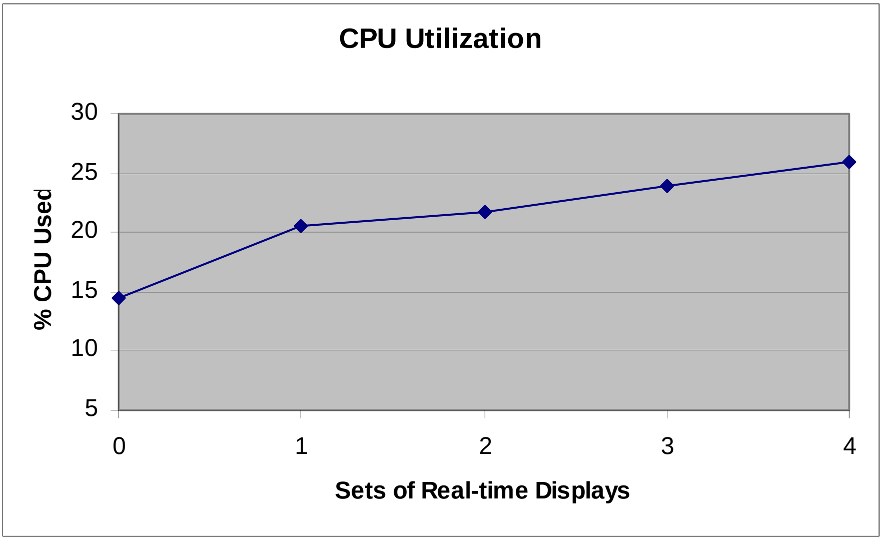
The performance testing configuration (see page 802) was measured with 100 skillsets configured and 150 agents logged on. The call rate was varied from 1200 to 5000+ calls per hour. The platform used was Configuration 1 (see page 807).



The above graph shows the CPU utilization of various call rates with a range of 0 to 4 sets of RTDs running. All data points are from measured values. The measurement shows a CPU consumption of 14.5% for the maximum load of 5000 calls per hour with no RTDs running.

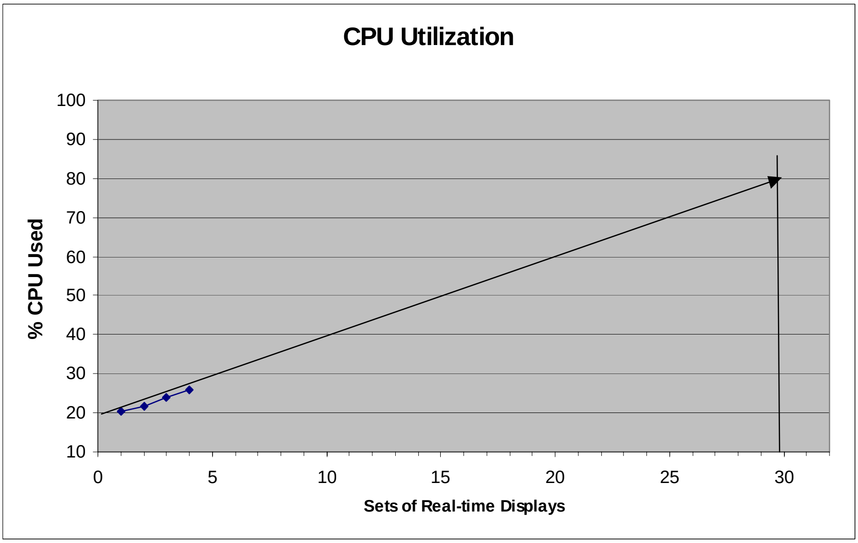
RTDs

The performance testing configuration (see page 802) was measured with 100 skillsets configured and 150 agents logged on. The number of sets of RTDs was varied from 0 to 4 with the first on the server node. The call rate was set at 5000+ calls per hour. The platform used was Configuration 1 (see page 807).



The above graph shows the CPU utilization of various RTDs connected to the server with 5000+ calls per hour. All data points are from measured values. Each set of RTDs consisted of an Agent Status Display with 150 rows updating with a 2-second refresh rate, a Skillset Performance Display with 100 rows updating at a 5-second refresh rate, and a Call Center Summary Display with one row updating at a 5-second refresh rate.

The data was extrapolated to determine what the effect of adding extra sets of RTDs would be. The results are illustrated in the following graph:

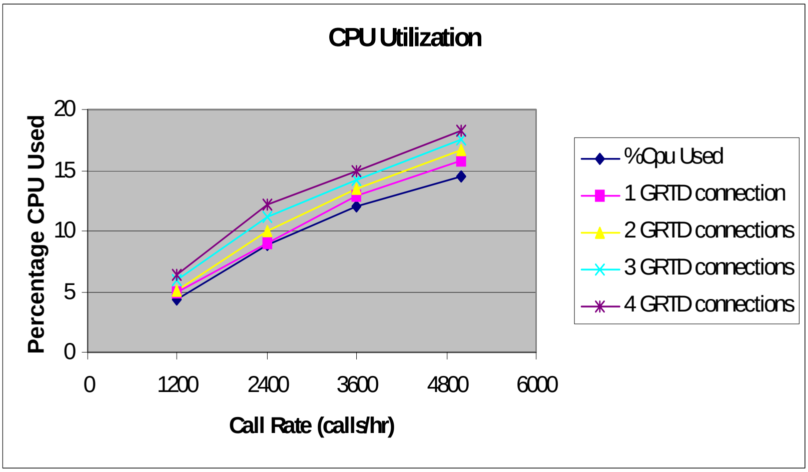


The above graph shows that with 30 RTDs, the CPU is still at 80% utilization. Nortel Networks recommends that the CPU utilization be kept under 70% to handle any possible burst traffic. At 70% CPU utilization, approximately 25 sets of RTDs can be supported. This is the best estimate that can be made with the data obtained. There is, however, an inherent danger in using linear extrapolation to derive the estimates. As CPU utilization increases, the response time to send messages back to the switch becomes longer. There may be a point before 70% CPU utilization is reached when the response time is no longer acceptable and the calls start to get M1 Default treatment.

The slope of the above graph indicates the percentage CPU per set of RTDs, and is observed to be about 2% CPU per RTD. This does not include the set of RTDs running on the server, which are seen to take up 6% CPU.

Call Rate with GRTD

The performance testing configuration (see page 802) was measured with 100 skillsets configured and 150 agents logged on. The call rate was varied from 1200 to 5000+ calls per hour. The platform used was Configuration 1 (see page 807).

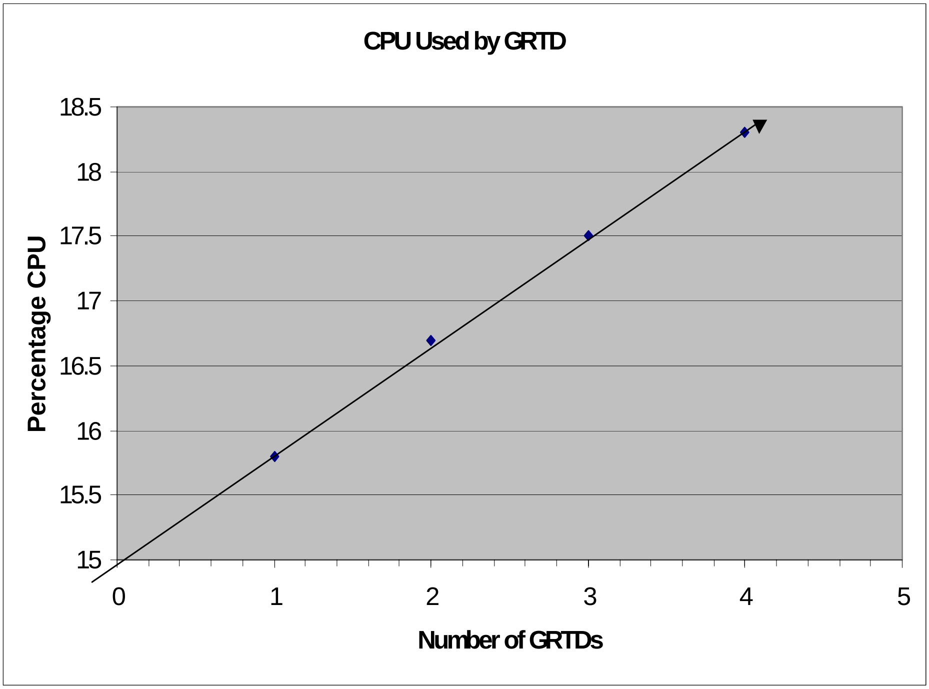


The above graph shows the CPU utilization of various call rates with a range of 0 to 4 GRTD clients running. All data points are from measured values.

GRTDs

The performance testing configuration (see page 802) was measured with 100 skillsets configured and 150 agents logged on. The number of sets of GRTDs was varied from 1 to 4. The call rate was set at 5000 calls per hour. The hardware platform used was Hardware Configuration 1 (see page 807). The hardware platform used for the Client PC was Configuration 2 (see page 807). Each GRTD consisted of one collection of seven data windows. The seven data windows were

- three charts
- four billboards
- zero maps
- zero grids



The above graph shows the CPU utilization of various numbers of GRTDs connected to the server with approximately 5000 calls per hour load. All data points are from measured values. From the data, you can use linear extrapolation to determine the effect of each GRTD on CPU use. The slope of the above graph indicates that the percentage CPU per GRTD is less than or equal to 1%.

Meridian Mail and CallPilot engineering

Introduction

This section describes engineering guidelines for using Meridian Mail or CallPilot with Symposium Express Call Center. You can use Meridian Mail or CallPilot to play announcements if your server does not have a Voice Services card.

Symposium Express Call Center supports

- Meridian Mail Release 11 or higher
- CallPilot 2.0 (requires Service Pack 06 or later)

Rules for Voice Port Partitioning

To allow for the proper operation of Symposium Express Call Center 4.2 and Meridian Mail or CallPilot, the voice ports used by Symposium Express Call Center 4.2 must be dedicated to the Symposium Express Call Center 4.2 application.

Note: If you “front end” a Symposium Express Call Center 4.2 CDN with a voice menu, it should be accessed via this ACD DN. These front-end ports are not acquired by Symposium Express Call Center 4.2.

The call center must be configured so that the Symposium Express Call Center 4.2 script command for call announcements and other Meridian Mail or CallPilot calls do not use the same ACD DN. Only one caller can listen to an announcement at one time when using Meridian Mail or CallPilot to play announcements.

Port requirements

Symposium Express Call Center cannot share voice ports with any other Meridian Mail or CallPilot application. The directory number, an IVR ACD-DN, routes the caller to a Meridian Mail or CallPilot treatment. Announcements (configured through the Call Routing Wizard) generate port requests. Symposium Express Call Center uses the Give IVR (GIVR) command to play announcements when using Meridian Mail or CallPilot.

GIVR port computations

For the predefined workload in the performance testing configuration (see page 802), the number of voice ports required was 0 (for 5000 CPH) since no announcements were played.

The number of Meridian Mail or CallPilot voice ports required for GIVR voice service depends on

- the rate of GIVR port requests
- the duration of the GIVR voice session/treatment
- the Grade of Service (GOS) - the probability that requests will be delayed by more than a certain number of seconds. The standard GOS is 5% probability that the calls will be delayed for more than 6 seconds (that is, 95% of the calls incur less than a 6-second delay)

To determine the rate of GIVR services, use the following formulas:

aGIVRPerCall =average number of announcements played per call

CallRate =number of calls per hour

GIVR_Rate =CallRate * aGIVRPerCall

nGIVR_Duration =average duration of an announcement played

Use the nearest values for IVR rate and duration (GIVR_Rate and nGIVR_Duration) to access Table 11 to determine the number of ports required:

nGIVR_Ports =ports from Table 11

Table 11 Number of ports required based on call rate, and number and duration of IVRs

GIVR_Rate	nGIVR_ Duration (Sec) 15	30	45	60	75	90
Number of calls per hour	Number of ports	Number of ports	Number of ports	Number of ports	Number of ports	Number of ports
30	2	2	2	2	2	2
60	2	2	2	5	5	5
90	2	2	5	5	5	6
100	2	2	5	5	6	6
125	2	5	5	6	6	8
250	4	5	7	8	11	12
500	5	8	11	13	17	20
1000	8	13	18	23	29	35
2000	13	23	32	41	52	62
3000	18	32	45	59	74	89
4000	23	41	59	76	97	115
5000	28	50	72	93	119	141

Note: Shaded entries in the table are not valid for Meridian Mail or CallPilot. The number of ports supported in Symposium Express Call Center is 96 for Meridian Mail and 95 for CallPilot. The number of voice ports recommended in the above table includes only those specifically required for use by Symposium Express Call Center. These numbers do not include voice ports required if

Meridian Mail or CallPilot is being used to provide front end treatment to a call before it enters the CDN(s) acquired by Symposium Express Call Center. The additional voice ports required for front end treatment can be obtained in the same way as indicated above for Symposium Express Call Center treatment.

Voice Services card requirements

Introduction

This section describes the requirements to configure Voice Services processing for use with Symposium Express Call Center. The Voice services feature is a keycoded option. A voice services card installed in the Meridian 1 switch provides front-end voice processing capability to Symposium Express Call Center.

Treatments can be

- comfort messages
- voice menus
- prompt collect digits/transfer

Each Voice Services port must be configured and acquired in Symposium Express Call Center. For information on configuring Voice Services ports, see Chapter 13, “Configuring a Voice Services card,” on page 549.

Announcements (configured through the Call Routing Wizard) generate voice port requests. Symposium Express Call Center uses the GIVR command to play announcements when using the Voice Services card.

GIVR Ports computations

The Voice Services ports required for GIVR voice service depend on

- port utilization not exceeding 70%
- the rate of port requests
- the duration of the GIVR voice session/treatment
- the Grade of Service (GOS)—for Voice Services, the probability that requests will be delayed by more than a certain number of seconds.

The number of Voice Services voice ports required for GIVR voice service depends on the rate of GIVR requests and the duration of the GIVR treatment. To determine the rate of GIVR services, use the following formulas:

aGIVRPerCall =average number of announcements played per call

CallRate =number of calls per hour

GIVR_Rate =CallRate * aGIVRPerCall

nGIVR_Duration =average duration of an announcement played

Table 12 indicates the number of Voice Services voice ports required based on the call rate, the number of IVRs, and the duration of IVRs. Port utilization was calculated using an integrated Voice Services loadware utility incorporated into the loadware version 1.04. The utility monitors each Voice Services port for activity, and calculates the utilization of each port for the period of time that the utility is running.

Table 12 Voice Services ports required

	nGIVR_Duration (in seconds)					
GIVR_Rate	**5**	**10**	**15**	**20**	**25**	**30**
Number of calls per hour	Number of ports	Number of ports	Number of ports	Number of ports	Number of ports	Number of ports
100	2	2	2	2	2	2
200	2	2	2	5	3	3
400	2	2	3	4	5	6
800	2	4	6	8	10	12
1000	3	5	8	10	13	16
2000	5	10	15	21	26	32
3000	8	15	22	30	37	46
4000	10	20	30	40	51	60
5000	13	25	37	50	63	-
6000	15	30	-	-	-	-
7000	17	35	-	-	-	-
8000	20	-	-	-	-	-
9000	23	-	-	-	-	-
10 000	25	-	-	-	-	-
15 000	-	-	-	-	-	-
20 000	-	-	-	-	-	

Note: Shaded entries in the above table are valid configurations for Voice Services and Symposium Express Call Center Release 4.2.

Limits/restrictions

Table 11 illustrates the system's limits. For example, at a rate of 9000 calls of 5-second duration, the system requires 23 ports.

Prompt/collect digits limits/restrictions

Voice Services prompts can be configured to collect multiple digits from the customer.

The maximum number of digits that can be collected by Voice Services and sent to TAPI is set at 120. This value also includes any colon values in multiple digit collection. Colons are used to separate groups of digits. For example, the following stream, containing seven digits and three separators (colons) is considered to be ten digits long: 12:34:56:7.

There is no limitation on the number of prompt/collect digit chains (that is, a group of prompt/collect digit treatments with prompt/collect digit after treatments) that can be specified. This is to allow maximum flexibility. The total maximum collection (including separator colons) must not exceed 120 digits.

pcAnywhere requirements

pcAnywhere launch and RAS Dialup were tested on the Platform Configuration 1 (server) with and without traffic load. The following CPU usage percentages were noted:

1. No Traffic

While CPU usage was fluctuating between 7–17% for a period of time, a dial connection was initiated from a remote PC.

When the connection was made, CPU usage rose to approximately 20% and then stabilized back to the original 7–17% mark. No noticeable additional CPU processing was noted.

With the dialup connection active, a pcAnywhere session was initiated on the remote client. When the session connected, CPU usage rose to 63% but then stabilized between 7–17% again. When actions were initiated, CPU increased as expected.

2. Traffic - 5000 calls per hour with 50 agents logged on

While CPU usage was fluctuating between 21–33% for a period of time, a dial connection was initiated from a remote PC.

When the connection was made, CPU usage rose to approximately 45%, but then continued between 21–33%.

When pcAnywhere connection launched, usage increased to 63% when connection was made, and then rose to 100% when actions were performed. The same increases were noted when the coresident client was launched without any connections.

Through the pcAnywhere connection, the coresident client was launched with three RTDs. The usage increases were similar to those noted without a dial-up connection.

Conclusions

The addition of pcAnywhere to the system does have additional CPU overheads when the session is active. However, from the testing conducted, these overheads are minimal and did not affect call processing under load.

(See “Memory and CPU utilization” on page 807 for other pcAnywhere measurements.)

Treatment script sizes

Introduction

The instructions that relate to a particular type of call, caller, or set of conditions, such as time of day or day of week are contained in scripts. Symposium Express Call Center 4.2 contains a set of scripts. It is also possible to create and edit scripts using the Call Treatment and Routing wizards to configure and validate scripts.

The maximum number of characters for an entire treatment script is set at 30 000. This limit must not be exceeded.

To calculate the size of the script, use the following formulas:

Master script size	=	Size of miscellaneous commands + size of CLID block + size of DNIS block + size of CDN block
Size of miscellaneous commands	=	Approximately 2250 characters
size of CLID block	=	Start of CLID block (41 characters) + ((Number of treatments routed)*32) +((Number of CLIDS)*(Number of digits in CLID + 1)+ (Number of CLIDS)*(Number of digits in CLID + 1)…….) + End of CLID block(22 characters)
size of DNIS block	=	Start of DNIS block (41 characters) + ((Number of treatments routed)*32) +((Number of DNIS)*(Number of digits in DNIS + 1)+ (Number of DNIS)*(Number of digits in DNIS + 1)…….) + End of DNIS block(22 characters)

size of CDN block	=	Start of CDN block (67 characters) + ((1 treatments)*22) +((1CDN)*(Number of digits in CDN + 1) + End of CDN block(22 characters)

Example

By using the example of a script that routes to one treatment using a CLID of 16 digits, routes to one treatment using a DNIS of 16 digits, and also routes to one treatment using a 4-digit CDN, and by using the above formulas, the size of the script can be calculated as follows:

Size =2250 + (41+ (1*32) + (1 * 17) + 22) + (41 + (1 * 32) + (1 * 17) + 22) + (67 + (1 * 22) + (1 * 5) + 22)

Size =2250 + (41 + 32+ 17 + 22) + (41 + 32+ 17 + 22) + (67 + 22 + 5 + 22)

Size =2250 + 112 + 112 + 116

Size =2590

Appendix C

Installing the Internationalization Framework

In this appendix

Overview

Introduction

Symposium Express Call Center Release 4.2 provides a base internationalization structure that supports installation on non-English operating systems. Additionally, in Release 4.2, Sybase ASE 12.0 adds database support for Asian character sets, such as Japanese and Traditional Chinese. As a result, you can now enter and display call center data in Asian character sets. You achieve this by installing a language PEP during the server installation steps. This is explained in detail later in this appendix.

Notes:

- For a complete list of available language versions, see the Meridian PEP Library web site, or contact your distributor.
- The Symposium Express Call Center server application is not localized for non-English languages. Therefore, if you are using a localized version of Windows, any Windows-generated text (such as the “OK” button label) is translated, but server-generated text and messages continue to display in English. Also, you must enter any server configuration data in English.

This appendix provides instructions for installing the Internationalization Framework feature on Symposium Express Call Center.

Migrating a non-English server

You can perform a platform migration from one internationalized server to another server that supports the same language if the following conditions apply:

- The language version of the Windows 2000 Server operating system and the system locale are the same on both platforms.
- The same language PEP is installed on both platforms.

Note: You cannot perform a platform migration from an internationalized server to a server that supports a different language.

Client requirements

You must install one copy of the Symposium Express Call Center client software on the same PC as the server software. This is called a coresident client. If you are installing additional copies of the client software on stand-alone PCs, Nortel Networks recommends that the stand-alone PCs run the same language version of the operating system as the server. For example, if the stand-alone client is connecting to a Traditional Chinese server, configure the client for Traditional Chinese.

Note: If a localized version of the Symposium Express Call Center client application is not available, you can use the English version of the client. If you do so, you can enter and view customer data in the local language, but the text on the client screens displays in English.

Checklist

Introduction

This checklist provides an overview of the steps required to install a non-English version of Symposium Express Call Center.

Installation steps

Step	✔
1 Ensure that the switch has been properly configured. Refer to your switch documentation for instructions.	
2 Complete the “Installation and configuration checklists” on page 44.	
3 Install the server hardware.	
4 Install and configure the appropriate Windows 2000 language version on the server. Make sure that you select the correct locale on the Regional Options window. For more information, see “Configuring Windows” on page 842. For more information about configuring the operating system for Symposium Express Call Center, see Section A: “Configuring the operating system” on page 99.	
5 On the server, follow the procedures in Section B: “Installing server software” on page 139 to ■ perform a Platform Compliance Check ■ install the product software (phase 1) ■ install the latest Install-time PEP ■ install the product database (phase 2) Stop BEFORE you begin the procedure in “Configuring the server and database (phase 3)” on page 156.	

Step		✔
6	If you want to display call center data in Asian character sets, install the appropriate language PEP on the server. Follow the instructions in “Installing and uninstalling PEPs and Service Update packs” on page 273. For a list of server language PEPs, see “Server language PEPs” on page 844.	
7	Complete the server software installation and configuration by following the instructions in “Configuring the server and database (phase 3)” on page 156.	
8	Apply the latest Service Update pack and any required PEPs to the server. Follow the instructions in Chapter 7, “Installing and uninstalling PEPs and Service Update packs.”	
9	Install the coresident client software on the same PC as the server software. Follow the instructions in Section A: “Installing a coresident client” on page 209.	
10	If there is a localized client PEP available, install it on the server PC on which the coresident client is installed. Follow the instructions in Section B: “Installing and uninstalling client PEPs and SUs” on page 289. For the list of client PEPs, see “Client minimum PEP levels” on page 844.	
11	If you have one or more stand-alone client PCs, install and configure the appropriate Windows language version.	
12	Install the client software on the stand-alone client PC. Follow the instructions in Section A: “Installing a stand-alone client” on page 237.	
13	If there is a localized client PEP available, install it on the stand-alone client PC. Follow the instructions in Section B: “Installing and uninstalling client PEPs and SUs” on page 289.	
14	Complete the required post-installation procedures. Follow the procedures in Chapter 8, “Post-installation.”	
15	Create backups of your server. Follow the procedures in Chapter 15, “Backing up data.”	
16	Install and configure pcAnywhere on the server. Follow the instructions in Section C: “Installing and configuring pcAnywhere” on page 171.	

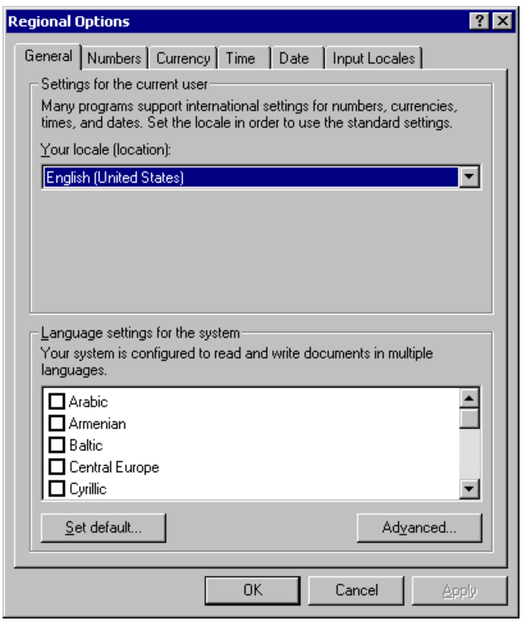
Configuring Windows

Introduction

This section lists the locales that are appropriate for the available language versions. (For a more up-to-date list, see the Meridian PEP Library web site, or contact your distributor.)

Regional Options

In the Windows 2000 Regional Options control panel, choose a locale that is appropriate for your language version.



If you are using this language	Choose one of these locales
Traditional Chinese	Chinese (Taiwan) Chinese (Hong Kong) Chinese (Macau)
Japanese	Japanese

Server and client PEPs

Introduction

This section lists the server and client PEPs required for non-English language support. (For a more up-to-date list, see the Meridian PEP Library web site, or contact your distributor.)

Server language PEPs

The following table lists the available server language PEPs:

Language	PEPs required
Traditional Chinese	NI0402TCHINESE
Japanese	NI0402JAPANESE

Note: Language PEPs are a special class of PEP, and do not create a PEP record that can be viewed with the PEP Viewer utility. To see the language PEPs installed on the server or client, use the Windows Add/Remove Programs control panel.

Client minimum PEP levels

The following table lists the minimum client PEP levels required for the supported languages (if any):

Language	Minimum PEP level
Traditional Chinese	See the Meridian PEP Library web site, or contact your distributor.
Japanese	See the Meridian PEP Library web site, or contact your distributor.

Glossary

A

accelerator key

A key on a phoneset that an agent can use to place a call quickly. When an agent presses an accelerator key, the system places the call to the configured number associated with the key. For example, if an agent presses the Emergency key, the system places a call to the agent's supervisor.

access class

A collection of access levels that defines the actions a member of the access class can perform within the system. For example, a member of the Administrator access class might be given a collection of Read/Write access levels.

access level

A level of access or permission given to a particular user for a particular application or function. For example, a user might be given View Only access to historical reports.

ACCESS link

A communication channel between Symposium Call Center Server and CallPilot or Meridian Mail.

ACCESS voice port

A voice port that is controlled by the ACCESS link.

ACD call

See Automatic call distribution call.

ACD-DN

See Automatic call distribution directory number.

ACD routing table

See Automatic call distribution routing table.

acquired resource

A resource configured on the switch that is under the control of Symposium Express Call Center. Resources must be configured with matching values on both the switch and Symposium Express Call Center.

activated script

A script that is processing calls or is ready to process calls.

activity code

A number that an agent enters on his or her phoneset during a call. Activity codes provide a way of tracking the time agents spend on various types of incoming calls. They are also known as Line of Business (LOB) codes. For example, the activity code 720 might be used to track sales calls. Agents can then enter 720 on their phonesets during sales calls, and this information can be generated in an Activity Code report.

administrator

A user who is responsible for setting up and maintaining the Symposium Express Call Center.

agent

A user who is responsible for handling customer calls.

agent logon ID

A unique identification number assigned to a particular agent. The agent uses this number when logging on. The agent ID is not associated with any particular phoneset.

agent to skillset assignment

A matrix that, when you run it, sets the priority of one or more agents for a skillset. Agent to skillset assignments can be scheduled.

agent to supervisor assignment

A definition that, when you run it, assigns one or more agents to specific supervisors. Agent to supervisor assignments can be scheduled.

API

See application program interface

application

1. A logical entity that represents a Symposium Express Call Center script for reporting purposes. The Master script and each primary script have an associated application. The application has the same name as the script it represents. 2. A program that runs on a computer.

application program interface

A set of routines, protocols, and tools that programmers use to develop software applications. APIs simplify the development process by providing commonly used programming procedures.

associated supervisor

A supervisor who is available for an agent if the agent’s reporting supervisor is unavailable. *See also* reporting supervisor.

Automatic call distribution

A means of automatically distributing an organization’s incoming calls among a number of answering positions (ACD agents). Automatic call distribution is useful in operations where callers want a service rather than a specific person. Calls are serviced in the order they arrive and are distributed so that the workload at each answering position is approximately equal.

Automatic call distribution call

A call to an ACD-DN. ACD calls are distributed to agents in an ACD group based on the ACD routing table on the switch. *See also* Automatic call distribution directory number.

Automatic call distribution directory number

A DN associated with an ACD group. Calls made to an automatic call distribution directory number are distributed to agents belonging to the group, based on the ACD routing table on the switch.

Automatic call distribution routing table

A table configured on the switch that contains a list of ACD-DNs used to define routes for incoming calls. This ensures that incoming calls not processed by Symposium Express Call Center will be queued to ACD groups and handled by available agents.

C

call age

The amount of time a call was waiting in the system before being answered by an agent.

CallPilot

A multimedia messaging system you can use to manage many types of information, including voice messages, fax messages, e-mail messages, telephone calls (including conferencing), calendars, and directories.

call presentation class

A collection of preferences that determines how calls are presented to an agent**.**

call priority

A numerical value assigned in a script that defines the relative importance of a call. If two calls are in the queue when an agent becomes available, and one call is queued with a higher priority than the other, the agent receives the higher priority call first. *See also* skillset priority.

call treatment

A script element that enables you to provide handling to a call while it is waiting to be answered by a call center agent. For example, a caller can hear a recorded announcement or music while waiting for an agent.

call variable

A script variable that applies to a specific call. A call variable follows the call through the system and is passed from one script to another with the call. *See also* I, script variable.

Calling Line Identification

An optional service that identifies the telephone number of the caller. This information can then be used to route the call to the appropriate agent or skillset. The CLID can also be displayed on an agent’s phoneset.

CDN

See controlled directory number.

CLAN

See Customer local area network.

CLID

See Calling Line Identification.

client

The part of Symposium Express Call Center software that is used to administer the server. One copy of the client software must coreside with the server software. Additional copies can be installed on a separate computers. *See also* server.

command

A building block used with expressions, variables, and intrinsics to create scripts. Commands perform distinct functions, such as routing a call to a specific destination, playing music to a caller, or disconnecting a caller.

controlled directory number

A special directory number that allows calls arriving at the switch to be queued when the CDN is controlled by an application such as Symposium Express Call Center. When a call arrives at this number, the switch notifies the application and waits for routing instructions, which are performed by scripts.

CSE 1000 switch

Succession Communication Server for Enterprise 1000 switch

customer administrator

A user who is responsible for maintaining Symposium Express Call Center.

Customer local area network

The LAN to which your corporate services and resources connect. The Symposium Express Call Center server and stand-alone client both connect to the CLAN. Third-party applications that interface with the server also connect to this LAN.

D

DBMS

Database Management System

default activity code

The activity code that is assigned to a call if an agent does not enter an activity code manually, or when an agent presses the activity code button twice on his or her phoneset.

default skillset

The skillset to which calls are queued if they have not been queued to a skillset or a specific agent by the end of a script.

DHCP

See dynamic host configuration protocol.

Dial-Up Networking

See Remote Access Services.

Dialed Number Identification Service

An optional service that allows Symposium Express Call Center to identify the phone number dialed by the incoming caller. An agent can receive calls from customers calling in on different DNISs and, if the DNIS is displayed on the phoneset, can prepare a response according to the DNIS.

directory number

The number that identifies a phoneset on a switch. The directory number (DN) can be a local extension (local DN), a public network telephone number, or an automatic call distribution directory number (ACD-DN).

directory number call

A call that is presented to the DN key on an agent’s phoneset.

display threshold

A threshold used in real-time displays to highlight a value below or above the normal range.

DN

See directory number.

DN call

See directory number call.

DNIS

See Dialed Number Identification Service.

dynamic host configuration protocol

A protocol for dynamically assigning IP addresses to devices on a network.

dynamic link library

A library of executable functions or data that can be used by a Windows application. Typically, a DLL provides one or more particular functions and a program accesses the functions by creating either a static or dynamic link to the DLL. Several applications can use a DLL at the same time.

E

ELAN

See embedded local area network.

embedded local area network

A dedicated Ethernet TCP/IP LAN that connects the server in Symposium Express Call Center and the switch.

Emergency key

A key on an agent's phoneset that, when pressed by an agent, automatically calls his or her supervisor to notify the supervisor of a problem with a caller.

event

1. An occurrence or action on the Symposium Express Call Center server, such as the sending or receiving of a message, the opening or closing of an application, or the reporting of an error. Some events are for information only, while others can indicate a problem. Events are categorized by severity: information, minor, major, and critical. 2. An action generated by a script command, such as queuing a call to a skillset or playing music.

F

first-level threshold

The value that represents the lowest value of the normal range for a statistic in a threshold class. The system tracks how often the value for the statistic falls below this value.

G

global settings

Settings that apply to all skillsets or IVR ACD-DNs that are configured on your system.

I

Interactive voice response

An application that allows telephone callers to interact with a host computer using prerecorded messages and prompts.

Interactive voice response ACD-DN

A directory number that routes a caller to a specific IVR application. An IVR ACD-DN must be acquired for non-integrated IVR systems.

Interactive voice response event

A voice port logon or logoff. An IVR event is pegged in the database when a call acquires or de-acquires a voice port.

Internet Protocol address

An identifier for a computer or device on a TCP/IP network. Networks use the TCP/IP protocol to route messages based on the IP address of the destination. The format of an IP address is a 32-bit numeric address written as four values separated by periods. Each value can be 0 to 255. For example, 1.160.10.240 could be an IP address.

IP address

See Internet Protocol address.

IVR

See Interactive voice response.

IVR ACD-DN

See Interactive voice response ACD-DN.

IVR event

See Interactive voice response event.

IVR port

See voice port.

L

LAN

See Local area network.

Local area network

A computer network that spans a relatively small area. Most LANs connect workstations and personal computers and are confined to a single building or group of buildings.

M

M1

Meridian 1 switch

M1 IE

Meridian 1 Internet Enabled switch

Management Information Base

A data structure that describes the collection of all possible objects in a network. Each managed node maintains one or more variables (objects) that describe its state. Symposium Call Center Server Management Information Bases (MIBs) contribute to the overall network MIB by

- identifying Nortel Networks/Meridian/Symposium Call Center Server nodes within the network
- identifying significant events (SNMP traps), such as alarms reporting
- specifying formats of alarms

Meridian Link Services

A communications facility that provides an interface between the switch and a third-party host application.

Meridian Mail

A Nortel Networks product that provides voice messaging and other voice and fax services.

MIB

See Management Information Base.

MLS
See Meridian Link Services.

MM
See Meridian Mail.

music route
A resource installed on the switch that provides music to callers while they wait for an agent.

N

network interface card
An expansion board that enables a PC to be connected to a local area network (LAN).

night mode
A skillset state in which the server does not queue incoming calls to the skillset, and in which all queued calls are given night treatment. A skillset goes into night mode automatically when the last agent logs off, or the administrator can put it into night mode manually. *See also* out-of-service mode, transition mode.

NPA
See Number Plan Area.

Number Plan Area
Area code

O

object linking and embedding
A compound document standard that enables you to create objects with one application and then link or embed them in a second application.

ODBC
See Open Database Connectivity.

OEM
Original equipment manufacturer

OLE

See object linking and embedding.

Open Database Connectivity

A Microsoft-defined database application program interface (API) standard.

out-of-service mode

A skillset state in which the skillset does not take calls. A skillset is out of service if there are no agents logged on or if the supervisor puts the skillset into out-of-service mode manually. *See also* night mode, transition mode.

out-of-service skillset

A skillset that is not taking any new calls. While a skillset is out of service, incoming calls cannot be queued to the skillset.

pegging

The action of incrementing statistical counters to track and report on system events.

pegging threshold

A threshold used to define a cut-off value for statistics, such as short call and service level. Pegging thresholds are used in reports.

PEP

See Performance Enhancement Package.

Performance Enhancement Package

A Symposium Express Call Center supplementary software application that enhances the functionality of previously released software by improving performance, adding functionality, or correcting a problem discovered since the original release.

phoneset

The physical device, connected to the switch, to which calls are presented. Each agent and supervisor must have a phoneset.

phoneset display

The display area on an agent's phoneset where information about incoming calls can be communicated.

Position ID

A unique identifier for a phoneset, used by the switch to route calls to the phoneset.

R

RAN

recorded announcement

RAN route

See recorded announcement route.

RAS

See Remote Access Services.

recorded announcement route

A resource installed on the switch that offers a recorded announcement to callers.

Remote Access Services

A feature built into Windows NT and Windows 95 that enables users to log on to an NT-based LAN using a modem, X.25 connection, or WAN link. This feature is also known as Dial-Up Networking.

reporting supervisor

The supervisor who has primary responsibility for an agent. When an agent presses the Emergency key on the phoneset, the emergency call is presented to the agent's reporting supervisor. *See also* associated supervisor.

route

A group of trunks. Each trunk carries either incoming or outgoing calls to the switch. *See also* music route, RAN route.

S

SCM
See Service Control Manager.

script
A set of instructions that relates to a particular type of call, caller, or set of conditions, such as time of day or day of week.

script variable
See variable.

second-level threshold
The value used in display thresholds that represents the highest value of the normal range for a given statistic. The system tracks how often the value for the statistic falls outside this value.

server
A computer or device on a network that manages network resources. Examples of servers include file servers, print servers, network servers, and database servers.

service
A process that adheres to a Windows NT structure and requirements. A service provides system functionality.

Service Control Manager
A Windows NT process that manages the different services on the PC.

service level
The percentage of incoming calls answered within a configured number of seconds.

service level threshold
A parameter that defines the number of seconds within which incoming calls should be answered.

Simple Network Management Protocol
A systematic way of monitoring and managing a computer network. The SNMP model consists of four components:

- managed nodes, which are any device, such as hosts, routers, and printers, capable of communicating status to the outside world via an SNMP management process called an SNMP Agent
- management stations, which are computers running special network management software that interact with the Agents for status
- management information, which is conveyed through exact specifications and format of status specified by the MIB
- Management Protocol or SNMP, which sends messages called protocol data units (PDUs)

skillset

A group of capabilities or knowledge required to answer a specific type of call.

skillset priority

An attribute of a skillset assignment that determines the order in which calls from different skillsets are presented to an agent. When an agent becomes available, calls might be waiting for several of the skillsets to which the agent belongs. The server presents the call queued for the skillset for which the agent has the highest priority.

standby

In skillset assignments, a property that grants an agent membership in a skillset, but makes the agent inactive for that skillset.

supervisor

A user who manages a group of agents. *See also* associated supervisor and reporting supervisor.

switch

The hardware that receives incoming calls and routes them to their destination.

switch resource

A device that is configured on the switch. For example, a CDN is configured on the switch, and then is used as a resource with Symposium Express Call Center. *See also* acquired resource.

Symposium Express Call Center call

A call to a CDN that is controlled by the Symposium Express Call Center. The call is presented to the Incalls key on an agent's phoneset.

T

TCP/IP

See Transmission Control Protocol/Internet Protocol.

telephony

The science of translating sound into electrical signals, transmitting them, and then converting them back to sound. The term is used frequently to refer to computer hardware and software that perform functions traditionally performed by telephone equipment.

threshold

A value for a statistic at which system handling of the statistic changes.

threshold class

A set of options that specifies how statistics are treated in reports and real-time displays. *See also* display threshold, pegging threshold.

Token Ring

A PC network protocol developed by IBM. A Token Ring network is a type of computer network in which all the computers are arranged schematically in a circle.

transition mode

A skillset state in which the server presents already queued calls to a skillset. New calls queued to the skillset are given out-of-service treatment. *See also* night mode, out-of-service mode.

Transmission Control Protocol/Internet Protocol

The communication protocol used to connect devices on the Internet. TCP/IP is the standard protocol for transmitting data over networks.

treatment

See call treatment.

U

utility

A program that performs a specific task, usually related to managing system resources. Operating systems contain a number of utilities for managing disk drives, printers, and other devices.

V

variable

A placeholder for values calculated within a script, such as CLID.

voice port

A connection from a telephony port on the switch to a port on the IVR system.

W

WAN

See also Wide area network.

Wide area network

A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local area networks (LANs). The largest WAN in existence is the Internet.

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Reader Response Form

Nortel Networks Symposium Express Call Center
Product release 4.2
Planning, Installation, and Administration Guide

Tell us about yourself:

Name: ______________________________

Company: ______________________________

Address: ______________________________

____

Occupation: ______________________ **Phone:** ______________

1. What is your level of experience with this product?

   ☐ New user ☐ Intermediate ☐ Experienced ☐ Programmer

2. How do you use this book?

   ☐ Learning ☐ Procedural ☐ Reference ☐ Problem solving

3. Did this book meet your needs?

   ☐ Yes ☐ No

   If you answered No to this question, please answer the following questions.

4. What chapters, sections, or procedures did you find hard to understand?

   ____
   ____
   ____

5. What information (if any) was missing from this book?

   ____
   ____
   ____

6. How could we improve this book?

   ____
   ____
   ____

Please mail your comments to Technology Manager, Information Products, Nortel Networks, Mervue Business Park, Galway, Ireland.

NORTEL NETWORKS™

Reader Response Form

Nortel Networks Symposium Express Call Center

Planning, Installation, and Administration Guide

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