



# **Nortel Networks Symposium Call Center Server**

for the Meridian 1  
Administrator's Guide

Product release 4.0

Standard 1.0

November 2000

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# Nortel Networks Symposium Call Center Server

## for the Meridian 1 Administrator's Guide

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# Chapter 1

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## Getting started

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# Overview

## Introduction

The *Nortel Networks Symposium Call Center Server Administrator's Guide* provides information on how to configure, and manage the configuration of, your Symposium Call Center Server.

## Restrict access to this guide

This guide contains sensitive information about maintaining your Symposium Call Center Server, including passwords, procedures, and information that can damage the system if not used correctly. Nortel Networks recommends that access to this guide be restricted to senior administrators only.

## Optional features

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

# Skills you need

## Nortel Networks product knowledge

Knowledge of, or experience with, the following Nortel Networks products is helpful when administering the Symposium Call Center Server:

- the Symposium Call Center Server
- the Meridian 1 switch

## PC experience or knowledge

Knowledge of, or experience with, the following PC products is helpful when administering the Symposium Call Center Server:

- Microsoft Windows 95, Windows 98, Windows NT 4.0 Workstation, or Windows 2000 Professional

## Other experience or knowledge

Other types of experience or knowledge that can be of use include

- analytical skills
- knowledge of your call center organizational structure and your call center objectives

# What's new?

## Introduction

This section lists the new administration features introduced in Release 4.0 of the Symposium Call Center Server.

## New administration feature in Release 4.0

In Release 4.0, you can install the client on a PC running Windows 2000 Professional.

# Section A: Call center setup and management tasks

## In this section

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Ongoing call center management tasks	9

# Switch configuration tasks

## Introduction

Before you can use the Symposium Call Center Server with the switch, you must configure the switch.

## Switch configuration tasks

You must perform the following tasks to configure the switch for the Symposium Call Center Server:

- configure CDNs
- configure NACD-DNs
- configure IVR ACD-DNs
- configure voice ports
- configure agent and supervisor phonesets
- configure routes
- configure Multiple Queue Assignments

If you are using a voice processing system, such as Meridian Mail, you must also configure the voice processing system. If you are using Meridian Link, you must also configure Meridian Link.

For detailed instructions, refer to the *Symposium, MI, and Voice Processing Guide*.

# Initial setup tasks

## Introduction

Initial setup tasks include all of those tasks required to create a system that performs in the manner required to meet your call center objectives. (For help in planning and setting up a new system, refer to the *Nortel Networks Symposium Call Center Server Setup Guide*.)

## Initial setup tasks

The following table lists initial setup tasks:

Task	For more information, see
Installing the Symposium Call Center Server Client	<i>Software Installation and Maintenance Guide</i>
Setting up security—defining access classes and giving users authority to connect to the server and perform various functions	“Adding access classes” on page 23 and “Adding desktop user accounts” on page 43
Creating threshold classes to control how statistics are pegged in reports and how they appear in displays	“Adding threshold classes” on page 132
Administering the switch (CDNs, routes, phonesets, IVR ACD-DNs, voice ports, activity codes, DNISs, and phoneset displays)	“Adding CDNs” on page 63, “Adding routes” on page 69, “Adding phonesets” on page 83, “Adding voice ports” on page 100, “Adding activity codes” on page 111, “Adding DNISs” on page 117, “Changing phoneset displays” on page 123
Customizing real-time displays	“Real-time displays” on page 151
Choosing the types of historical statistics to be collected and how long they are stored	“Configuring historical statistics collection” on page 166

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<b>Task</b>	<b>For more information, see</b>
Creating call presentation classes	“Adding call presentation classes” on page 179
Creating skillsets	“Adding skillsets” on page 198
Creating supervisors	“Adding or changing supervisors” on page 212
Creating agents	“Adding agents” on page 221
Creating scheduled agent to supervisor assignments	“Adding agent to supervisor assignments” on page 235
Creating scheduled agent to skillset assignments	“Adding agent to skillset assignments” on page 247
Creating custom reports	<i>Historical Reporting and Data Dictionary Guide</i>
Generating reports	<i>Supervisor’s Guide</i>
Scheduling regular system backups	<i>Software Installation and Maintenance Guide</i>
Creating scripts	<i>Scripting Guide</i>

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# Ongoing call center management tasks

## Introduction

From time to time, changes in your call center require changes to the configuration of the server. During system installation, the installer created a default system administrator. You can add other system administrators. You must add users, user groups, and application administrators, as required, so that others can use the system.

## Ongoing call center management tasks

The following table lists ongoing call center management tasks:

Task	For more information, see
Adding and maintaining threshold classes to control how statistics are treated in reports, statistics, and displays	Chapter 4, “Managing threshold classes”
Administering the switch (CDNs, routes, phonesets, IVR ACD-DNs, voice ports, activity codes, DNISs, and phoneset displays)	Chapter 3, “Administering the switch”
Change the historical statistics collection and real-time displays configuration	Chapter 5, “Working with displays and statistics”
Adding and maintaining call presentation classes and skillsets	Chapter 6, “Managing skillsets and call presentation”
Adding and maintaining supervisors	Chapter 7, “Managing supervisors”
Adding and maintaining agents	Chapter 8, “Managing agents”
Adding and maintaining agent to supervisor assignments	Chapter 9, “Managing agent to supervisor assignments”

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<b>Task</b>	<b>For more information, see</b>
Adding and maintaining agent to skillset assignments	Chapter 10, “Managing agent to skillset assignments”
Creating and modifying custom reports	<i>Historical Reporting and Data Dictionary Guide</i>
Generating reports and using real-time displays	<i>Supervisor’s Guide</i>
Scheduling regular system backups	<i>Software Installation and Maintenance Guide</i>
Creating and maintaining scripts	<i>Scripting Guide</i>

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## Section B: Using SMI Workbench

### **In this section**

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# Adding servers

## Introduction

This section introduces you to the System Management Interface (SMI) Workbench. Through the SMI Workbench, you access the SMI window, which contains all of the functions available on the Symposium Call Center Server.

**Note:** Existing MAT systems for Symposium Call Center Server are exported to SMI systems during client software installation or upgrade. If you require more information, refer to the *Software Installation and Maintenance Guide*.

## Using a dial-up connection to the server

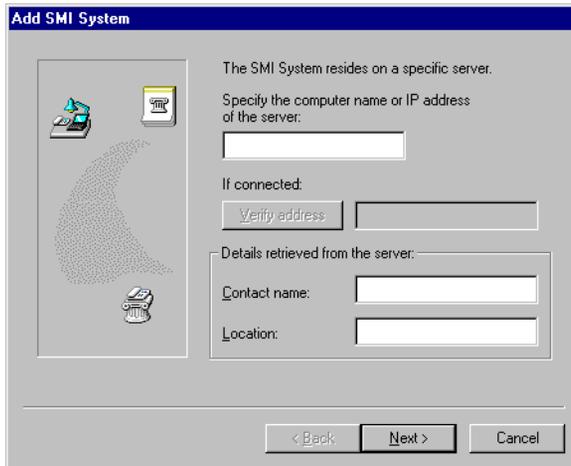
Client PCs that are not on the same LAN as the server must use Dial-Up Networking to establish a network connection. For instructions, refer to the *Software Installation and Maintenance Guide*.

**Note:** You cannot generate reports across a dial-up (PPP) connection.

## To add a server

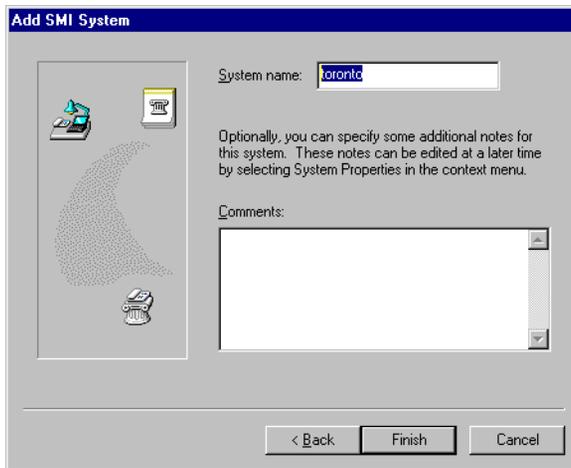
- 1 From the Windows Start menu, choose Programs → SMI Workbench.
- 2 Double-click Add System.

**Result:** The Add SMI System dialog box appears.



- 3 Enter the computer name or the IP address of the server you want to access.  
**Note:** For a dial-up connection, enter the IP address.
- 4 If the client PC has a network connection to the server, click Verify address to verify that the computer name or IP address is correct and reachable.

5 Click Next.



6 (Optional) Enter notes or a comment that describes this SMI system.

7 Click Finish.

**Result:** The server appears in the SMI Workbench folder.

## To group servers by location

Group servers by location if the client PC is used to administer servers in different physical locations.

To group SMI systems, create subfolders in the SMI Workbench folder. Name these subfolders by the site (location) names. Click and drag the servers into the appropriate folders.

# Logging on to the server

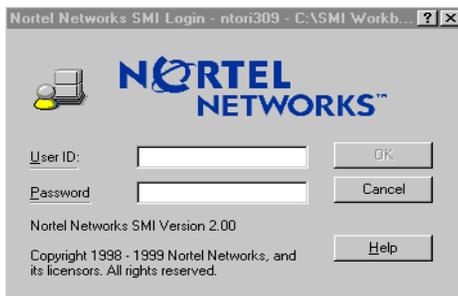
## Introduction

To access the Symposium Call Center Server client functions, you must log on to the server.

## To log on

- 1 Double-click the server in the SMI Workbench folder (or double-click the desktop shortcut, if one is available).

**Result:** The SMI Login dialog box appears.



- 2 In the User ID box, type your user ID.
- 3 In the Password box, type your password.
- 4 Click OK.

**Result:** The Login dialog box closes and the SMI window appears.

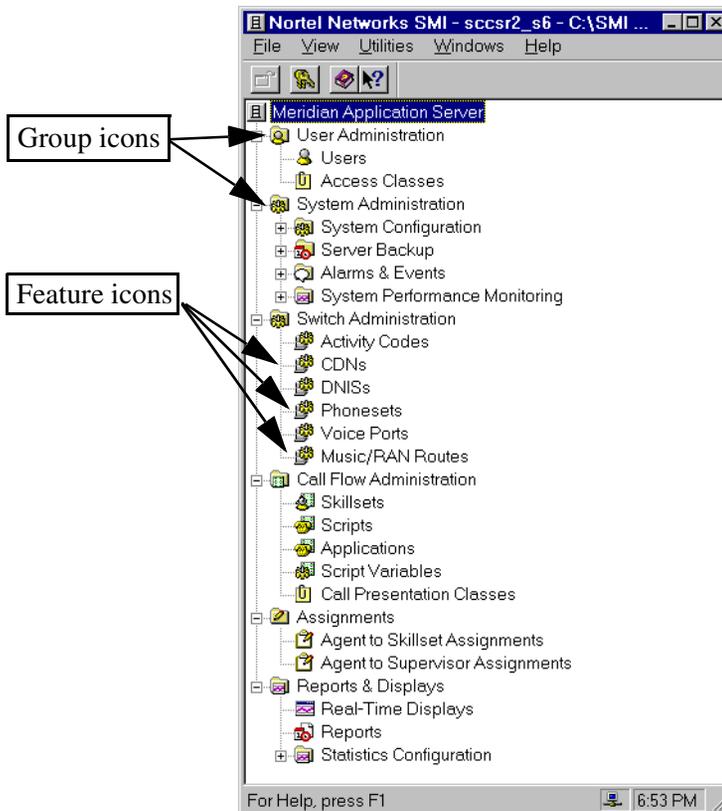
# Overview of the SMI window

## Introduction

The SMI window displays a tree of system administration tasks to which you have access. This window appears after you log on to the server.

## The SMI window

The following figure shows the SMI window. The contents of the window depend on the system administration tasks available and your access permissions. Your SMI window might look different from the example below.



# Chapter 2

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## Managing security

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# Overview of managing security

## Introduction

Today, much information that is vital to a company's well-being is transmitted over networks between company sites. These networks must be protected so that only authorized users can access, change, or delete information.

The system administrator is responsible for establishing and maintaining system security. The administrator sets up security by assigning logon passwords and access classes to users. By assigning the appropriate access classes to the appropriate users, the administrator can help ensure system security.

## Example

You might want to restrict access to call-by-call reports to senior administrators, since stored call-by-call data, such as caller-entered data, can contain confidential information. To restrict access, define an access class with the ability to

- generate reports
- generate call-by-call reports
- view user data

Then assign this access class to senior administrators.

## Setting up security

To set up security, perform these tasks:

1. Define access classes.
2. For each access class, select the Symposium Call Center Server functions that members of that class might use. For a complete list of functions and privileges, see page 29.
3. Create desktop user accounts for users who require access to Symposium Call Center Server functions.

4. Assign access classes to user accounts, giving users the privileges they need to perform their jobs.

## Password retry lockout

Users are locked out of the system if they attempt to log on more than three consecutive times using an invalid password. (This is based on Windows NT settings configured during the installation.) To restore a user's access to the system, an administrator must reset the password retry count to zero. For more information, see "To restore a user's access to the server" on page 48.

If the locked-out user is an administrator, another administrator must restore access. (If you are logged on as sysadmin, you will not be locked out.)

**Note:** If there is no other administrator, only Nortel Networks Customer Support staff can reset the account. Therefore, be sure to create at least two users with administrator privileges.



# Section A: Working with access classes

## In this section

Overview of access classes	22
Adding access classes	23
Viewing the members of an access class	26
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Functions and privileges	29

# Overview of access classes

## Introduction

An access class is a set of privileges for the various functions available for the Symposium Call Center Server.

## Default access classes

The installation process creates three default access classes:

- **adminGroup:** Users belonging to this class have administrator access to the system and can access all functions.
- **Call Center Admin:** Users belonging to this class can access all functions except the switch administration functions (such as configuring phonesets and CDNs) and system administration functions (such as backup, restore, and the alarm monitor).
- **Supervisor:** Users belonging to this class can view and change reporting agents, create and run reports, and create and view real-time displays.

# Adding access classes

## To add an access class

- 1 From the SMI window, choose User Administration → Access Classes.

**Result:** The Access Classes window appears.



- 2 Choose File → New.

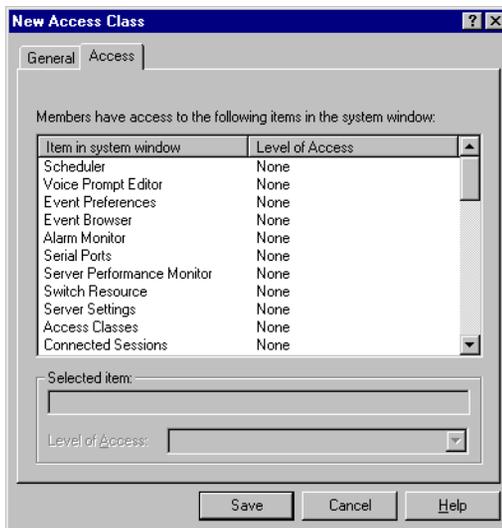
**Result:** The New Access Class property sheet appears.



- 3 In the Name box, type a name for the access class. Use a descriptive name that describes the type of user who will have this access level or the type of privileges available at this access level.

- 4 In the Comments box, enter additional optional information about the access class.
- 5 Click the Access tab.

**Result:** The Access page appears, showing the available Symposium Call Center Server functions and the level of access that members of this access class have for each function.



**Notes:**

- Most of the items in this list correspond to items in the SMI window.
  - After you assign users to an access class, a third tab appears, named “Members.” This tab shows you all the users who belong to the access class.
- 6 Select a function you want to make available to this access class. For a list of functions and available access levels, see “Functions and privileges” on page 29.

**Result:** The selected function appears in the Selected item box.

- 7 Choose the desired level of access for that function.
- 8 Repeat steps 6 and 7 for each function you want this access class to have.
- 9 Click Save.

**Result:** You return to the Access Classes window.

**10** To return to the SMI window, choose File → Close.

# Viewing the members of an access class

## To view the members of an access class

- 1 From the SMI window, choose User Administration → Access Classes.

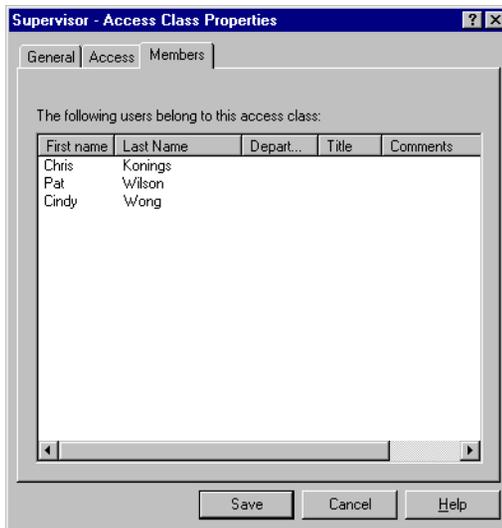
**Result:** The Access Classes window appears.



- 2 Select the access class for which you want to display the members.
- 3 Choose File → Properties.

**Result:** The Access Class Properties property sheet appears.

- 4 Click the Members tab.



- 5 Click Save.  
**Result:** You return to the Access Classes window.
- 6 To return to the SMI window, choose File → Close.

## Other procedures for access classes

### To change the properties of an access class

From the Access Classes window, select the access class you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview the list of access classes

From the Access Classes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print the list of access classes

From the Access Classes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete an access class

**Note:** You cannot delete the default access classes (AdminGroup, Call Center Admin, or Supervisor) or any access class that has members.

From the Access Classes window, select the access classes you want to delete and choose File → Delete.

## Functions and privileges

Function	Privilege	Description
<b>Access Classes</b>	View	Allows users to display the Access Classes window and view the properties for any access class.
	Edit	Allows users to display the Access Classes window and view and change properties for any access class.
	Create/Delete	Allows users to display the Access Classes window and view, change, add, and delete access classes.
<b>Activity Codes</b>	View	Allows users to display the Activity Codes window and view properties for all activity codes.
	Edit	Allows users to display the Activity Codes window and view and change properties for all activity codes.
	Create/Delete	Allows users to display the Activity Codes window and view, change, add, and delete activity codes.
<b>Agent Threshold Classes</b>	View	Allows users to view the Agent Threshold Classes window and view properties for agent threshold classes.
	Edit	Allows users to view and change properties for agent threshold classes.
	Create/Delete	Allows users to view, change, add, and delete properties for agent threshold classes.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Agent to Skillset Assignments</b>	View own agents only	Allows users to display the Agent to Skillset Assignments window (showing only those assignments containing their reporting and associated agents), and view the properties, schedules, and matrixes for these assignments. The matrix specifies agents' priority for a skillset.
	View and assign own agents only	Allows users to display the Agent to Skillset Assignments window and view, change, add, and delete properties, schedules, and matrixes for assignments created for their reporting and associated agents.
	View all agents	Allows users to display the Agent to Skillset Assignments window and view properties, schedules, and matrixes for assignments created for all agents.
	View and assign all agents	Allows users to display the Agent to Skillset Assignments window and view, change, add, and delete properties, schedules, and matrixes for assignments created for all agents.
<b>Agent to Supervisor Assignments</b>	View all agents	Allows users to display the Agent to Supervisor Assignments window and view properties and schedules for all assignments.
	View and assign all agents	Allows users to display the Agent to Supervisor Assignments window and view, change, add, and delete properties and schedules for all assignments.
<b>Alarm Monitor</b>	View	Allows users to open the Alarm Monitor and view event details for system alarms.
	Create/Delete	Allows users to open the Alarm Monitor, view event details for system alarms, and clear and acknowledge alarms.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Application Threshold Classes</b>	View	Allows users to view the Application Threshold Classes window and view properties for application threshold classes.
	Edit	Allows users to view and change properties for application threshold classes.
	Create/Delete	Allows users to view, change, add, and delete properties for application threshold classes.
<b>Applications</b>	View	Allows users to display the Applications window and view the properties of any application.
	Edit	Allows users to display the Applications window and view and change the properties of any application.
<b>Backup Devices</b>	View	Allows users to display the Backup Devices window and view the list of available backup devices.
	Edit	Allows users to display the Backup Devices window and view and change the properties of backup devices.
	Create/Delete	Allows users to display the Backup Devices window and view, change, and delete backup devices.
<b>Backup Scheduler</b>	View	Allows users to display the Backup Scheduler window and view the scheduled date and time of backups.
	Edit	Allows users to display the Backup Scheduler window and view and change the scheduled date and time of backups.
	Create/Delete	Allows users to display the Backup Scheduler window and view, change, and delete scheduled backups.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Call Presentation Classes</b>	View	Allows users to display the Agent Call Presentation Classes window and view the properties for all call presentation classes.
	Edit	Allows users to display the Agent Call Presentation Classes window and view and change the properties for all call presentation classes.
	Create/Delete	Allows users to display the Agent Call Presentation Classes window and view, change, add, and delete call presentation classes.
<b>CDNs</b>	View	Allows users to display the CDNs window and view properties for all CDNs.
	Edit	Allows users to display the CDNs window and view and change properties for all CDNs.
	Create/Delete	Allows users to display the CDNs window and view, change, add, delete, acquire, and deacquire CDNs.
<b>Connected Sessions</b>	View	Allows users to display the Connected Sessions window.
	Create/Delete	Allows users to display the Connected Sessions window and log off connected users.
<b>DNISs</b>	View	Allows users to display the DNISs window and view properties for all DNISs.
	Edit	Allows users to display the DNISs window and view and change properties for all DNISs.
	Create/Delete	Allows users to display the DNISs window and view, change, add, and delete DNISs.
<b>Emergency Help</b>	View	Allows users to open the Emergency Help window.
<b>Event Browser</b>	View	Allows users to open the Event Browser and view all Informational, Critical, Minor, or Major events.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Event Preferences</b>	View	Allows users to view event preferences configured for event codes.
	Edit	Allows users to view event preferences and increase or decrease their severity.
	Create/Delete	Allows users to create event preferences, increase or decrease their severity, and delete event preferences.
<b>Formulas</b>	View	Allows users to display the Formulas window and view properties for all formulas.
	Edit	Allows users to display the Formulas window and view and change properties for all formulas.
	Create/Delete	Allows users to display the Formulas window and view, change, add, and delete formulas.
<b>Historical Statistics</b>	View	Allows users to view the Historical Statistics property sheet. This property sheet determines the type of historical statistics collected, and how long they are stored.
	Edit	Allows users to view and change the Historical Statistics properties.
<b>IVR ACD-DN Threshold Classes</b>	View	Allows users to view the IVR ACD-DN Threshold Classes window and view properties for IVR ACD-DN threshold classes.
	Edit	Allows users to view and change properties for IVR ACD-DN threshold classes.
	Create/Delete	Allows users to view, change, add, and delete properties for IVR ACD-DN threshold classes.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>IVR ACD-DNs</b>	View	Allows users to display the IVR ACD-DNs window and view properties for all IVR ACD-DNs.
	Edit	Allows users to display the IVR ACD-DNs window and view and change properties for all IVR ACD-DNs.
	Create/Delete	Allows users to display the IVR ACD-DNs window and view, change, add, delete, acquire, and deacquire IVR ACD-DNs.
<b>Maintenance</b>	View	Allows users to monitor the status of server components, perform maintenance operations, and run diagnostics.
<b>Network Communication Parameters</b>	View	Allows users to view the Network Communication parameters dialog box.
	Edit	Allows users to view and change the Network Communication parameters.
<b>Network Historical Statistics (NCC)</b>	View	Allows users to view the Network Historical Statistics property sheet.
	Edit	Allows users to view and change the Network Historical Statistics Configuration properties.
<b>Network Skillsets (NCC)</b>	View	Allows users to display the Network Skillsets window and view properties for all network skillsets.
	Edit	Allows users to display the Network Skillsets window and view and change properties for all network skillsets.
	Create/Delete	Allows users to display the Network Skillsets window and view, change, add, and delete network skillsets.
<b>Nodal Threshold Class</b>	View	Allows users to view the Nodal Threshold Classes property sheet.
	Edit	Allows users to view and change properties for the nodal threshold class.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Phoneset Displays</b>	View	Allows users to display the Phoneset Displays window and view properties for all phoneset displays.
	Edit	Allows users to display the Phonesets Displays window and view and change properties for all phoneset displays.
<b>Phonesets</b>	View	Allows users to display the Phonesets window and view properties for all phonesets.
	Edit	Allows users to display the Phonesets window and view and change properties for all phonesets.
	Create/Delete	Allows users to display the Phonesets window and view, change, add, delete, acquire, and deacquire phonesets.
<b>Real-Time Displays</b>	View own agents	Allows users to view reporting and associated agents in the real-time displays.
	View own agents–create displays	Allows users to view reporting and associated agents in the real-time displays, and view and change the properties of real-time display definitions.
	View all agents	Allows users to view all agents in the real-time displays.
	View all agents–create displays	Allows users to view all agents in the real-time displays, and view and change the properties of real-time display definitions.
<b>Real-time Statistics</b>	View	Allows users to view the Real-time Statistics Configuration property sheet. This property sheet determines the type of real-time statistics collected, and the viewing mode.
	Edit	Allows users to view and change the Real-time Statistics Configuration properties.
<b>Reports</b>	Create and run any report	Allows users to display the Reports window. In combination with one of the following options, allows users to generate reports.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Reports–Agent Performances</b>	Create and run any report	Allows users to modify the properties (including the schedule and selection criteria) of user-defined performance reports, and produce ad hoc performance reports.
<b>Reports–Call by Call</b>	Create and run any report	Allows users to modify the properties (including the schedule) of user-defined call-by-call reports, and produce ad hoc call-by-call reports.
<b>Reports–Other</b>	Create and run any report	Allows users to modify the properties of user-defined configuration reports, and produce ad hoc configuration reports.
<b>Route Threshold Classes</b>	View	Allows users to view the Route Threshold Classes window and view properties for route threshold classes.
	Edit	Allows users to view and change properties for route threshold classes.
	Create/Delete	Allows users to view, change, add, and delete properties for route threshold classes.
<b>Routes</b>	View	Allows users to display the Routes window and view properties for all routes.
	Edit	Allows users to display the Routes window and view and change properties for all routes.
	Create/Delete	Allows users to display the Routes window and view, change, add, delete, acquire, and deacquire routes.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Scheduler</b>	View	Allows users to display the Scheduler window and view the scheduled date and time for scheduled events. These events include all server activities that are scheduled to run unattended, including report generation, agent to skillset and agent to supervisor assignments, and backups.
	Edit	Allows users to display the Scheduler window and view and change the scheduled date and time for scheduled events.
	Create/Delete	Allows users to display the Scheduler window and view, change, and delete scheduled events.
<b>Script Variables</b>	View	Allows users to view the Script Variables window and view the properties of any script variable.
	Edit	Allows users to view the Script Variables window and view and change the properties of any script variable.
	Create/Delete	Allows users to view the Script Variables window and view, change, add, and delete script variables.
<b>Scripts</b>	View	Allows users to display the Scripts window and view scripts in the Script Editor.
	Edit	Allows users to display the Scripts window and view and change scripts in the Script Editor.
	Create/Delete	Allows users to display the Scripts window, and view and change scripts in the Script Editor, as well as add and delete scripts.
<b>Serial Ports</b>	View	Allows users to display the Serial Ports window and view properties for all serial ports.
	Edit	Allows users to display the Serial Ports window and view and change properties for all serial ports.

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Server Performance Monitor</b>	View	Allows users to display the Server Performance Monitor. This monitor displays information about processing capacity, memory, and storage space.
<b>Server Settings</b>	View	Allows users to display detailed information about the server, such as the software release it is running and its serial number.
<b>Sites (NCC)</b>	View	Allows users to display the Sites window and view properties for all sites.
	Edit	Allows users to display the Sites window and view and change properties for all sites.
	Create/Delete	Allows users to display the Sites window and view, change, add, and delete sites.
<b>Skillset Threshold Classes</b>	View	Allows users to view the Skillset Threshold Classes property sheet for skillset threshold classes.
	Edit	Allows users to view and change properties for skillset threshold classes.
	Create/Delete	Allows users to view, change, add, and delete properties for skillset threshold classes.
<b>Skillsets</b>	View	Allows users to display the Skillsets window, view the properties for all skillsets, and view the Global Settings.
	Edit	Allows users to display the Skillsets window, view, and change the properties for all skillsets, and view and change the Global Settings.
	Create/Delete	Allows users to display the Skillsets window, view, change, add, and delete skillsets, and view and change the Global Settings.

---

<b>Function</b>	<b>Privilege</b>	<b>Description</b>
<b>Switch Resource</b>	View	Allows users to view the Switch Resource properties. These properties display information about the switch type.
	Edit	Allows users to view and change the Switch Resource properties.
<b>Table Routing Assignments (NCC)</b>	View	Allows users to display the Table Routing Assignments window and view properties for all table routing assignments.
	Edit	Allows users to display the Table Routing Assignments window and view and change properties for all table routing assignments.
	Create/Delete	Allows users to display the Table Routing Assignments window and view, change, add, and delete table routing assignments.

---

Function	Privilege	Description
<b>Users</b>	View reporting agents only	Allows users to display the Users window and view properties for reporting agents.
	View and edit reporting agents only	Allows users to display the Users window and view and change properties for reporting agents.
	Edit all agents—create agents only	Allows users to display the Users window and view, change, create, and delete any agents.
	View all users	Allows users to display the Users window and view properties for all desktop users, supervisors, and agents. <b>Note:</b> This access privilege is required for generation of call-by-call reports.
	Edit all users	Allows users to display the Users window and view and change properties for all desktop users, supervisors, and agents.
	Edit all users—create any type	Allows users to view the Users window and view, change, add, and delete desktop users, supervisors, and agents.
<b>Voice Ports</b>	View	Allows users to display the Voice Ports window and view properties for all voice ports.
	Edit	Allows users to display the Voice Ports window and view and change properties for all voice ports.
<b>Voice Prompt Editor</b>	View	Allows users to log on to the Voice Prompt Editor and view voice files and voice segments.
	Edit	Allows users to log on to the Voice Prompt Editor and view and change voice segments and voice files.
	Create/Delete	Allows users to log on to the Voice Prompt Editor and view, change, add, and delete voice files and voice segments.

## **Section B: Working with desktop user accounts**

### **In this section**

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Adding desktop user accounts	43
Controlling access to the server	47
Resetting desktop passwords	50
Other procedures for desktop users	52

# Overview of desktop user accounts

## Introduction

A desktop user account uses the client application to access the Symposium Call Center Server. You must create a desktop user account for each user who requires access to the server. You must also assign each account to the access class that gives the user the privileges he or she needs to perform his or her job.

# Adding desktop user accounts

## Introduction

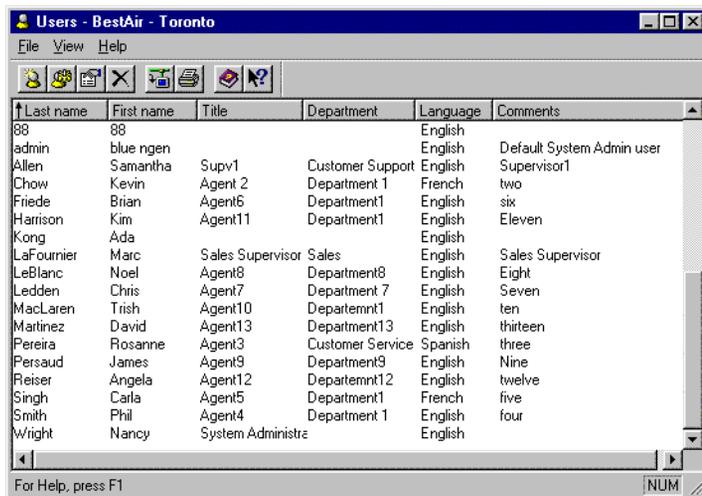
When you create a desktop user account, the account is assigned the default password, “password.” When the user logs on to the server, he or she is prompted to change the password.

**Note:** The user can also change his or her password by logging on to the server and choosing Utilities → Change Password.

## To add desktop user accounts

- 1 From the SMI window, choose User Administration → Users.

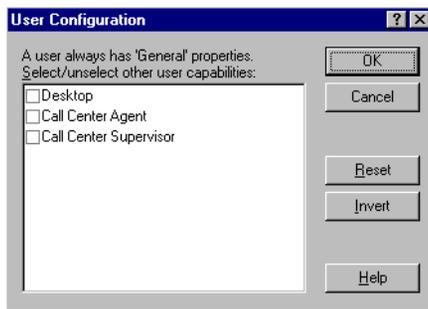
**Result:** The Users window appears.



Last name	First name	Title	Department	Language	Comments
88	88			English	
admin	blue ngen			English	Default System Admin user
Allen	Samantha	Supv1	Customer Support	English	Supervisor1
Chow	Kevin	Agent 2	Department 1	French	two
Friede	Brian	Agent6	Department1	English	six
Harrison	Kim	Agent11	Department1	English	Eleven
Kong	Ada			English	
LaFourrier	Marc	Sales Supervisor	Sales	English	Sales Supervisor
LeBlanc	Noel	Agent8	Department8	English	Eight
Ledden	Chris	Agent7	Department 7	English	Seven
MacLaren	Trish	Agent10	Departemnt1	English	ten
Martinez	David	Agent13	Department13	English	thirteen
Pereira	Rosanne	Agent3	Customer Service	Spanish	three
Persaud	James	Agent9	Department9	English	Nine
Reiser	Angela	Agent12	Departemnt12	English	twelve
Singh	Carla	Agent5	Department1	French	five
Smith	Phil	Agent4	Department 1	English	four
Wright	Nancy	System Administre		English	

**2** Choose File → New.

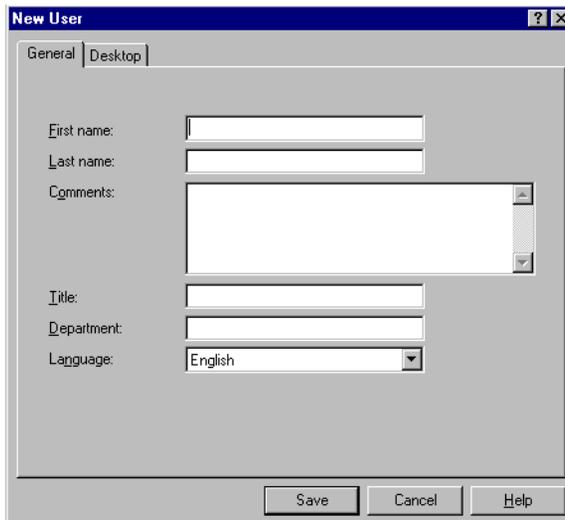
**Result:** The User Configuration dialog box appears.

**3** Click Desktop.

**Note:** If this user will also have Agent capabilities, select Call Center Agent (for more information about setting up agents, see Chapter 8, “Managing agents”). If this user will also have Supervisor capabilities, select Call Center Supervisor (for more information about setting up supervisors, see Chapter 7, “Managing supervisors”).

**4** Click OK.

**Result:** The New User property sheet appears.



- 5 Enter the user's contact information in the boxes on the General property page.
- 6 Click the Desktop tab.

**Result:** The Desktop property page appears.

- 7 Enter information into the following boxes:

**User ID:** The user ID with which the desktop user logs on to the server. You cannot change the user ID after you save the user account.

**Password retry count:** The desktop Password retry count shows the number of times the user has tried to log on and failed.

**Note:** When a user is locked out, you must set the password retry count to zero. To do this, restore the User desktop status to OK by clicking Restore. (The Lock Out button on the Desktop property page changes to Restore when the User is locked out.)

**User desktop status:** The User desktop status shows whether the user currently has access to the system. A user's status can be OK or Locked Out. Users are locked out under the following conditions:

- when the system administrator locks them out manually (see "Controlling access to the server" on page 47)
- when the user tries and fails to log on the maximum number of times

**Access Class:** The access class to which you want to assign the user.

**Note:** The access class must already exist (for more information about adding access classes, see “Adding access classes” on page 23).

- 8 Click Save to save your settings and return to the Users window.

**Note:** If you click Save before you enter the necessary information, the system prompts you to complete the required boxes.

**Result:** The new user appears in the list of users.

- 9 To return to the SMI window, choose File → Close.

# Controlling access to the server

## Introduction

This section provides instructions for restricting and restoring access to the server for individual desktop users.

## To prevent users from accessing the server

### ATTENTION

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If the desktop user you want to lock out is currently logged on, log the desktop user off (see “Logging users off” on page 55).

- 1 From the SMI window, choose User Administration → Users.

**Result:** The Users window appears.

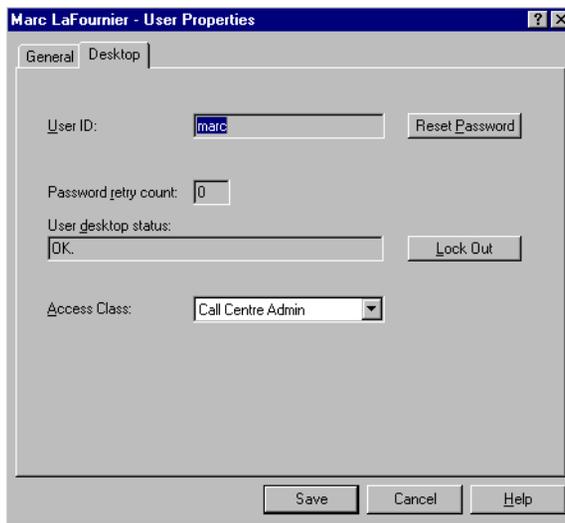
- 2 Select the user you want to prevent from accessing the system.

- 3 Choose File → Properties.

**Result:** The User Properties property sheet appears.

- 4 Click the Desktop tab.

**Result:** The Desktop property page appears.



- 5 Click Lock Out.

**Result:** The User desktop status changes to Locked out by an administrator. This continues to be the current status of the user until an administrator restores it to OK. The Lock Out button changes to Restore.

- 6 Click Save.

**Result:** You return to the Users window.

- 7 To return to the SMI window, choose File → Close.

## To restore a user's access to the server

Use this procedure when a user is locked out of the system after exceeding the password retry count, or after an administrator manually locks out a user.

- 1 From the SMI window, choose User Administration → Users.

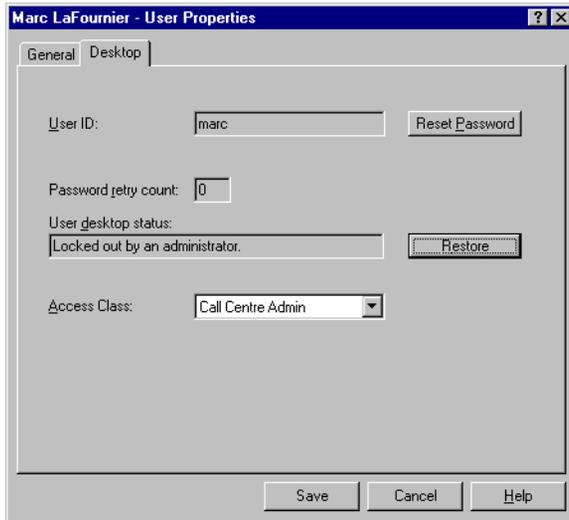
**Result:** The Users window appears.

- 2 Select the user whose access you want to restore.

- 3 Choose File → Properties.

**Result:** The User Properties property sheet appears.

- 4 Click the Desktop tab.



- 5 Click Restore.

**Result:** The User desktop status changes to OK. The Restore button changes to Lock Out.

- 6 Click Save.

**Result:** You return to the Users window.

- 7 To return to the SMI window, choose File → Close.

# Resetting desktop passwords

## When to use

Follow this procedure when a user has forgotten his or her desktop password. By resetting the user's password, you restore the default password, which is "password." Once the user is able to log on again, he or she then needs to change the default password.

### Notes:

- You cannot change a user's password. To change his or her password, the user logs on to the server, and chooses Utilities → Change Password.
- When you reset the user's desktop password, he or she might be locked out of the server. If this happens, restore the user (see "To restore a user's access to the server" on page 48).

## To reset the desktop password

- 1 From the SMI window, choose User Administration → Users.

**Result:** The Users window appears.

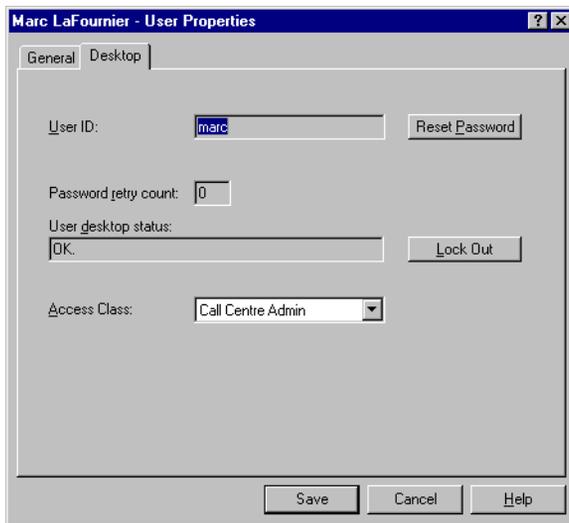
- 2 Select the user whose desktop password you want to reset.

- 3 Choose File → Properties.

**Result:** The User Properties property sheet appears.

- 4 Click the Desktop tab.

**Result:** The Desktop property page appears.



- 5 Click Reset Password.

**Result:** A dialog box appears indicating that the user must use the password "password" to log on next time.

- 6 Click Yes to confirm.
- 7 Click Save.

**Result:** You return to the Users window.

- 8 To return to the SMI window, choose File → Close.

# Other procedures for desktop users

## To change the capabilities of a desktop user

You can assign or revoke supervisor and agent capabilities for a desktop user.

From the Users window, select the desktop user you want to change, and choose File → Configuration.

For step-by-step instructions, press F1 to access the online Help.

## To change the properties of a desktop user

### ATTENTION

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Ensure that the user is not logged on when you change his or her access class. If the user is logged on, the server logs the user off when you make the change.

From the Users window, select the desktop user you want to change, and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To print the list of users (including desktop users)

From the Users window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete a desktop user

**Note:** If you delete a user who is currently logged on, the user is automatically logged off.

From the Users window, select the desktop user you want to delete, and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

## Section C: Managing user sessions

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# Viewing connected users

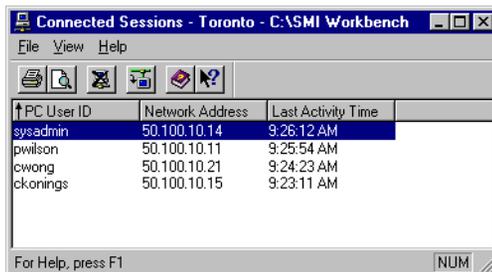
## When to use

Follow the procedure in this section to check the status of a desktop user's connection to the server.

## To view a list of connected users

- 1 From the SMI window, choose System Administration → System Configuration → Connected Sessions.

**Result:** The Connected Sessions window appears. This list shows the desktop users who are logged on to the server, their user IDs, their location (network address), and the time of their last activity on the system.



The screenshot shows a window titled "Connected Sessions - Toronto - C:\SMI Workbench". The window contains a table with the following data:

PC User ID	Network Address	Last Activity Time
sysadmin	50.100.10.14	9:26:12 AM
pwilson	50.100.10.11	9:25:54 AM
cwong	50.100.10.21	9:24:23 AM
ckonings	50.100.10.15	9:23:11 AM

- 2 To return to the SMI window, choose File → Close.

## To print a list of connected users

From the Connected Users window, choose File → Print.

For step-by-step instructions on printing, access the online Help.

# Logging users off

## When to use

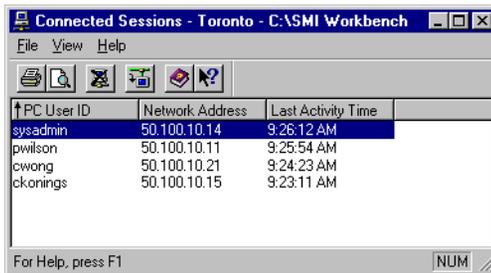
Follow the procedure in this section to disconnect a user from the server.

**Note:** This procedure disconnects and logs users off immediately. The disconnected user is not warned.

## To log a user off

- 1 From the SMI window, choose System Administration → System Configuration → Connected Sessions.

**Result:** The Connected Sessions window appears.



- 2 Select the PC User ID of the user you want to disconnect.
- 3 Choose File → Disconnect Session.

**Result:** The program prompts you to confirm that you want to disconnect the user, since this action logs the user off immediately.

- 4 Click Yes.

**Result:** You return to the Connected Sessions window. The user is no longer on the list.

- 5 To return to the SMI window, choose File → Close.



# Chapter 3

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## Administering the switch

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# Overview

## Introduction

On the Symposium Call Center Server, you must configure a number of resources that have already been configured on the switch.

## Acquired resources

You must configure certain resources to enable Symposium Call Center Server to acquire them from the switch. These resources include

- Controlled Directory Numbers (CDNs)
- phonesets
- voice ports
- IVR ACD-DNs
- routes

**Note:** The server must acquire a route if you want to be able to generate All Trunks Busy reports for that route.

When you configure these resources on the server, you add them to a catalog maintained by the server. At startup, or whenever you make a change to the catalog of resources (for example, if you add a phoneset), the server acquires these resources. For each acquired resource, the switch sends messages regarding the resource to the server.

### States of acquisition

The following table shows the states that switch resources can enter:

IF the current state is	THEN
Not Acquired	the resource has just been created or deacquired.
Acquired-Pending	there is a request into the system to acquire the resource.
Acquired	the resource is acquired from the switch.

IF the current state is	THEN
Acquired Login (voice port)	the voice port has been acquired, and is in login state.
Acquired Logout (voice port)	the voice port has been acquired, and is in logout state.
Acquired-Failed	a problem occurred during an attempt to acquire the resource. The server is unable to acquire it.
Deacquired-Pending	there is a request into the system to deacquire the resource.
Deacquired-Failed	there is a problem deacquiring the resource from the switch, and the system is unable to deacquire it.

**Note:** A change in the status of an acquisition is not automatically reflected in the resource window. To view the current status of the acquisition of a switch resource, choose View→ Refresh.

## Phonset displays

You can customize the appearance of agent phonset displays—that is, you can customize the fields included on the display, and their order.

## Other resources

To make your reports easier to understand, you can assign names to the following resources:

- music/RAN (Recorded ANnouncement) routes
- activity codes

- DNISs

**ATTENTION**

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Information that is configured at the switch must match the configuration on the Symposium Call Center Server to ensure that the switch and the system can communicate and function properly.

# Section A: Working with CDNs

## In this section

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# Overview of CDNs

## Introduction

A controlled directory number (CDN) enables incoming calls to be queued into the switch and enables messages to be sent to Symposium Call Center Server regarding these calls.

To ensure that the Symposium Call Center Server can track when calls are terminated at that CDN, you must do the following:

1. Add a CDN at the switch.
2. Add the CDN at the server.
3. Acquire the CDN at the server.

# Adding CDNs

## Introduction

To enable the server to acquire a CDN, you must do the following:

1. Define the CDN at the switch.
2. Add the CDN on the Symposium Call Center Server.

### ATTENTION

If you want agents to be able to identify the source site of incoming network calls, follow these steps:

1. Configure a network CDN for each source site. Assign a CDN Name that identifies the source site.
2. Tell the source site administrator which network CDN (dialable DN) to use to route calls to your site.
3. Configure your phoneset displays to display the CDN name (see “Changing phoneset displays” on page 123).

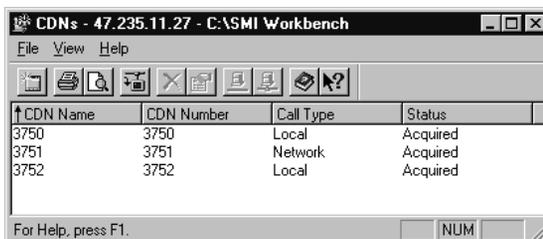
## Before you begin

Make sure that the CDN is configured on the switch. For more information, refer to the *Symposium, M1 and Voice Processing Guide*.

## To add a CDN

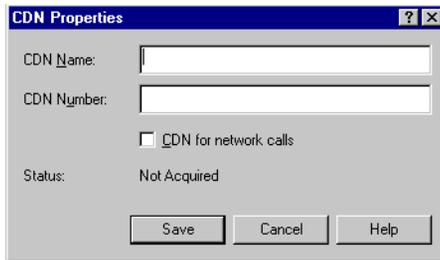
- 1 From the SMI window, choose Switch Administration → CDNs.

**Result:** The CDNs window appears.



- 2 Choose File → New.

**Result:** The CDN Properties property sheet appears.



- 3 Enter information into the following boxes:

**CDN Name:** The name of the CDN as it appears on reports.

**CDN Number:** The number that is passed to the switch in requests to acquire or deacquire the CDN. This number must match the number that is configured at the switch.

**CDN for network calls:** Networking option only. Select this option if you want this CDN to be used for network calls.

- 4 Click Save.

**Result:** The new CDN is added to the list in the CDNs window. It has the status Not Acquired.

- 5 To return to the SMI window, choose File → Close.

## After you finish

Now that you have added the CDN, you must acquire it to enable the system to track calls terminated on it. To acquire the CDN, see “Acquiring and deacquiring CDNs” on page 65.

# Acquiring and deacquiring CDNs

## Introduction

Follow this procedure to request the system to acquire or deacquire a CDN. The Symposium Call Center Server must acquire a CDN to be able to track when calls are terminated at that CDN.

**Note:** Nortel Networks recommends that you deacquire a CDN before you change its configuration on the switch.

## Before you begin

Make sure the CDN has been configured on the switch and added on the Symposium Call Center Server (see “Adding CDNs” on page 63).

## To acquire or deacquire a CDN

- 1 From the SMI window, choose Switch Administration → CDNs.  
**Result:** The CDNs window appears.
- 2 Select the CDN you want to acquire or deacquire.
- 3 If you want to acquire the CDN, choose File → Acquire. If you want to deacquire the CDN, choose File → deacquire.
- 4 To refresh the CDN status on the display, choose View → Refresh.
- 5 Click Save.  
**Result:** You return to the CDNs window.
- 6 To return to the SMI window, choose File → Close.

# Other procedures for CDNs

## To change the properties of a CDN

### Notes:

- You must deacquire a CDN before you change its properties.
- You cannot change the number assigned to a CDN once it has been saved. You must delete the CDN and recreate it with a new number.

From the CDNs window, select the CDN you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To preview a list of CDNs

From the CDNs window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of CDNs

From the CDNs window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete a CDN

### Notes:

- Before deleting a CDN, make sure that its status is one of the following: Not-Acquired or Acquired-Failed.
- This procedure does not delete the CDN from the switch.

From the CDNs window, select the CDNs you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

## Section B: Working with routes

### **In this section**

Overview of routes	68
Adding routes	69
Acquiring and deacquiring trunk routes	71
Viewing route thresholds	72
Other procedures for routes	74

# Overview of routes

## Introduction

You can define two types of routes:

- groups of trunks—Each trunk carries incoming and outgoing calls to and from the switch. You must define these routes on the Symposium Call Center Server if
  - you want to include the routes on your Route reports
  - you want the server to acquire the route, so that you can report on All Trunks Busy (ATB) statistics

**Note:** Only FGDT, TIE, DID, COT, FEK, and WATS route types are supported.

- music and recorded announcement (RAN) routes—You must define these routes on the Symposium Call Center Server if you want them to have names in your reports.

# Adding routes

## Introduction

You must add routes on the Symposium Call Center Server to allow them to appear on reports. In addition, you must add and acquire trunk routes if you want to create All Trunks Busy (ATB) statistics in reports for trunk routes.

## Before you begin

Before you add a route, ensure that it is configured on the switch. For more information, refer to the *Symposium, MI, and Voice Processing Guide*.

## To add a route

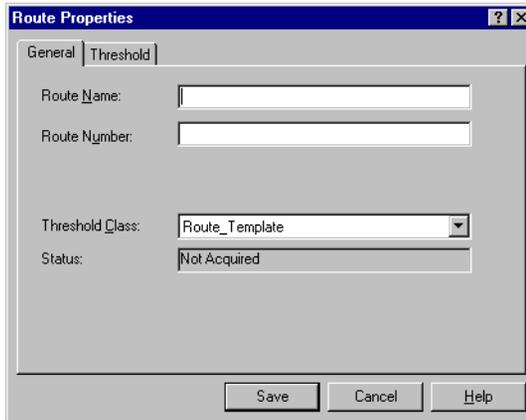
- 1 From the SMI window, choose Switch Administration → Routes.

**Result:** The Routes window appears.



- 2 Choose File → New.

**Result:** The Route Properties property sheet appears. The General property page is on top.

The image shows a screenshot of the 'Route Properties' dialog box. The title bar reads 'Route Properties' with a question mark and a close button. There are two tabs: 'General' (selected) and 'Threshold'. The 'General' tab contains four input fields: 'Route Name' (text box), 'Route Number' (text box), 'Threshold Class' (dropdown menu with 'Route\_Template' selected), and 'Status' (text box with 'Not Acquired'). At the bottom of the dialog are three buttons: 'Save', 'Cancel', and 'Help'.

- 3 Enter information into the following boxes:

**Route Name:** The route name as it appears on reports.

**Route Number:** The number that is passed to the switch in requests to acquire or deacquire the route. Ensure that this matches the route number configured at the switch.

**Threshold Class:** The threshold class assigned to this route.

- 4 Click Save.

**Result:** The route is added to the list in the Routes window. It has the status Not Acquired.

- 5 To return to the SMI window, choose File → Close.

## After you finish

If you want to report on All Trunks Busy (ATB) statistics for the new route, you must acquire the route (see “Acquiring and deacquiring trunk routes” on page 71).

# Acquiring and deacquiring trunk routes

## Introduction

Follow this procedure to request the system to acquire or deacquire a trunk route. You only need to acquire trunk routes for which you want All Trunks Busy (ATB) statistics in reports.

**Note:** You do not need to acquire music and RAN routes. If you attempt to acquire a music or RAN route, the acquire attempt fails.

## Before you begin

Ensure that the route has been added on the Symposium Call Center Server (see “Adding routes” on page 69), and configured on the switch.

## To acquire or deacquire a route

- 1 From the SMI window, choose Switch Administration → Routes.  
**Result:** The Routes window appears.
- 2 Select the route you want to acquire or deacquire.
- 3 If you want to acquire the route, choose File → Acquire. If you want to deacquire the route, choose File → De-acquire.
- 4 To refresh the route status on the display, choose View → Refresh.
- 5 To return to the SMI window, choose File → Close.

# Viewing route thresholds

## Introduction

Follow this procedure to view the thresholds defined for the threshold class assigned to a route. You can use the Route Properties Threshold property page to view thresholds, but you cannot change the values here.

### Changing the threshold class for a route

You can change the threshold class assigned to a route on the Route Properties General property page. For more information, see “To change the properties of a route” on page 74.

### Changing the thresholds for a route

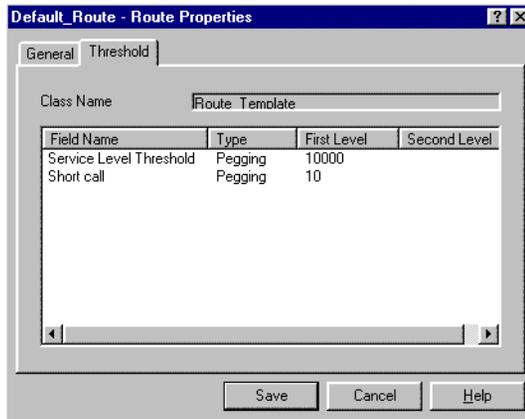
You change the route threshold classes in the route Threshold Class Properties property sheet. For more information, see Chapter 4, “Managing threshold classes.”

## To view route thresholds

- 1 From the SMI window, choose Switch Administration → Routes.  
**Result:** The Routes window appears.
- 2 Select the route you want to view.
- 3 Choose File → Properties.

- 4 Click the Thresholds tab.

**Result:** The Route Properties Threshold property page appears.



- 5 Click Save.
- 6 To return to the SMI window, choose File → Close.

## Other procedures for routes

### To change the properties of a route

**Note:** You cannot change the number assigned to a route once it has been saved. You must delete the route and recreate it with a new number.

From the Routes window, select the route you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview the list of routes

From the Routes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print the list of routes

From the Routes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete a route

**Note:** Before deleting the route, make sure that the route status is either Not-Acquired or Acquire-Failed.

From the Routes window, select the route you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

## Section C: Working with music/RAN routes

### In this section

Overview of music/RAN routes	76
Adding music/RAN routes	77
Other procedures for music/RAN routes	79

# Overview of music/RAN routes

## Introduction

A music/RAN route is a resource installed on the switch that offers music or a recorded announcement to callers on hold. Callers can be transferred to music and RAN routes in one of the following ways:

- by the switch
- by a Symposium Call Center Server script
- by an agent

If you want to include a music/RAN route name on reports, you must define the route on the Symposium Call Center Server.

# Adding music/RAN routes

## Introduction

You must define music/RAN routes on the Symposium Call Center Server to enable the route names to appear on reports.

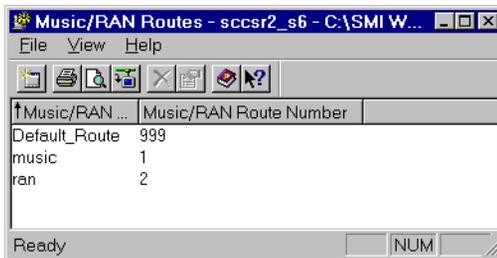
## Before you begin

Make sure that the route is configured in table ACDRTE on the switch. For more information, refer to the *Symposium and DMS Switch Guide* or the *Symposium and MSL-100 Switch Guide*.

## To add a music/RAN route

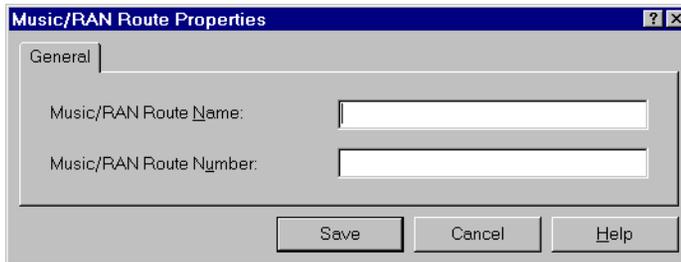
- 1 From the SMI window, open Call Center Management → Switch Administration → Music/RAN Routes.

**Result:** The Music/RAN Routes window appears.



- 2 Choose File → New.

**Result:** The Music/RAN Route Properties property sheet appears.

The image shows a dialog box titled "Music/RAN Route Properties" with a standard Windows-style title bar containing a question mark and a close button. The dialog has a "General" tab selected. Inside the dialog, there are two text input fields. The first is labeled "Music/RAN Route Name:" and the second is labeled "Music/RAN Route Number:". At the bottom of the dialog, there are three buttons: "Save", "Cancel", and "Help".

- 3 Enter information in the following boxes:

**Music/RAN Route Name:** The route name as it appears on reports.

**Music/RAN Route Number:** The number of the music or RAN route as it is configured at the switch.

- 4 Click Save.

**Result:** The route is added to the list in the Music/RAN Routes.

- 5 To return to the SMI window, choose File → Close.

## Other procedures for music/RAN routes

### To change the name of a music/RAN route

**Note:** You cannot change the number assigned to a music/RAN route once it has been saved. You must delete the route and recreate it with a new number.

On the Music/RAN Routes window, select the route you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview the list of music/RAN routes

From the Music/RAN Routes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print the list of music/RAN routes

From the Music/RAN Routes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete music/RAN routes

On the Music/RAN Routes window, select the routes you want to delete, and choose File → Delete.

**Note:** This procedure does not delete the route from the switch.

For step-by-step instructions, press F1 to access the online Help.



## Section D: Working with phonesets

### **In this section**

Overview of phonesets	82
Adding phonesets	83
Acquiring and deacquiring phonesets	85
Other procedures for phonesets	86

# Overview of phonesets

## Introduction

You must add and acquire each phoneset at which agents and supervisors will log on to the system. When the Symposium Call Center Server acquires a phoneset, the switch begins sending messages about the phoneset to the server.

## Agent and supervisor phonesets

Agents are not associated with a specific phoneset. They can log on to any phoneset. When agents log on, the server obtains their position ID from the switch. The server automatically maps agents' position IDs to their agent key on the supervisor's phoneset.

Supervisors are associated with a specific phoneset, as specified in the position ID field. This enables the switch to program the keys on the supervisor's phoneset to communicate with that supervisor's agents.

You associate agents and supervisors in the following ways:

- on the agents' Supervisor property page (see "To assign supervisors" on page 228)
- with the Agent to Supervisor application (see Chapter 9, "Managing agent to supervisor assignments")

# Adding phonesets

## Introduction

You must add and acquire each phoneset that you want to use with the Symposium Call Center Server so that the switch can send messages to the server when an agent logs on to the phoneset.

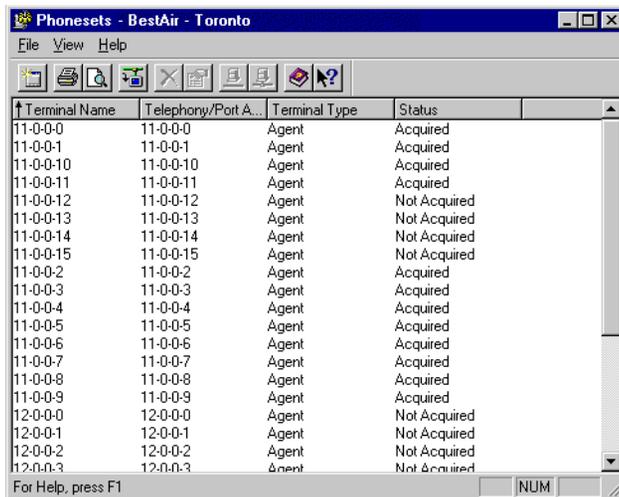
## Before you begin

Configure the phoneset on the switch. For more information, refer to the *Symposium, M1, and Voice Processing Guide*.

## To add a new phoneset

- 1 From the SMI window, choose Switch Administration → Phonesets.

**Result:** The Phonesets window appears.



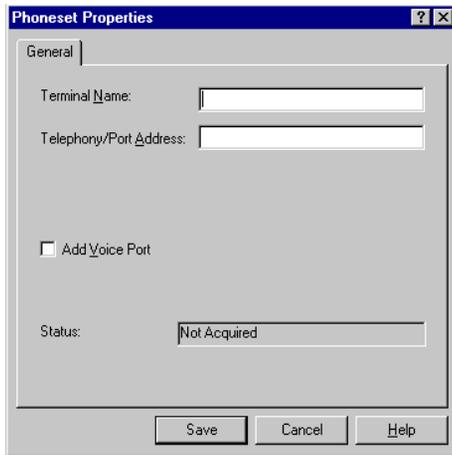
The screenshot shows a window titled "Phonesets - BestAir - Toronto" with a menu bar (File, View, Help) and a toolbar. Below the toolbar is a table with the following data:

Terminal Name	Telephony/Port A...	Terminal Type	Status
11-0-0-0	11-0-0-0	Agent	Acquired
11-0-0-1	11-0-0-1	Agent	Acquired
11-0-0-10	11-0-0-10	Agent	Acquired
11-0-0-11	11-0-0-11	Agent	Acquired
11-0-0-12	11-0-0-12	Agent	Not Acquired
11-0-0-13	11-0-0-13	Agent	Not Acquired
11-0-0-14	11-0-0-14	Agent	Not Acquired
11-0-0-15	11-0-0-15	Agent	Not Acquired
11-0-0-2	11-0-0-2	Agent	Acquired
11-0-0-3	11-0-0-3	Agent	Acquired
11-0-0-4	11-0-0-4	Agent	Acquired
11-0-0-5	11-0-0-5	Agent	Acquired
11-0-0-6	11-0-0-6	Agent	Acquired
11-0-0-7	11-0-0-7	Agent	Acquired
11-0-0-8	11-0-0-8	Agent	Acquired
11-0-0-9	11-0-0-9	Agent	Acquired
12-0-0-0	12-0-0-0	Agent	Not Acquired
12-0-0-1	12-0-0-1	Agent	Not Acquired
12-0-0-2	12-0-0-2	Agent	Not Acquired
12-0-0-3	12-0-0-3	Agent	Not Acquired

At the bottom of the window, there is a text prompt "For Help, press F1" and a button labeled "NUM".

- 2 Choose File → New.

**Result:** The Phoneset Properties property sheet appears.



- 3 Enter information into the following boxes:

**Terminal Name:** The name of the phoneset, as it will appear on reports.

**Telephony/Port Address:** The address of the ACD phoneset on the telephony server.

- 4 Ensure that the Add Voice Port box is unchecked.
- 5 Click Save.

**Result:** The phoneset is added to the list in the Phonesets window. It has the status Not Acquired.

- 6 To return to the SMI window, choose File → Close.

## After you finish

After adding the phoneset, you must acquire it so that the switch sends messages to the system when an agent logs on to the phoneset.

# Acquiring and deacquiring phonesets

## Introduction

You must acquire each phoneset so that the switch sends a message to the system when an agent logs on to the phoneset.

**Note:** Nortel Networks recommends that you deacquire a phoneset before you configure it on the switch.

## Before you begin

Make sure that the phoneset is configured on the switch, and has been added on the Symposium Call Center Server (see “Adding phonesets” on page 83).

## To acquire or deacquire a phoneset

- 1 From the SMI window, choose Switch Administration → Phonesets.  
**Result:** The Phonesets window appears.
- 2 Select the phoneset you want to acquire or deacquire.
- 3 If you want to acquire the phoneset, choose File → Acquire. If you want to deacquire the phoneset, choose File → De-acquire.  
**Result:** The phoneset status changes to Acquired (or Deacquired) pending.
- 4 To refresh the phoneset status on the display, choose View → Refresh.
- 5 To return to the SMI window, choose File → Close.

# Other procedures for phonesets

## To change the name of a phoneset

### Notes:

- You must deacquire a phoneset before you change its properties.
- You cannot change the telephony/port address assigned to a phoneset. To change these properties, delete the phoneset and recreate it.

From the Phonesets window, select the phoneset you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To preview the list of phonesets

From the Phonesets window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To print the list of phonesets

From the Phonesets window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete a phoneset

### Notes:

- Before deleting the phoneset from the system, ensure that the phoneset status is either Not-Acquired or Acquired-Failed. You cannot delete a phoneset if it is Acquired or Deacquired-Failed.
- This procedure does not delete the phoneset from the switch.
- If this phoneset is a voice port type, the associated voice port is also deleted.

From the Phonesets window, select the phoneset you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



## Section E: Working with IVR ACD-DNs

### In this section

Overview of IVR ACD-DNs	90
Adding IVR ACD-DNs	91
Acquiring and deacquiring an IVR ACD-DN	93
Viewing IVR ACD-DN thresholds	94
Changing IVR ACD-DN global settings	96
Other procedures for IVR ACD-DNs	98

# Overview of IVR ACD-DNs

## Introduction

An IVR ACD-DN is a directory number that routes a caller to a specific IVR application. An IVR ACD-DN must be acquired for nonintegrated IVR systems.

# Adding IVR ACD-DNs

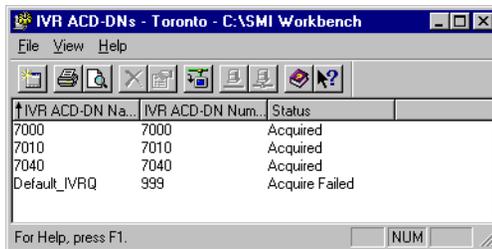
## Before you begin

Make sure that the IVR ACD-DN is configured on the switch. For more information, refer to the *Symposium, M1 and Voice Processing Guide*.

## To add an IVR ACD-DN

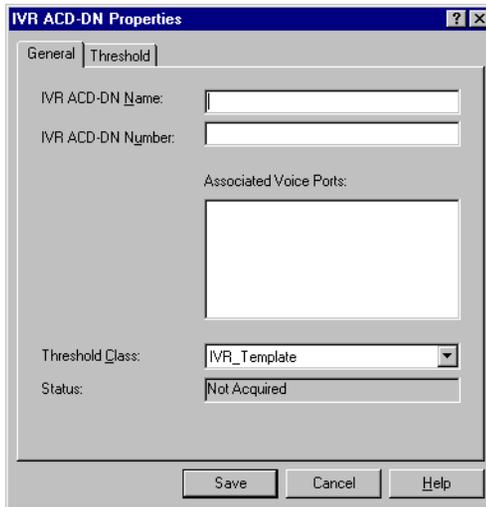
- 1 From the SMI window, choose Switch Administration → IVR ACD-DNs.

**Result:** The IVR ACD-DNs window appears.



- 2 Choose File → New.

**Result:** The IVR ACD-DN Properties property sheet appears.



The screenshot shows a window titled "IVR ACD-DN Properties" with a "General" tab selected. The "General" tab contains the following fields:

- IVR ACD-DN Name: [Text box]
- IVR ACD-DN Number: [Text box]
- Associated Voice Ports: [Empty list box]
- Threshold Class: [Dropdown menu with "IVR\_Template" selected]
- Status: [Text box with "Not Acquired"]

At the bottom of the dialog are three buttons: "Save", "Cancel", and "Help".

- 3 Enter information into the following boxes:

**IVR ACD-DN Name:** The name of the IVR ACD-DN as it appears on reports.

**IVR ACD-DN Number:** The number that is passed to the switch in requests to acquire or deacquire the ACD-DN.

**Threshold Class:** The threshold class for the IVR ACD-DN.

- 4 Click Save.

**Result:** The IVR ACD-DN is added to the list in the IVR ACD-DNs window. It has the status Not Acquired.

- 5 To return to the SMI window, choose File → Close.

# Acquiring and deacquiring an IVR ACD-DN

## Introduction

If you are using a nonintegrated IVR system, follow this procedure to request the system to acquire or deacquire an IVR ACD-DN.

**Note:** Nortel Networks recommends that you deacquire an IVR ACD-DN before you configure it on the switch.

## To acquire or deacquire an IVR ACD-DN

- 1 From the SMI window, choose Switch Administration → IVR ACD-DNs.  
**Result:** The IVR ACD-DNs window appears.
- 2 Select the IVR ACD-DN you want to acquire or deacquire.
- 3 If you want to acquire the IVR ACD-DN, choose File → Acquire. If you want to deacquire the IVR ACD-DN, choose File → De-acquire.
- 4 To refresh the IVR ACD-DN status on the display, choose View → Refresh.

# Viewing IVR ACD-DN thresholds

## Introduction

Follow this procedure to view the thresholds that make up the threshold class assigned to an IVR ACD-DN. You can only view the thresholds from the IVR ACD-DN Properties Threshold property page; you cannot change the values.

### Changing the threshold class for an IVR ACD-DN

The threshold class assigned to an IVR ACD-DN can be changed on the IVR ACD-DN Properties General property page. For more information, see “To change the properties of an IVR ACD-DN” on page 98.

### Changing the thresholds for a threshold class

The IVR ACD-DN threshold classes are changed in the IVR ACD-DN Threshold Class Properties property sheet. For more information, see Chapter 4, “Managing threshold classes.”

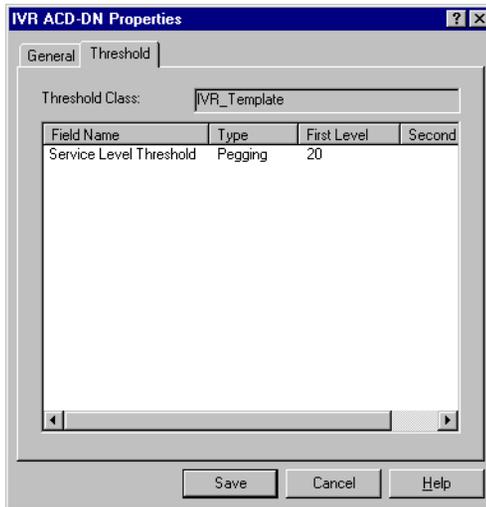
## To view the thresholds assigned to an IVR ACD-DN

- 1 From the SMI window, choose Switch Administration → IVR ACD-DNs.
- 2 The IVR ACD-DNs window appears.
- 3 Select the IVR ACD-DN for which you want to view the thresholds.
- 4 Choose File → Properties.

**Result:** The IVR ACD-DNs Properties property sheet appears.

- 5 Click the Threshold tab.

**Result:** The IVR ACD-DN Properties Threshold property page appears.



- 6 Click Save.
- 7 To return to the SMI window, choose File → Close.

# Changing IVR ACD-DN global settings

## Introduction

If you want to use Meridian Mail to provide voice processing services, you must configure the Global Settings. For more information about voice processing with Meridian Mail, refer to the *Symposium, MI, and Voice Processing Guide*.

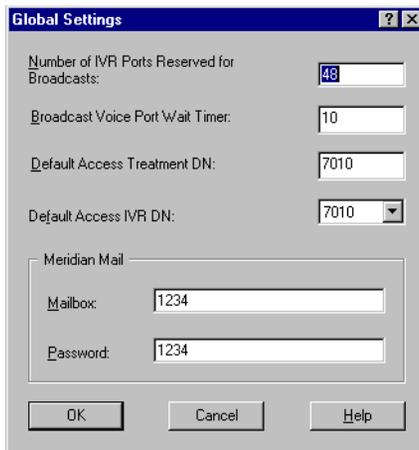
## To change IVR ACD-DN global settings

- 1 From the SMI window, choose Switch Administration → IVR ACD-DNs.

**Result:** The IVR ACD-DNs window appears.

- 2 Choose File → Global Settings.

**Result:** The IVR ACD-DNs Global Settings dialog box appears.



The screenshot shows a dialog box titled "Global Settings" with the following fields and values:

- Number of IVR Ports Reserved for Broadcasts: 48
- Broadcast Voice Port Wait Timer: 10
- Default Access Treatment DN: 7010
- Default Access IVR DN: 7010 (dropdown menu)
- Meridian Mail section:
  - Mailbox: 1234
  - Password: 1234

Buttons at the bottom: OK, Cancel, Help.

- 3 Make the desired changes to the properties. You can change the following properties:

**Number of IVR Ports Reserved for Broadcasts:** The total number of IVR ports that can be user-controlled for broadcast at any time.

**Broadcast Voice Port Wait Timer:** The number of seconds the system will wait for a voice port to become available.

**Default Access Treatment DN:** The default DN used when a script contains voice processing commands, but does not specify a treatment DN.

**Default Access IVR DN:** The default DN used when a script contains voice processing commands that might take an IVR ACD-DN as a parameter, but no IVR ACD-DN is specified.

**Mailbox:** The Meridian Mail mailbox where voice segments and voice segments for broadcast are stored.

**Password:** The password for the Meridian Mail mailbox where voice segments are stored.

- 4 Click OK.

**Result:** You return to the IVR ACD-DNs window.

- 5 To return to the SMI window, choose File → Close.

# Other procedures for IVR ACD-DNs

## To change the properties of an IVR ACD-DN

**Note:** You cannot change the number assigned to an IVR ACD-DN once it has been saved. You must delete the IVR ACD-DN and recreate it with a new number.

From the IVR ACD-DNs window, select the IVR ACD-DN you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To preview the list of IVR ACD-DNs

From the IVR ACD-DNs window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of IVR ACD-DNs

From the IVR ACD-DNs window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete IVR ACD-DNs

**Note:** Before removing the IVR ACD-DN from the system, ensure that its status is either Not-Acquired or Acquired-Failed.

From the IVR ACD-DNs window, select the IVR ACD-DN you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

## Section F: Working with voice ports

### In this section

Adding voice ports	100
Acquiring and deacquiring a voice port	104
Other procedures for voice ports	105

# Adding voice ports

## Introduction

A voice port is defined as a 2500 phoneset for third-party IVR systems or an RCS (517 or 2009) phoneset for Meridian Mail. To add a voice port, you must add a phoneset and then configure it as a voice port.

## Limitations

You can define up to 96 voice ports.

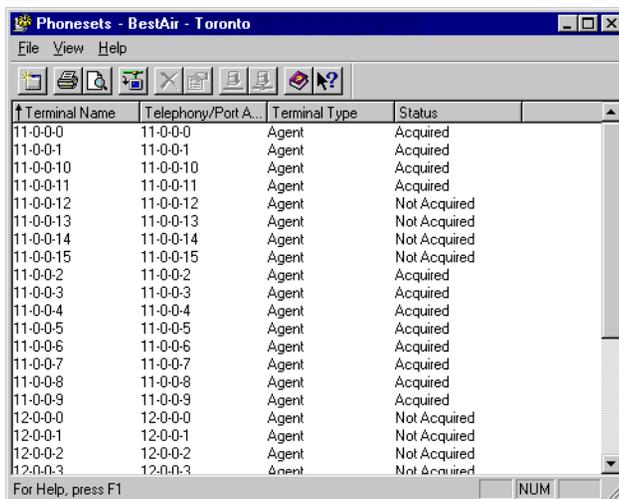
## Before you begin

Make sure that the voice port is configured on the switch. For more information, refer to the *Symposium, M1, and Voice Processing Guide*.

## To add a phoneset for voice port

- 1 From the SMI window, choose Switch Administration → Phonesets.

**Result:** The Phonesets window appears.

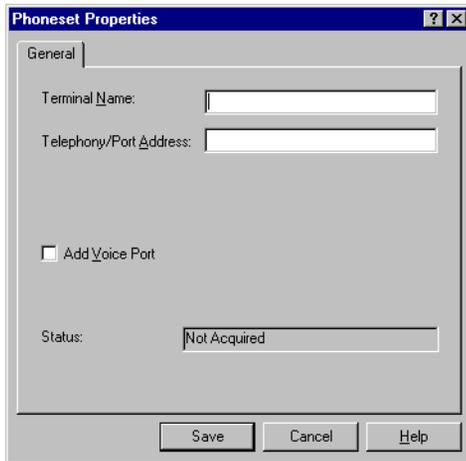


The screenshot shows a window titled "Phonesets - BestAir - Toronto" with a menu bar (File, View, Help) and a toolbar. Below the toolbar is a table with the following columns: Terminal Name, Telephony/Port A..., Terminal Type, and Status. The table contains 20 rows of data, with the last row partially cut off. At the bottom of the window, there is a status bar that says "For Help, press F1" and a button labeled "NUM".

Terminal Name	Telephony/Port A...	Terminal Type	Status
11-0-0-0	11-0-0-0	Agent	Acquired
11-0-0-1	11-0-0-1	Agent	Acquired
11-0-0-10	11-0-0-10	Agent	Acquired
11-0-0-11	11-0-0-11	Agent	Acquired
11-0-0-12	11-0-0-12	Agent	Not Acquired
11-0-0-13	11-0-0-13	Agent	Not Acquired
11-0-0-14	11-0-0-14	Agent	Not Acquired
11-0-0-15	11-0-0-15	Agent	Not Acquired
11-0-0-2	11-0-0-2	Agent	Acquired
11-0-0-3	11-0-0-3	Agent	Acquired
11-0-0-4	11-0-0-4	Agent	Acquired
11-0-0-5	11-0-0-5	Agent	Acquired
11-0-0-6	11-0-0-6	Agent	Acquired
11-0-0-7	11-0-0-7	Agent	Acquired
11-0-0-8	11-0-0-8	Agent	Acquired
11-0-0-9	11-0-0-9	Agent	Acquired
12-0-0-0	12-0-0-0	Agent	Not Acquired
12-0-0-1	12-0-0-1	Agent	Not Acquired
12-0-0-2	12-0-0-2	Agent	Not Acquired
12-0-0-3	12-0-0-3	Agent	Not Acquired

- 2 Choose File → New.

**Result:** The Phoneset Properties property page appears.



- 3 Enter information into the following boxes:

**Terminal Name:** The name of the phoneset as it will appear on reports.

**Telephony/Port Address:** The address of the voice port on the telephony server.

- 4 Ensure that the Add Voice Port box is checked.
- 5 Click Save.

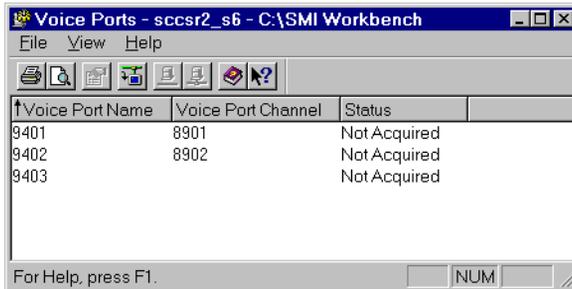
**Result:** The phoneset is added to the list in the Phonesets window.

- 6 To return to the SMI window, choose File → Close.

## To add a voice port

- 1 From the SMI window, choose Switch Administration → Voice Ports.

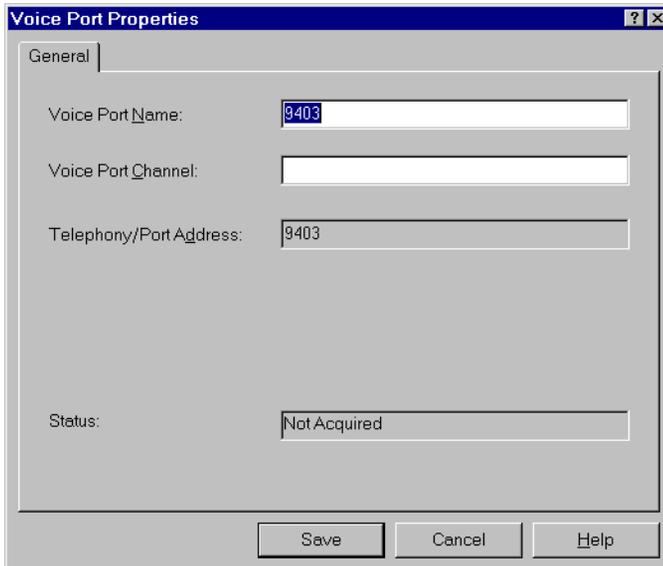
**Result:** The Voice Ports window appears.



Voice Port Name	Voice Port Channel	Status
9401	8901	Not Acquired
9402	8902	Not Acquired
9403		Not Acquired

- 2 From the Voice Ports window, select the phoneset that you added.
- 3 Choose File → Properties.

**Result:** The Voice Port Properties property sheet appears.



Voice Port Properties

General

Voice Port Name: 9403

Voice Port Channel:

Telephony/Port Address: 9403

Status: Not Acquired

Save Cancel Help

- 4 Enter information into the following boxes:

**Voice Port Name:** The name of the voice port as it appears on reports, if it is different from the phoneset name.

**Voice Port Channel:** The number that is passed to the telephony server in requests to acquire or deacquire the voice port.

- 5 Click Save.

**Result:** The voice port channel number is added to the list in the Voice Ports window.

- 6 To return to the SMI window, choose File → Close.

## After you finish

After adding a voice port, you must acquire it so that the switch sends messages to the system.

# Acquiring and deacquiring a voice port

## To acquire or deacquire a voice port

**Note:** Nortel Networks recommends that you deacquire a voice port before you configure it on the switch.

- 1 From the SMI window, choose Switch Administration → Voice Ports.  
**Result:** The Voice Ports window appears.
- 2 Select the voice port you want to acquire or deacquire.
- 3 If you want to acquire the voice port, choose File → Acquire. If you want to deacquire the voice port, choose File → De-acquire.
- 4 To refresh the voice port status on the display, choose View → Refresh.

## Other procedures for voice ports

### To change the name of a voice port

**Note:** You cannot change the channel or telephony/port address assigned to a voice port. To change these properties, you must delete the voice port and recreate it with the new channel.

From the Voice Ports window, select the voice port you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview a list of voice ports

From the Voice Ports window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print a list of voice ports

From the Voice Ports window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete a voice port

**Note:** Before deleting a voice port from the system, ensure that the voice port status is either Not-Acquired, Deacquire Failed, or Acquired-Failed.

From the Voice Ports window, select the voice port you want to delete and choose File → Deacquire. From the Phonesets window, select the voice port to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



## Section G: Working with activity codes

### In this section

Overview of activity codes	108
Not Ready reason codes	109
Adding activity codes	111
Other procedures for activity codes	113

# Overview of activity codes

## Activity codes

An activity code is a number that an agent enters on the phoneset keypad during a call. The system uses activity codes to keep track of the amount of time that is spent on the various types of incoming calls (for example, Sales or Service calls). You can then generate reports on activity codes.

## Skillset default activity code

For each skillset, you can define a default activity code, which is used if no other activity code is assigned.

## System default activity code

The server ships with a system default activity code, which cannot be changed or deleted. The system default activity code is assigned to calls that are not queued to a skillset and if no other activity code is assigned.

# Not Ready reason codes

## Introduction

You can use Not Ready reason codes to track the time agents spend in the Not Ready state.

## What are Not Ready reason codes?

The Not Ready reason codes are numbers that agents enter on the phoneset key pad when going into the Not Ready state. These numbers identify the reason for the Not Ready state. The Not Ready reason codes are used to track the amount of time spent by agents on various activities.

Not Ready reason codes are similar to activity codes, except that the Not Ready activities only apply to agents in the Not Ready state.

Not Ready activities are reported in the Activity Code Agent Report in the same way as other activities. Since Not Ready activities are not associated with a call, they do not have an Application. The Activity Code by Application report shows all the Not Ready activities against a special system application.

You can view the Not Ready reason codes in the Not Ready Reason Codes by Agent report.

## To add Not Ready reason codes

You can add Not Ready reason codes in the same Activity Codes Window as the other activities. Use a different range of numbers to distinguish the Not Ready reason codes from the other activity codes.

To add Not Ready reason codes, follow the procedure in the “Adding activity codes” section of the *Administrator’s Guide*, using the names of the Not Ready reason codes and the corresponding numbers.

Refer to the “Switch Guide” section of the *What’s New in Release 4.0* guide for information about configuring the Not Ready activity codes.

## **Not Ready reason codes**

A Not Ready reason code is a number that an agent enters on the phoneset keypad when going into Not Ready state. This number identifies the reason for the Not Ready state. The server uses the Not Ready reason codes to track the amount of time spent on various activities.

# Adding activity codes

## Introduction

You can use activity codes to track time spent on different types of calls and to track Not Ready reasons. If you do not create activity codes, agents can still enter activity code numbers and the system will report on them. However, when you run Activity Code reports, no names will appear on the reports.

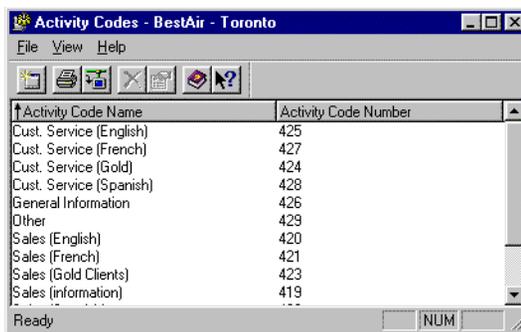
## Limitations

You can define up to 4998 activity codes.

## To add an activity code

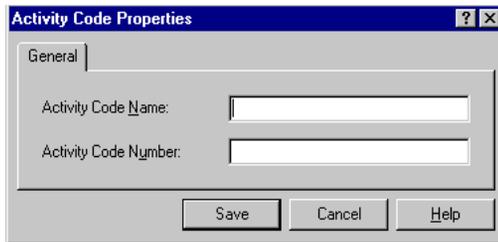
- 1 From the SMI window, choose Switch Administration → Activity Codes.

**Result:** The Activity Codes window appears.



- 2 Choose File → New.

**Result:** The Activity Code Properties property sheet appears.

The image shows a screenshot of a software dialog box titled "Activity Code Properties". The dialog has a blue title bar with a question mark icon and a close button (X). Below the title bar is a tab labeled "General". The main area of the dialog contains two text input fields. The first is labeled "Activity Code Name:" and the second is labeled "Activity Code Number:". At the bottom of the dialog, there are three buttons: "Save", "Cancel", and "Help".

- 3 Complete the General property page by entering information into these boxes:

**Activity Code Name:** The name of the activity code as it will appear on reports.

**Activity Code Number:** The number the agent will enter at a phoneset to select this activity code.

- 4 Click Save.

**Result:** The new activity code is added to the list in the Activity Codes window.

- 5 To return to the SMI window, choose File → Close.

## Other procedures for activity codes

### To change the name of an activity code

**Note:** You cannot change the number assigned to an activity code once it has been saved. To change the number, delete the activity code and recreate it with a new number.

From the Activity Codes window, select the activity code you want to delete and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview a list of activity codes

From the Activity Codes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print a list of activity codes

From the Activity Codes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete an activity code

**Note:** You cannot delete the Skillset\_Default\_Activity\_Code and System\_Default\_Activity\_Code.

From the SMI window, on the Activity Codes window, select the activity code you want to delete and choose File → Delete.



## Section H: Working with DNISs

### **In this section**

Overview of DNISs	116
Adding DNISs	117
Other procedures for DNISs	119

# Overview of DNISs

## Introduction

A dialed number identification service (DNIS) is a method by which the system recognizes the phone number dialed by the incoming caller. Agents can receive calls from customers calling in on different DNISs and customize their response depending on the DNIS that appears on the phoneset display.

# Adding DNISs

## Before you begin

Before you configure a new DNIS, ensure that the CDN, ACD-DN, or Supplementary DN is configured on the switch. For more information, refer to the *Symposium, M1, and Voice Processing Guide*.

## Limitations

The server supports up to 10 000 DNISs.

## To add a DNIS

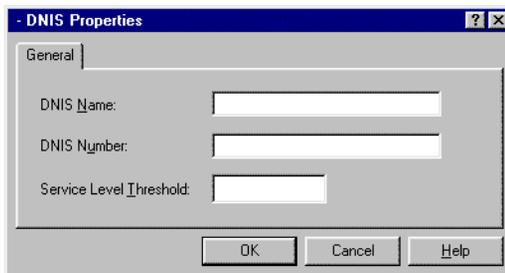
- 1 From the SMI window, choose Switch Administration → DNISs.

**Result:** The DNISs window appears.



- 2 Choose File → New.

**Result:** The DNIS Properties property page appears.



- 3 Complete the General property page by entering information into these boxes:

**DNIS Name:** The name of the DNIS as it will appear on reports.

**DNIS Number:** The ACD-DN or CDN number as it is configured on the switch.

**Service Level Threshold:** Specify the time (in seconds) within which all calls coming through on this DNIS should be answered or abandoned. This threshold value is used in real-time displays.

- 4 Click Save.

**Result:** The DNIS appears in the list in the DNISs window.

- 5 To return to the SMI window, choose File → Close.

## Other procedures for DNISs

### To change the properties of a DNIS

**Note:** You cannot change the number assigned to a DNIS once it has been saved. You must delete the DNIS and recreate it with a new number.

From the DNISs window, select the DNIS you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview the list of DNISs

From the DNISs window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print the list of DNISs

From the DNISs window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete a DNIS

From the DNISs window, select the DNIS you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



# Section I: Working with phoneset displays

## In this section

Overview of phoneset displays	122
Changing phoneset displays	123
Other procedures for phoneset displays	127

# Overview of phoneset displays

## Introduction

Phoneset displays enable you to customize the information that appears on agents' phoneset LCD displays. You can customize the display for each type of phoneset in your call center. The customized display applies to all phonesets of that type. For example, if you configure the display for a 1 x 16 alphanumeric phoneset, all phonesets of that type will use the customized display.

**Note:** For the 3905 phoneset display, the Symposium Call Center Server supports 24 characters on the first line, and 18 characters on the second line.

# Changing phoneset displays

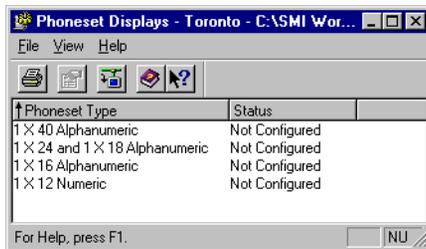
## Before you begin

Ensure that the phoneset display type is configured on the switch. For more information, refer to the *Symposium, M1, and Voice Processing Guide*.

## To change a phoneset display

- 1 From the SMI window, choose Switch Administration → Phoneset Displays.

**Result:** The Phoneset Displays window appears.

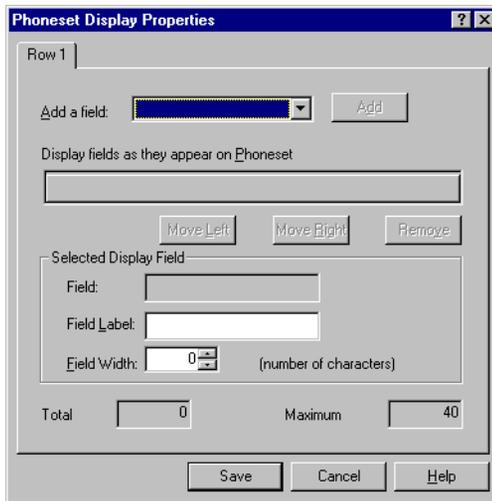


- 2 Select the phoneset display type you want to change.

**Note:** This phoneset display type must be configured on the switch.

3 Choose File → Properties.

**Result:** The Phoneset Display Properties property sheet appears.



4 If the display has more than one row, click the tab of the row you want to change.

5 What do you want to do?

**IF you want to**

**THEN**

add a field

go to “To add a field” on page 125.

delete a field

go to “To delete a field” on page 125.

change the order of fields

go to “To change the order of fields” on page 125.

change field properties

go to “To change field properties” on page 125.

save the display and exit

click Save.

6 To return to the SMI window, choose File → Exit.

## To add a field

1 In the Add a field box, select a display field.

2 Click Add.

**Result:** The field is added to the display. By default, the field label that appears on the display is identical to the field name, and the field has a default width of one character.

3 To change the field label, in the Field Label box, enter the text to be displayed on the phoneset.

4 To change the field width, in the Field Width box, type the number of characters in the field.

5 Return to step 5 on page 124.

## To delete a field

1 In the Display fields as they appear on Phoneset box, select the field you want to delete.

2 Click Remove.

3 Return to step 5 on page 124.

## To change the order of fields

1 In the Display fields as they appear on Phoneset box, select the field you want to move.

2 Move the field one position to the left or right.

3 Repeat step 2 until the field is where you want it.

4 Return to step 5 on page 124.

## To change field properties

1 In the Display fields as they appear on Phoneset box, select the field whose properties you want to change.

2 To change the field label, type a new label in the Field Label box. The label is the text that appears on the phoneset display to identify the field.

- 3** In the Field Width box, type the new number of characters for the field.

**Note:** The total width of all of the fields must not exceed the display width as shown in the Maximum box.

- 4** Return to step 5 on page 124.

## Other procedures for phoneset displays

### To preview a list of phoneset displays

From the Phoneset Displays window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To print a list of phoneset displays

From the Phoneset Displays window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.



# Chapter 4

---

## Managing threshold classes

### In this chapter

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Adding threshold classes	132
Other procedures for threshold classes	135
Thresholds	136

# Overview

## Introduction

A threshold class is a set of options that specifies how statistics are treated in reports and real-time displays.

You can define threshold classes to apply different standards to different types of agents, skillsets, and so on. For example, you can create different agent threshold classes for customer service trainees and for senior customer service representatives. You can also create different skillset threshold classes for weekday performance and weekend performance.

The following types of threshold classes are available:

- agent
- skillset
- application
- IVR ACD-DNs (Meridian 1 switch only)
- routes (Meridian 1 switch only)
- network calls (Meridian 1 switch only)
- nodal

Many of these threshold class types contain two types of thresholds: pegging thresholds (used for reports) and display thresholds (used for real-time displays).

## Pegging thresholds

Pegging thresholds are used to accumulate historical statistical data. In a threshold class, you define a value that represents a cut-off limit for statistics such as short calls or the delay before a call is answered or abandoned. Pegging thresholds allow you to define the length of a short call and the minimum delay before answer/abandon that you want to peg.

For example, you can create a skillset threshold that defines a short call as a call of less than ten seconds. Any calls that are less than ten seconds, and that are directed to skillsets with this threshold, are pegged as short calls and appear on short call reports.

## **Display thresholds**

For display thresholds, you define two values—the low end and the high end of the normal range. When you create a real-time display, you can use colors to identify whether the value of the statistic is less than the low value, between the low and high value, or greater than the high value.

For example, in a skillset threshold class, you can specify low and high values for the Agent Available statistic. You might set the low value to 2, and the high value to 6. You can create a real-time display that displays this statistic in red if it is less than 2, in black if it is 3 to 6, and in blue if it is greater than 6.

## **Types of statistics available**

The statistics that are available for a threshold class vary depending on the threshold class type. For a list of statistics by threshold class type, see “Thresholds” on page 136.

# Adding threshold classes

## When to use

Follow the procedures in this section to add a threshold class, add a threshold, and print a list of threshold classes.

## To add a threshold class

- 1 From the SMI window, choose Reports & Displays → Statistics Configuration.
- 2 Double-click the threshold class type you want to configure (for example, Skillset Threshold Classes).

**Result:** The Threshold Classes window for the selected threshold class type appears.



- 3 Choose File → New.

**Result:** A Skillset Threshold Class Properties property page appears.

The screenshot shows a dialog box titled "Skillset Threshold Class Properties" with a "General" tab. The dialog contains the following elements:

- A text field labeled "Threshold Class:".
- A dropdown menu labeled "Add Threshold:" with an "Add" button to its right.
- A table with the following columns: "Name", "Type", "Level 1", and "Level 2". The table is currently empty.
- A "Remove" button located below the table.
- A section labeled "Selected Threshold:" containing:
  - A text field for the name.
  - A "Type:" label followed by a text field.
  - A "Level 1:" label followed by a text field.
  - A "Level 2:" label followed by a text field.
- At the bottom, there are three buttons: "Save", "Cancel", and "Help".

- 4 Enter the threshold class name.
- 5 Continue with the following procedure to add thresholds to a threshold class.

## To add a threshold

- 1 From the Add Threshold drop-down list, select the statistic for which you want to define thresholds.
  - 2 Click Add.
- Result:** The new statistic is added to the list of thresholds.
- 3 Enter information into the following boxes:

**Level 1:** For a display threshold, enter the value for the low end of the normal range. For a pegging threshold, enter the cut-off value for this statistic.

**Level 2:** Display thresholds only. Enter the value for the high end of the normal range.

- 4 Repeat steps 1 to 3 for each statistic for which you want to define thresholds.
- 5 Click Save.

**Result:** The property page closes and the new threshold class appears in the Thresholds Classes window.

- 6 To return to the SMI window, choose File → Close.

## Other procedures for threshold classes

### To rename a threshold class or add, delete, or change thresholds

**Note:** You cannot rename a threshold class if it is currently assigned to any objects.

From the Threshold Classes window, select the threshold class you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

### To preview a list of threshold classes

From the Threshold Classes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To print a list of threshold classes

From the Threshold Classes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

### To delete threshold classes

**Note:** You cannot delete a threshold class if it is currently assigned to any objects.

From the Threshold Classes window, select the threshold class and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

# Thresholds

## Agent thresholds

### Active

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Active state. Agents are in active state when they are handling a call on their Incalls key.

### Break

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Break state. An agent goes into Break state after each call if his or her call presentation class has the break option enabled.

### Busy

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Busy state.

### Call Present

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Call Present state. Agents are in Call Present state when a call is ringing at their phonesets.

### Consultation

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Consultation state. Agents are in Consultation state when they are in conference with another agent.

### Emergency

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Emergency state. Agents go into Emergency state when they press the Emergency key on their phoneset.

**Idle**

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Idle state. Agents are in Idle state when they are waiting for a call.

**Logout**

**Description:** Display

**Type:** Defines upper- and low-level thresholds for the Logout state.

**Not Ready**

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Not Ready state. Agents go into Not Ready state when they press the Not Ready key.

**On Hold**

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Hold state. Agents go into Hold state when they place a call on hold.

**Reserve**

**Type:** Display

**Description:** Network and NACD options only. Defines upper- and low-level thresholds for the Reserve state. Agents go into Reserve state when they are reserved for a network call.

**Walkaway**

**Type:** Display

**Description:** Defines upper- and low-level thresholds for the Walkaway state.

**Application thresholds****%Abandoned\_Aft\_Threshold**

**Type:** Display

**Description:** The percentage of calls abandoned for an application that are abandoned after the service level threshold.

**%\_Calls\_Abandoned****Type:** Display**Description:** The percentage of calls offered for an application that are abandoned.**%Service Level****Type:** Display**Description:** The percentage of incoming calls answered within the period specified in the threshold class associated with this application.**Average\_Abandon\_Delay****Type:** Display**Description:** The average wait experienced by calls that were abandoned for an application.**Average\_Answer\_Delay****Type:** Display**Description:** The average wait experienced by calls that were answered for an application.**Calls Abandoned****Type:** Display**Description:** The number of calls abandoned for an application.**Calls Abandoned Delay****Type:** Display**Description:** The average wait experienced by calls that were abandoned for an application.**Calls Abdnnd Aft Threshold****Type:** Display**Description:** The number of calls abandoned for an application after experiencing a delay greater than or equal to the service level for the application.

**Calls Answd Aft Threshold**

**Type:** Display

**Description:** The number of calls answered for an application after experiencing a delay greater than or equal to the service level for the application.

**Calls Answd Dly At Skillset**

**Type:** Display

**Description:** The delay experienced by all calls from the time the call is first queued against the first skillset until it is answered.

**Calls Answered**

**Type:** Display

**Description:** The number of calls answered for an application.

**Calls Answered Delay**

**Type:** Display

**Description:** The total wait experienced by all calls answered for an application.

**Calls Given Terminate**

**Type:** Display

**Description:** The number of calls terminated with one of the following treatments:

- given force busy, force overflow, force disconnect, route to, or default treatment
- reached a non-ISDN trunk while being routed to a remote site
- transferred in an IVR session
- networked out through an NACD queue

**Calls Offered**

**Type:** Display

**Description:** The number of calls offered for an application.

**Calls Waiting**

**Type:** Display

**Description:** The number of calls for an application that are currently waiting to be answered.

**Max Waiting Time**

**Type:** Display

**Description:** The amount of time that the oldest call for an application has been waiting to be answered.

**Network Out Calls**

**Type:** Display

**Description:** Networking option only. The number of outgoing network calls sent from an application.

**Network Out Calls Abandoned**

**Type:** Display

**Description:** Networking option only. The number of outgoing network calls sent by an application and abandoned at destination sites.

**Network Out Calls Abandoned Delay**

**Type:** Display

**Description:** Networking option only. The total delay experienced by all outgoing network calls sent by an application and abandoned at destination sites.

**Network Out Calls Answered**

**Type:** Display

**Description:** Networking option only. The number of outgoing network calls sent by an application and answered by an agent, answered by IVR, or given termination treatment at destination sites.

**Network Out Calls Answered Delay**

**Type:** Display

**Description:** Networking option only. The total wait experienced by all outgoing network calls sent by an application and answered by an agent, answered by IVR, or given termination treatment at the destination sites.

**Network Out Calls Waiting**

**Type:** Display

**Description:** Networking option only. The number of outgoing network calls sent by an application that are currently in a waiting state.

**Service Level Threshold**

**Type:** Pegging

**Description:** The number of seconds specified in your service level objective for this application. For example, if your service level objective is “80 percent of calls are answered within 20 seconds,” enter 20 here.

**ShortCall**

**Type:** Pegging

**Description:** The length, in seconds, of a short call for this application.

**Waiting Time**

**Type:** Display

**Description:** The total wait experienced by all calls for an application that are currently waiting.

**IVR ACD-DN real-time display thresholds****%Srv Level\_for\_Answd\_Calls**

**Type:** Display

**Description:** The percentage of incoming calls answered within the period specified in the threshold class associated with this IVR ACD-DN.

**Average\_Answer\_Delay\_IVR**

**Type:** Display

**Description:** The average wait experienced by calls that were answered for an application.

**Calls Answered**

**Type:** Display

**Description:** The number of calls answered by this IVR queue.

**Calls Answd Aft Threshold**

**Type:** Display

**Description:** The number of IVR calls answered that experienced a delay greater than or equal to the service level threshold for the threshold class to which the IVR ACD-DN belongs.

**Calls Answered Delay**

**Type:** Display

**Description:** The total wait experienced by all IVR calls answered.

**Calls Not Treated**

**Type:** Display

**Description:** The number of calls offered for an application.

**Calls Not Treated After Threshold**

**Type:** Display

**Description:** The number of IVR calls abandoned or pulled back while waiting in an IVR queue that experienced a delay greater than or equal to the service level threshold for the threshold class to which the IVR ACD-DN belongs.

**Calls Not Treated Delay**

**Description:** The total delay experienced by all IVR calls that were abandoned or pulled back from an IVR queue.

**Calls Waiting**

**Description:** The number of calls that are currently waiting in this IVR queue.

**Service Level Threshold**

**Type:** Pegging

**Description:** The number of seconds specified in your service level objective for this IVR ACD-DN. For example, if your service level objective is “80 percent of calls are answered within 20 seconds,” enter 20 here.

**ShortCall**

**Type:** Pegging

**Description:** The length of a short call, in seconds, for this IVR ACD-DN.

## Nodal thresholds

### Calls Answered

**Type:** Display

**Description:** The number of calls answered at this site.

### Calls Offered

**Type:** Display

**Description:** The number of calls offered at this site.

### Calls Waiting

**Type:** Display

**Description:** The number of calls waiting at this site.

### Network In Calls Answered

**Type:** Display

**Description:** Networking option only. The number of incoming network calls answered at this site.

### Network In Calls Offered

**Type:** Display

**Description:** Networking option only. The number of incoming network calls offered to this site.

### Network Calls Waiting

**Type:** Display

**Description:** Networking option only. The number of incoming network calls currently waiting to be answered.

## Route thresholds

### All Trunks Busy Time

**Type:** Display

**Description:** The total time that a route is in an All Trunks Busy state.

**Service Level Threshold**

**Type:** Pegging

**Description:** The number of seconds specified in your service level objective for this route. For example, if your service level objective is “80 percent of calls are answered within 20 seconds,” enter 20 here.

**Short Call**

**Type:** Pegging

**Description:** The length of a short call, in seconds, for this route.

**Skillset thresholds****%Service Level for Ans Calls**

**Type:** Display

**Description:** The percentage of answered calls answered within the period defined in the threshold class for this skillset.

**Agent Available**

**Type:** Display

**Description:** The number of agents currently in Waiting state.

**Agent In Service**

**Type:** Display

**Description:** The number of agents assigned to a skillset who are currently logged on.

**Agent Not Ready**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently in Not Ready state.

**Agents On ACD-DN Call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling ACD calls.

**Agent On DN call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling a DN call.

**Agent on In call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling a Symposium Call Center Server call.

**Agents On NACD-DN Call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling networked ACD calls.

**Agents On Network Call**

**Type:** Display

**Description:** Networking option only. The number of agents logged on for a skillset who are currently handling network calls.

**Agents On Other Skillset Call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling calls for skillsets other than this skillset.

**Notes:**

- Agents can be assigned to multiple skillsets.
- Other skillsets can be local skillsets designed specifically for call handing at your location, or system skillsets that can be assigned from any site. An example of a system skillset is Agent Queue To.

**Agents On This Skillset Call**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are currently handling a call for this skillset.

**Agent Unavailable**

**Type:** Display

**Description:** The number of agents logged on for a skillset who are unavailable to take calls.

**Average\_Answer\_Delay\_S**

**Type:** Display

**Description:** The average wait experienced by calls answered for a skillset, from the time they were queued to the skillset to the time they were answered.

**Calls Answd Aft Threshold**

**Type:** Display

**Description:** The number of calls answered for a skillset after experiencing a delay greater than or equal to the service level for the skillset.

**Calls Answered**

**Type:** Display

**Description:** The number of calls answered for a skillset.

**Calls Waiting**

**Type:** Display

**Description:** The number of calls for a skillset that are currently waiting to be answered.

**Expected Wait Time**

**Type:** Display

**Description:** The total time a new call is expected to wait before being answered by an agent with the required skillset.

**Longest Wait Since Last Call**

**Type:** Display

**Description:** The longest idle time for all agents who are currently waiting to answer calls for a skillset. This idle timer is reset whenever a call is answered. For example, the longest waiting time since the last call is currently 14 seconds; Mary and Jim have been idle 14 and 10 seconds, respectively. A call arrives and is presented to Mary. Her idle timer is set to 0, and the longest wait time is reset to 10.

**Note:** This statistic includes time that agents are in Not Ready state.

**Longest Wait Since Login**

**Type:** Display

**Description:** The longest waiting time of all idle agents who are currently waiting to answer calls for a skillset. This idle timer is reset when the agent logs on to the skillset. Waiting time is incremented until the agent answers a call. After the call ends, waiting time is incremented until the agent answers the next call.

**Max Wait Time**

**Type:** Display

**Description:** The amount of time that the oldest call for an application has been waiting to be answered.

**Network Calls Answered**

**Type:** Display

**Description:** Networking option only. The number of network calls answered by all agents with this skillset.

**Network Calls Waiting**

**Type:** Display

**Description:** Networking option only. The number of network calls currently waiting at this skillset.

**Service Level Threshold**

**Type:** Pegging

**Description:** The number of seconds specified in your service level objective for this skillset. For example, if your service level objective is “80 percent of calls are answered within 20 seconds,” enter 20 here.

**ShortCall**

**Type:** Pegging

**Description:** The length of a short call, in seconds, for this skillset.

**Total Answered Delay**

**Type:** Display

**Description:** The total wait experienced by all calls answered for a skillset from the time they were queued to the skillset until they were answered.

**Total Wait Time**

**Type:** Display

**Description:** The total waiting time for all calls for a skillset that are currently waiting.

# Chapter 5

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## Working with displays and statistics

### In this chapter

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# Section A: Real-time displays

## In this section

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# Overview

## Introduction

Real-time displays provide up-to-date statistics for your call center and its resources. You can use these statistics to monitor your call center and determine its effectiveness. The Symposium Call Center Server provides you with real-time statistics such as

- agents available or unavailable in a skillset
- calls waiting
- expected waiting time

To use the real-time statistics feature of the Symposium Call Center Server, you must configure real-time statistics collection and create real-time displays.

## Types of real-time displays

The following types of real-time displays are available:

- agent
- application
- IVR
- route
- skillset
- nodal

## Standard display definitions

The Symposium Call Center Server ships with a set of default, or standard, real-time display definitions. The contents of these real-time display definitions are predefined and cannot be modified. Standard real-time display definitions are stored on the server.

## **User-defined display definitions**

You create user-defined definitions. You can modify these definitions at any time. They are stored on the client PC.

## Types of statistics

The following types of real-time call processing statistics are available:

- application statistics
- skillset statistics
- agent statistics
- IVR statistics
- route statistics
- nodal statistics

You can choose which types of real-time statistics you want to display on real-time displays. For more information, see “Configuring real-time statistics collection” on page 157.

## Working with real-time displays

### Configuring real-time statistics collection

You must configure the server to collect the types of statistics you want to include in your real-time displays. If the server does not collect application statistics, for example, you cannot open the application real-time displays.

When you configure real-time statistics collection, you choose

- the types of statistics to be collected
- viewing modes for the different types of statistics (moving window or interval-to-date)
- the start time and length of the interval in which real-time statistics are accumulated
- the frequency with which real-time statistics are refreshed

### Managing formulas

You can use formulas to create customized real-time statistics fields for use in your real-time displays. To create formulas, you combine existing fields using mathematical operators.

### **Creating real-time displays**

You can create user-defined real-time display definitions to display the type of information you need to monitor your call center. For more information, see the *Supervisor's Guide*.

### **Managing real-time displays**

You can change, print a list of, or delete user-defined real-time display definitions. For more information, see the *Supervisor's Guide*.

### **Using real-time displays**

You can view, sort, and print real-time displays. Supervisors can also filter agent and skillset real-time displays to show only their agents, all agents except their agents, or all agents. For more information, see the *Supervisor's Guide*.

## **Real-time displays and agent keys**

Agents should not use the following keys on their phonesets:

- Hotline
- Private line
- Voice call
- Dial Intercom

The use of these keys results in incorrect agent statuses on the real-time displays.

## **Viewing modes**

### **Moving window mode**

In moving window mode, statistics shown represent the last ten minutes of system activity.

### **Interval-to-date mode**

In interval-to-date mode, statistics are collected only for the current interval. When the interval is over, data fields initialize to zero and collection begins for the next interval.

## Refresh rates

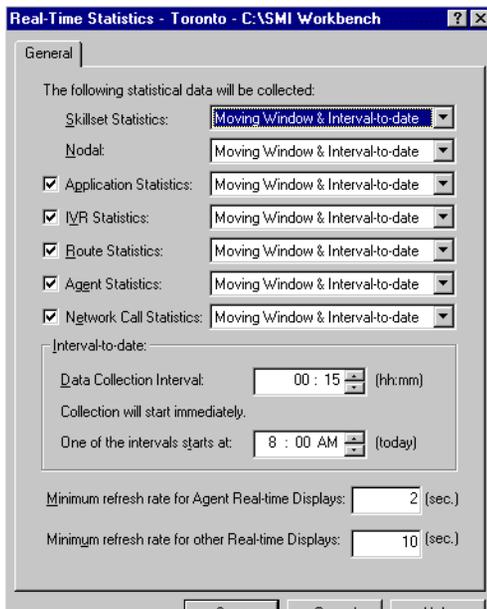
The minimum refresh rate for the collection of real-time statistics data is applied to real-time displays across the entire system. A unique refresh rate can be defined for each individual real-time display, but it cannot be less than the minimum refresh rate defined for the entire system.

# Configuring real-time statistics collection

## To configure real-time statistics collection

- 1 From the System Administration window, choose Reports & Displays → Statistics Configuration → Real-Time Statistics.

**Result:** The Real-Time Statistics property sheet appears.



- 2 On the General property page, make the desired changes to the general properties. You can change the following properties:

**Skillset Statistics:** The mode for skillset statistics collection. (For more information about modes, see “Overview” on page 152.)

**Nodal:** The mode for nodal statistics collection.

**Application Statistics:** Whether to collect application statistics, and the mode for application statistics collection.

**IVR Statistics:** Whether to collect IVR statistics, and the mode for IVR statistics collection.

**Route Statistics:** Whether to collect route statistics, and the mode for route statistics collection.

**Agent Statistics:** Whether to collect agent statistics, and the mode for agent statistics collection.

**Network Call Statistics:** Whether to collect statistics for the network.

**Data Collection Interval:** The length of the period in which real-time statistics are accumulated. To ensure that intervals start at the same time each day, interval lengths can be one of the following: 15 minutes, 30 minutes, 45 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 6 hours, 8 hours, 12 hours, and 24 hours.

**One of the intervals starts at:** The start time for one of the intervals during a day. The system uses this information to calculate the start times of all other intervals.

For example, a system administrator is modifying the real-time statistics data at 3:00 p.m. He specifies four hours as the interval duration. Since the agents' shifts begin at 9:00 a.m., he wants one of the intervals to start every day at that time. He enters 9:00 a.m. as the value for this field. The system automatically calculates the start time for all other intervals to be 1:00 p.m., 5:00 p.m., 9:00 p.m., and 1:00 a.m. The change takes effect immediately, so at 5:00 p.m. the next interval begins.

**Note:** The data collection interval and interval start time specified here apply to all real-time displays that use interval-to-date mode, at all sites in your network. If the sites are in different time zones, the start time is converted to local time at each site. For example, if the administrator at Toronto configures the interval start time to be 3:00 p.m., that interval start time is used for all sites. Since Chicago is in a different time zone, the start time at Chicago is 4:00 p.m.

**Minimum refresh rate for Agent Real-time Displays:** The minimum refresh rate for agent real-time displays.

**Minimum refresh rate for other Real-time Displays:** The minimum refresh rate for displays other than agent displays.

- 3 Click Save.

**Note:** Nodal and skillset statistics are automatically collected by the system.

# Creating formulas

## Introduction

Use formulas to create custom real-time statistics fields by combining existing statistics fields with mathematical operators. For example, you can create a customized formula for calculating the service level.

You can select and use these custom fields in your real-time displays. You can also define display thresholds for customized formulas.

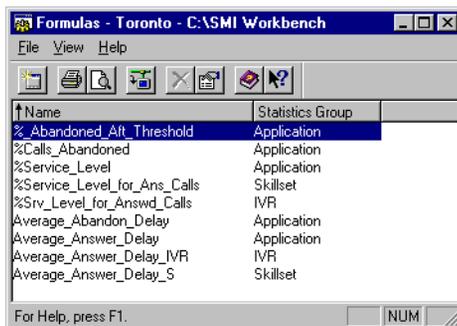
### ATTENTION

Custom fields created by using formulas cannot be used in reports.

## To create formulas

- 1 From the SMI window, choose Reports & Displays → Statistics Configuration → Formulas.

**Result:** The Formulas window appears.



- 2 Choose File → New.

- 3 Choose the statistics class (Agent, Skillset, Application, or Nodal) that you want to use.

**Result:** The Formula Properties property sheet appears.

- 4 Enter information into the following fields:

**Formula Name:** The name of your formula.

**Comment:** Optional. Additional information about the formula.

**Definition:** The definition of the formula. To add a variable, select it from the Column Name box. To add numbers or arithmetic operators to the definition, click on them. For example, to create a customized formula for service level, you might enter the following:

**Calls Answered – Calls Answered Aft Threshold / Calls Answered**

The definition can be up to 250 characters long.

**Notes:**

- When you select a variable, it appears in the Definition field, with a percent symbol (%) preceding it. The percent symbol identifies it as a variable; the symbol is not an operator.
  - You cannot use all operations buttons at all times. Operations buttons that are not available appear dimmed.
  - When you click the Max or Min button, an open bracket is automatically inserted.
- 5 Click Save.
- Result:** The new formula is added to the list in the Formulas window.
- 6 To return to the SMI window, choose File → Close.

# Other procedures for formulas

## To change a formula

**Note:** You cannot change standard formulas.

From the Formulas window, select the formula and choose File → Open.

For step-by-step instructions, press F1 to access the online Help.

## To print a formula

From the Formulas window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete a formula

**Note:** You cannot delete standard formulas.

From the Formulas window, select the formula and choose File → Delete.

For step-by-step instructions, click F1 to access the online Help.



### CAUTION

---

#### **Risk of data loss**

The formula you are deleting might be used in existing real-time displays. If you delete a formula that is used in a display, then columns containing the formula appear as blank.

## Section B: Managing historical statistics

### In this section

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# Overview of historical statistics collection

## Introduction

The Symposium Call Center Server enables you to report on such historical statistics as

- the number of calls an agent took during a specified period
- the number of calls that abandoned before an agent became available
- (optionally) call events

However, to do so, you must configure the server to collect these statistics.

**Note:** Call-by-call statistics are available only if you purchased the call-by-call statistics option, and the option has been activated using a keycode. The call-by-call statistics option is not available on a 2 Gbyte system.

## Configuring historical statistics collection

When you configure historical statistics collection, you can choose

- the types of statistics to be collected
- the values for system parameters, such as number of agent positions, number of skillsets, and number of calls per hour
- how long historical statistics are stored on your system
- the applications for which call-by-call statistics are collected

The statistics are stored in the system database. The Historical Statistics Configuration window estimates required disk space for the options you have selected, and displays the amount of disk space available.

## Types of statistics

When you configure historical statistics, you choose the types of statistics for which you want to record statistics. The server can collect the following types of statistics:

- activity code statistics

- agent performance statistics
- agent by application statistics
- agent by skillset statistics
- application statistics (see below)
- CDN statistics
- DNIS statistics
- IVR statistics
- IVR port statistics
- music/RAN route statistics
- route statistics
- skillset statistics
- trunk statistics
- agent login/logout statistics
- IVR port login/logout statistics
- call-by-call statistics

To manage your disk space usage, you can vary the number and types of statistics you collect.

# Configuring historical statistics collection

## Introduction

Use this procedure to configure the following options for historical statistics collection:

- the types of statistics to be collected
- the values for system parameters, such as number of agent positions, number of skillsets, and number of calls per hour
- how long historical statistics are stored on your system
- the applications for which call-by-call statistics are collected

This procedure also shows you how to calculate the amount of disk space required by your selected configuration.

## Enabling network call-by-call statistics collection

To enable the collection of network call-by-call statistics for an application, configure the application for call-by-call statistics collection at the source site. Statistics will be collected for all calls entering this site that are routed to a remote site (regardless of how call-by-call statistics collection is configured at the remote site). If you change the call-by-call statistics collection option at the source site, the change is effective only for new calls; calls that already in the network are unaffected.

**Note:** Ensure you have adequate resources available at your site to enable you to collect network call-by-call statistics.

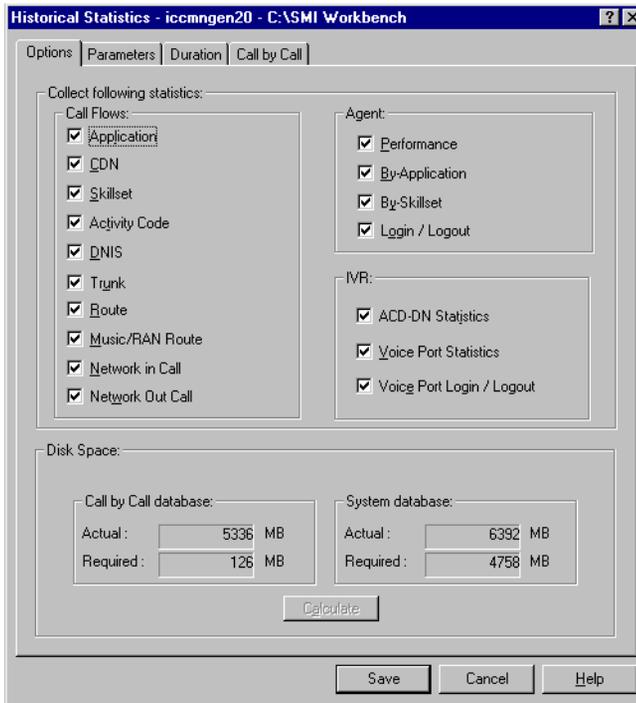
## Removal of expired statistics

Each day, the server deletes any historical data that has exceeded the allowable age for data of its type (defined on the Duration property page of the Historical Statistics Configuration window). If the size of the statistics database exceeds the size configured during installation, then the server deletes the oldest unexpired data to provide space for new data.

## To configure historical statistics collection

- 1 From the SMI window, choose Reports & Displays → Statistics Configuration → Historical Statistics.

**Result:** The Historical Statistics property sheet appears.



- 2 In the Call Flows box, check the call flow statistics that you want to collect, and clear those that you do not want to collect. You can select the following options:

**Application:** To collect application statistics, such as calls abandoned and calls answered for an application.

**CDN:** To collect CDN statistics, such as calls offered to a CDN and calls terminated on a CDN.

**Skillset:** To collect skillset statistics, such as active time, calls answered, and calls answered after threshold for a skillset.

**Activity Code:** To collect activity code activity statistics, such as total call time charged to an activity code.

**DNIS:** To collect DNIS statistics, such as calls answered and abandoned for a DNIS number.

**Trunk:** To collect trunk statistics, such as skillset calls abandoned while waiting on a trunk or skillset calls answered.

**Route:** To collect route statistics, such as all trunks busy (ATB) time.

**Music/RAN Route:** To collect RAN and music route statistics, such as the number of times a RAN/music route was accessed, and the total amount of time it was in use.

**Network in Call:** To collect incoming network call statistics, such as the number of calls answered at this site that originated from an application at another site.

**Network Out Call:** To collect outgoing network call statistics, such as the number of calls originating from an application at this site that were answered at another site.

**Note:** Options selected here apply to all applications defined in the system database. They cannot be applied to a selected group of applications.

- 3 In the Agent box, check the agent statistics that you want to collect and clear those that you do not want to collect. You can choose to collect the following types of statistics:

**Performance:** To collect agent performance statistics, such as number of ACD calls answered, conferenced, and transferred.

**By-Application:** To collect statistics, by agent, for individual applications. Statistics available include calls answered for the application and agent talk time for the application.

**By-Skillset:** To collect statistics, by agent, for individual skillsets. Statistics available include calls answered and short calls answered.

**Login/Logout:** To collect agent logon and logoff statistics.

- 4 In the IVR box, check the IVR statistics that you want to collect, and clear those that you do not want to collect. You can choose to collect the following types of statistics:

**ACD-DN statistics:** To collect IVR queue statistics, such as calls offered, answered, and not treated.

**Voice Port Statistics:** To collect voice port statistics, such as calls answered, conferenced, and transferred.

**Voice Port Login / Logout:** To collect statistics, by agent, for individual skillsets. Statistics available include calls answered and short calls answered.

- 5 Click the Parameters tab to configure system parameters.

**Result:** The Parameters property page appears.

Parameter Name	Value
Active Agents	NA
Agent Positions (phoneset)	200
Skillsets	50
Calls per Hour	100
DNISs	500
CDNs	15
IVR ACD-DNs	10
Activity Codes	250
Agent Events per Day	32
Routes	128
RAN Routes	25
Music Routes	25
Trunks	300
Applications	10
Nodes	30
IVR Ports	384

Selected Parameter: Active Agents

Configured Value: NA

Purchased Value: 1500

Measured Value: NA

System Value: NA

Disk Space

Database	Actual (MB)	Required (MB)
Call by Call database	5336	126
System database	6392	4758

Buttons: Save, Cancel, Help

For each parameter, this property page contains the following information:

**Configured Value:** The number used to calculate the required database size (for example, estimated number of activity codes).

**Purchased Value:** The maximum number you can configure (this number is controlled by keycodes).

**Measured Value:** The number currently defined in the system.

**System Value:** The maximum number that can be defined in the system, if all available options are installed.

**Note:** The measured value for skillsets includes the four system skillsets. The measured value for applications includes the system applications. The

number varies depending on the options installed on your server, but it can include Master\_Script, ACD\_DN\_Application, NACD\_DN\_Application, Network\_Script, and System\_Application.

- 6 Click the Parameter Name for which you want to change the configured value. You can change the following parameters:

**Active Agents:** Purchased Value is the number of agents logged on at any time. You cannot change the configured value for this parameter. Measured Value and System Value are not applicable to this parameter.

**Agent Positions (phoneset):** The number of phonesets defined in the system. Purchased Value is not applicable to this parameter; the number of phonesets is not controlled by a license option.

**Skillsets:** The number of skillsets defined in the system. Allow for the four system skillsets. For example, if you want to define 25 skillsets, then enter 29 as your configured value.

**Calls per Hour:** The estimated number of calls arriving at the call center within an hour. Measured Value is not applicable to this parameter, as you do not configure the number of calls allowed per hour.

**DNISs:** The number of DNISs defined in the system.

**CDNs:** The number of CDNs defined in the system.

**IVR ACD-DNs:** The number of IVR queues configured on the system.

**Activity Codes:** The number of activity codes defined in the system. Allow for the two default activity codes when you configure this value.

**Agent Events per Day:** The number of agent events (logon, logoff, walkaway, return from walkaway) that occur in one day. Measured Value is not applicable to this parameter, as you do not configure the number of events allowed per day. This estimate is used to calculate usage of disk space.

**Routes:** The number of routes configured on the system.

**RAN Routes:** The number of RAN routes defined in the system.

**Music Routes:** The number of music routes defined in the system.

**Trunks:** The number of trunks configured on the system.

**Applications:** The number of applications defined in the system. Based on the options installed on your server, up to five system applications might be installed. Allow for these applications when you configure this value.

**Nodes:** The number of nodes in the network.

**IVR Ports:** The number of voice ports configured on the system.

**Note:** The values you enter here do not affect the size of the database. However, they do control the number of entities you can add to the database.

- 7 In the Selected Parameter group box, change the Configured Value as required.
- 8 Click the Duration tab to define the storage duration.

The screenshot shows a dialog box titled "Historical Statistics - Toronto - C:\SMI Workbench" with a "Duration" tab selected. The dialog is divided into two main sections: "Determine collection period for the following statistics" and "Disk Space".

**Determine collection period for the following statistics:**

- Interval: 20 days
- Daily: 31 days
- Weekly: 26 weeks
- Monthly: 36 months
- IVR Voice Port: 3 days
- Agent login and logout: 3 days
- First business day of the week: Sunday
- Length of business day: 8 hours
- Business week contains: 5 days
- Call by call: 6 days

**Disk Space:**

Database Type	Actual (MB)	Required (MB)
Call by Call database	5797	10206
System database	6836	5984

Buttons at the bottom: Save, Cancel, Help, and a Calculate button above them.

- 9 Enter a value for each of the following collection periods:

**Interval:** The number of days that interval statistics are stored by the system.

**Daily:** The number of days that daily statistics are stored by the system.

**Weekly:** The number of weeks that weekly statistics are stored by the system.

**Monthly:** The number of months that monthly statistics are stored by the system.

**IVR Voice Port:** The number of days IVR voice port logon and logoff statistics are stored by the system.

**Agent login and logout:** The number of days that agent logon and logoff statistics are stored by the system.

**First business day of the week:** The day defined as the first business day of the week. Weekly statistics are cumulated automatically at the beginning of the day designated as the first business day.

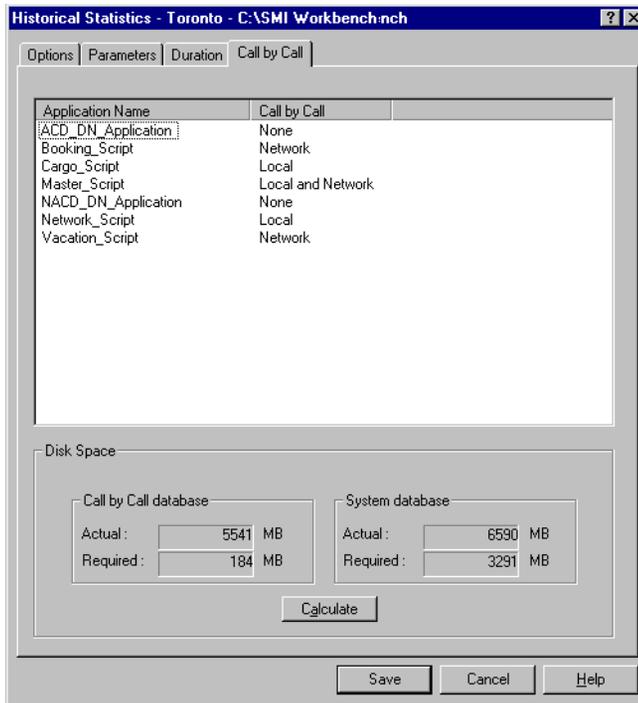
**Length of business day:** The number of hours per business day that the system collects historical statistics.

**Business week contains:** The number of business days per week that the system collects historical statistics.

**Call by call:** The number of days call-by-call statistics are stored by the system. In a Symposium Call Center Server network, use the same value for all servers in the network.

**Note:** These values are used to calculate the size of the database. They do not affect statistics collection.

- 10 Click the Call by Call tab to select applications for call-by-call statistics collection.



The list contains all applications defined on your server. You can choose whether to collect call-by-call statistics for local calls, network calls, both, or neither.

- 11 To change the call-by-call statistics collection method for an application, click in the Call by Call column beside the application, and select one of the following options:
- **Local**—For calls originating on the local server, collect call event data for local events. Data collection ends when the call terminates or is routed out to another site. Local call data is stored on the local server.
  - **Network**—For outbound network calls, collect call-by-call data for events at the destination site. (Local call-by-call data is not collected.) Network call-by-call data is stored on the NCC.
  - **Local and Network**—For all calls, collect call event data for both local events and network events (events occurring at the destination site).

Local event data is stored on the local server, and network event data is stored at the NCC.

- **None**

### **ATTENTION**

---

The collection of network call-by-call statistics uses network resources. Before selecting the Network or Local and Network options, contact the administrator at the NCC to ensure that the network has been engineered to support the collection of network call-by-call statistics.

**Note:** This change does not take effect until it has been propagated to all sites in the network. This can take several minutes.

- 12** To determine the disk space requirements of your selected configuration, click Calculate.
- 13** The Required fields are updated to show the disk space requirement of the selected configuration. The Actual fields show the disk space available.
- 14** Click Save.

**Note:** Save is enabled only if the Required value (the disk space required by the selected configuration) is less than the Actual value (the disk space available). If Save is not enabled, you must modify your configuration.

# Chapter 6

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## Managing skillsets and call presentation

### In this chapter

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# Overview of skillsets and call presentation

## Introduction

This chapter provides instructions for defining and configuring call presentation classes and skillsets. These features, in conjunction with scripts, determine how and when calls are presented to agents. To understand the operation of your call center, you must understand how these features function.

## Skillsets

A skillset is a set of capabilities necessary to answer a specific type of call. Skillsets are the basic building blocks of skill-based routing. They are used to match callers with the agents who can best meet their needs.

## Call presentation

Call presentation is the matching of available agents with calls in the queue. The order in which calls are presented is determined by the following parameters:

- call priority, as specified in the script
- call age
- call source (local calls or network)

The agent to which a call is presented is determined by the following parameters:

- agents' priority for the skillset to which the call is being presented
- agents' idle time

# Section A: Managing call presentation classes

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# Overview of call presentation classes

## Introduction

Call presentation is the matching of available agents with calls in the queue. How the server presents calls to agents varies depending on the call presentation class to which the agent belongs. In your agent call presentation classes, you can configure the following options.

## Presentation of calls to agents

You can configure how calls are presented to an agent phoneset. If a call is not answered after a specific length of time, it can

- be returned to the skillset queue
- remain queued to the agent phoneset until it is answered or abandoned

## Other presentation options

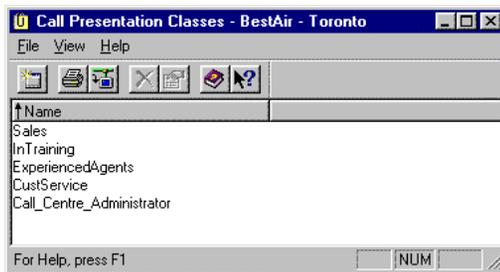
- You can choose whether agents can place directory number (DN) calls on hold to answer incoming calls.
- You can choose whether agent phonesets can show the Reserve state to indicate that the agent is reserved for a network call. To enable the network call to be successfully transferred, agents in reserved state should not log off or press the Not Ready key.

# Adding call presentation classes

## To add a call presentation class

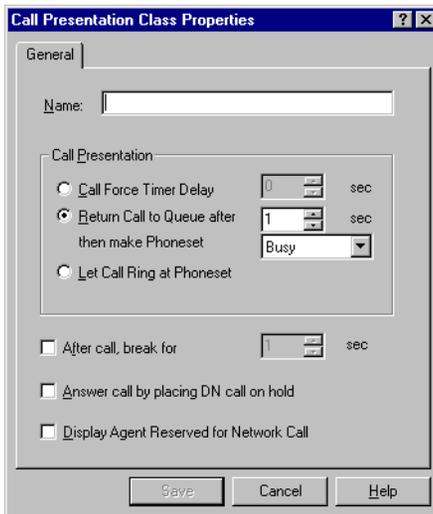
- 1 From the SMI window, choose Call Flow Administration → Call Presentation classes.

**Result:** The Call Presentation Classes window opens.



- 2 Choose File → New.

**Result:** The Call Presentation Class Properties property sheet appears.



- 3 Enter information into the following boxes:

**Name:** The name of the call presentation class as it will appear in

drop-down lists and on reports.

**Call Presentation:** Select one of the following call presentation options:

- **Call Force Timer Delay**—The call is automatically answered at the agent phoneset after the number of seconds you specify. Select this option if you are using a Computer Telephony Integration (CTI) application that provides screen pops.
- **Return Call to Queue after**—The call is returned to the queue if not answered within the time you specify. You can also choose the mode in which the phoneset is placed after the call is returned to the queue.
- **Let Call Ring at Phoneset**—The call rings at the phoneset until it is answered or abandoned.

**After call, break for:** Puts the agent in break state for the amount of time you specify, after the end of a call. The agent can use this time to complete any processing related to the finished call.

**Answer call by placing DN call on hold:** Allows agents to put DN calls on hold to answer incoming Symposium Call Center Server calls.

**Display Agent Reserved for Network Call:** Displays the message “Reserved” on the agent’s phoneset display after the server reserves the agent for a network call.

- 4 Click Save.
- 5 To return to the SMI window, choose File → Close.

# Other procedures for call presentation classes

## Introduction

After you define a call presentation class, you can change it or delete it. You can also print a list of call presentation classes.

## To change call presentation class properties

From the Call Presentation Classes window, select the call presentation class you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To preview a list of call presentation classes

From the Call Presentation Classes window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of call presentation classes

From the Call Presentation Classes window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To delete call presentation classes

**Note:** You cannot delete a call presentation class that is assigned to an agent.

From the Call Presentation Classes window, select the call presentation class you want to delete and choose File → Delete.



## Section B: Skillsets and skill-based routing

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# Skillsets

## Introduction

A skillset is a set of capabilities necessary to answer a specific type of call. Skillsets are the basic building blocks of skill-based routing. They are used to match callers with the agents who can best meet their needs.

You can assign agents to skillsets by two methods:

- the agent's Skillsets property page (see "To assign skillsets" on page 227)
- agent to skillset assignments (see Chapter 10, "Managing agent to skillset assignments")

## Examples of skillsets

BestAir has several different skillsets:

- **Bookings:** Agents who can accept and change bookings, and provide schedule and rate information.
- **Shipping:** Agents who can arrange for shipment of goods. Additional skillsets include agents who specialize in shipment of perishable food products and hazardous goods, as well as international shipments.
- **Cargo Tracing:** Agents who specialize in the tracing of shipments and personal luggage.
- **BestAir Travel Club:** Agents who can provide information about BestAir Travel Club benefits and air miles.
- **Vacations:** Agents who can book vacation packages. Additional skillsets specialize in **American, European, Asian, and Pacific** vacations.

James Jones is a booking agent with BestAir. He is a member of the Bookings skillset. Through training courses, James has become familiar with the company's vacation package offerings. After completing the courses, he was assigned to the Vacations skillset as well. Through additional courses, travel, and reading, James has developed additional expertise in European travel issues. He is now also a member of the European skillset.

# Skill-based routing

## Introduction

Skill-based routing uses skillsets to match callers with the agents who can best meet their needs.

## Example

Sandra Smith wants to book a vacation to Britain. She has called several airlines to obtain information for the trip, including

- schedules and fares information
- a British Rail pass
- a list of bed and breakfasts in the cities she is planning to visit
- information about tour packages

All of the airlines were able to provide her with schedules and fares, but most were not able to provide her with the general travel information that she wanted. They referred her to the British embassy.

However, when she called BestAir, her call was routed to the European skillset and presented to James Jones. James was able to give her information about the British Rail pass, along with a list of bed and breakfasts, and a description of the tour packages that are available.

# Calls in queue

## Introduction

The server must make the following decisions when presenting calls:

- If multiple agents are available, to which agent will it present the call?
- If multiple calls are waiting, which call will it present first?

## Choosing an agent

If two agents are available to answer an incoming call, the server presents the call to the agent with the highest priority for the skillset to which the call is queued. Skillset priority is based on the agent's skill level for a skillset. An agent with a higher skill level is assigned a higher priority for a skillset, and an agent with a lower skill level is assigned a lower priority. (Priority can range from 1–48.)

If more than one agent has the same priority, the server presents the call to the agent with the greatest idle time. Your administrator can configure the server to base idle time on one of the following:

- total idle time since logon
- idle time since last status change
- idle time since last Symposium Call Center Server or ACD call

### **Example: Skillset priority**

James Jones and Emma Wright are both members of the European skillset. Emma has recently completed training on European vacations and was assigned a priority of 4 for the skillset. However, James has had additional training and experience and, therefore, was assigned a priority of 1 for the skillset.

Both James and Emma are available when a call is queued to the European skillset. Regardless of how long each of them has been idle, the system presents the call to James because he has the highest priority for the European skillset.

**Example: Idle time**

James Jones, Brandon Woo, and Toni Morelli are members of the European skillset. All three have a priority of 1 for that skillset. James Jones has been idle a total of ten minutes since he logged on to the system. Brandon has been idle seven minutes. Toni Morelli has been idle for five minutes. The following events occur:

- 11:10:24 James, Toni, and Brandon are all on calls.
- 11:10:25 Brandon's call ends. Brandon presses Not Ready.
- 11:10:30 Toni's call ends.
- 11:10:40 James' call ends.
- 11:10:45 Brandon presses Not Ready again, to go out of Not Ready state.
- 11:10:60 Call is queued to the European skillset.

The following table summarizes the idle times:

<b>Agent</b>	<b>Idle time since logon</b>	<b>Idle time since last ACD/Symposium Call Center Server call</b>	<b>Idle time since last status change</b>
James	10 minutes	20 seconds	30 seconds
Brandon	7 minutes	35 seconds	15 seconds
Toni	5 minutes	30 seconds	20 seconds

The following table shows how your configuration of idle time preference affects call queuing:

<b>IF Idle time preference is set to</b>	<b>THEN call is presented to</b>
Idle time since logon	James
Idle time since last ACD/Symposium Call Center Server call	Brandon
Idle time since last status change	Toni

## Choosing a call

If two calls are waiting in a skillset queue when an agent for that skillset becomes available, the server selects the call to present based on call priority, call age, and call source. Priority is assigned to calls in the script. If two queued calls have the same priority, the server uses call age and call source to determine which one to present.

You can configure the server to base call age on either

- when the call was received by the server (that is, passed to the server from the switch)
- when the call was added to the skillset queue

Calls with the greatest age are presented to an agent first.

If you are using the networking option, you can give priority to either local calls or network calls, or you can choose not to prioritize calls based on source. If you prioritize local calls, a local call with the same priority (as assigned in the script) as a network call is presented before the network call, regardless of which call entered the queue first. If you prioritize network calls, the network call is presented before the local call.

### Example: Call age preference

The following events occur:

- 11:31:24 Lisa Lanai calls BestAir to book a flight to Switzerland. Her call arrives in the system and is queued to the Bookings skillset. Her call is presented to Rose Chan.
- 11:31:29 Gerda Spitz calls BestAir for information about British package queues. Her call is queued to the European skillset.
- 11:31:31 Lisa mentions that she is interested in vacation packages, so Rose transfers Lisa's call to the European skillset.
- 11:31:37 James Jones, an agent in the European skillset, becomes available, and two calls are in the queue for the European skillset.

The following table summarizes the call ages:

Caller	Time in Bookings queue	Time in European queue	Total call age
Lisa	7 seconds	6 seconds	13 seconds
Gerda	N/A	8 seconds	8 seconds

The following table shows how your call age preference affects call queuing:

IF Idle call age preference is set to	THEN the following call is presented
oldest	Lisa's call
first in queue	Gerda's call

### Example: Call source preference

BestAir has offices in Toronto and Montreal. The European skillset has been set up as a network skillset. Calls queued to the European skillset arrive simultaneously in Toronto and Montreal. Ten seconds after a call arrives, James Jones, a Toronto agent who is a member of the European skillset, becomes available.

The following table shows how your configuration of call source preference affects call queuing:

IF call source preference is set to	THEN the following call is presented
local	Toronto
network	Montreal
neither	the first call queued to the skillset

## **Queuing to a default skillset**

You can define a default skillset. Any calls that are not queued by the end of script execution are automatically queued to this skillset. You can create a separate default skillset for each agent. For example, BestAir has defined Bookings as the default skillset. Calls that have not been queued by the end of the script execution are presented to agents assigned to the Bookings skillset.

# When skillsets go out of service

## Introduction

Skillsets go out of service under the following conditions:

- automatically, when all agents have logged off
- manually, when you change the skillset mode on the Skillset Properties property sheet

Two out-of-service modes are available: transition mode and night service mode.

## Transition mode

Skillsets must be put into transition mode manually from the Skillset Properties property sheet. For example, you can put a skillset into transition mode if a service interruption occurs during the business day, and you want to answer all calls currently waiting in the queue before putting the skillset out of service.

### Example

The computer that stores BestAir's bookings database has gone down. BestAir's information systems staff are attempting to solve the problem, but in the meantime, agents have no information about seats available on any of BestAir's flights. BestAir's call center manager has decided to take manual bookings from all customers who are currently queued for the Bookings skillset. When all waiting calls have been answered, the Bookings skillset will temporarily be put out of service.

To implement this decision, the call center manager puts the Bookings skillset into transition mode.

## Night service mode

Skillsets can be put into night service mode automatically—when all agents have logged off—or manually, from the Skillset Properties property sheet.

In your scripts, you define how calls are handled when a skillset is in night service mode.

**Example**

Bill Bailey calls BestAir at 8:01 p.m. Unfortunately, the office is closed and the Bookings skillset is out of service, in night service mode. Bill hears the following message:

*Thank you for calling BestAir. Our office hours are from 8:00 a.m. to 8:00 p.m. Monday to Friday, and 9:00 a.m. to 6:00 p.m. on Saturdays. Please call back during our regular office hours. Thank you.*

# Tracking call types using activity codes

## Introduction

Agents can assign activity codes to each call that they answer. The system uses activity codes to track the amount of time that is spent on the various types of incoming calls.

## Default activity code

For each skillset, you can define a default activity code, which is used if no other activity code is assigned.

## Example

If James receives a call for the Vacations skillset, he usually does not have to enter an activity code—the default activity code for that skillset is automatically used.

However, BestAir currently has a new ad campaign. Agents must ask all callers to the Vacations skillset the question “How did you hear about us?” Agents use the following activity codes, depending on the response they receive:

457	newspaper
458	radio
459	television

When James answers Sandra’s call, he asks her the question “How did you hear about us?” She says that she saw a newspaper ad. James presses his Activity Code key and dials 457.

As the call proceeds, James discovers that it is a “vacation inquiry” call. He enters the activity code for this type of call (440). BestAir has also defined activity codes to be assigned to schedule inquiries, bookings, and vacation package sales.

**Note:** If the activity codes are defined and named at the server, then the call center supervisor can generate reports on what type of calls are being handled.

# Using threshold classes

## Introduction

A threshold class is a set of options that you can apply to individual skillsets. Threshold classes specify how statistics are treated in reports and real-time displays. For example, you can create a threshold class to define a different short call length and apply it to particular skillsets. (The short call threshold defines the length of a short call for pegging purposes.)

## Example

BestAir has applied a threshold class to the European skillset that has a short call threshold of ten seconds. This means that if a caller hangs up or is disconnected within ten seconds of speaking to an agent assigned to the European skillset, the call is pegged as a short call. In reports, the short call peg count is incremented by one.

For example, Fred Faraday inquires about direct flights to Hamburg. He speaks to Michael Monvale, who tells him that no direct flights are available. Michael adds that BestAir does have flights to Frankfurt and Berlin, and there are frequent shuttles from both of these cities to Hamburg. Fred decides to check around for direct flights, so he thanks Michael and hangs up. The duration of this call was only eight seconds and, therefore, is pegged as a short call.



## Section C: Skillset procedures

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# Adding skillsets

## Prerequisites

Before you configure a new skillset, do the following:

- Define the activity code to be assigned as the default activity code for the skillset if you do not want to use either of the system-defined default activity codes. The system-defined defaults are
  - System\_Default\_Activity\_Code
  - Skillset\_Default\_Activity\_Code

For information on how to define activity codes in the system, see “Adding activity codes” on page 111.

- Define the ACD-DN to which calls for this skillset are directed if the system is not available. For information on how to define ACD-DNs on the switch, refer to the *Symposium, M1, and Voice Processing Guide*.
- Define the threshold class you want to assign to this skillset if you do not want to use the default threshold class. For information on defining threshold classes, see Chapter 4, “Adding threshold classes.”

## Limitations

The application maintains two types of skillsets: local and network. You can define up to 350 skillsets per node. Up to 50 of those skillsets can be network skillsets, which must be created at the Network Control Center (NCC).

## To add a skillset

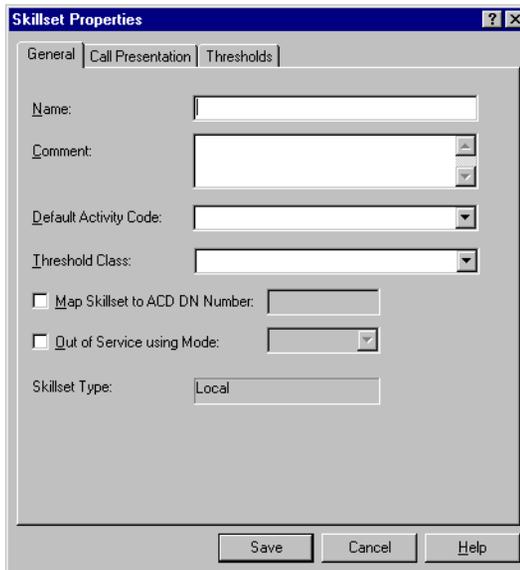
- 1 From the SMI window, choose Call Flow Administration → Skillsets.

**Result:** The Skillsets window opens.



- 2 Choose File → New.

**Result:** The Skillset Properties property sheet appears.



- 3 Complete the General property page by entering information into the following boxes:

**Name:** A unique name for the skillset. Skillset names are not case-sensitive.

**Comment:** Optional. Additional information about the skillset.

**Default Activity Code:** The activity code to be used for calls to this skillset if no activity code is entered by the agent. The activity code must have been defined in the system.

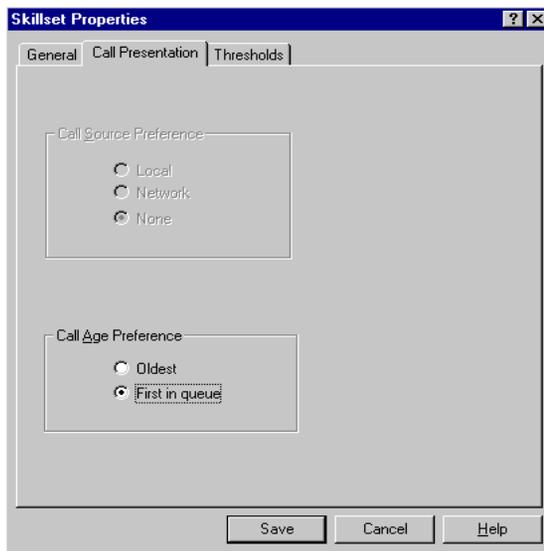
**Threshold Class:** The threshold class to be assigned to this skillset.

**Map Skillset to ACD DN Number:** The ACD-DN number for which calls will be pegged to this skillset. If you select this option, you must enter the ACD-DN number as it is defined on the switch.

**Note:** To put the skillset out of service, see “Putting skillsets out of service” on page 205.

- 4 Click the Call Presentation tab.

**Result:** The Call Presentation property page appears.



**Note:** The Call Source Preference options are available only for network skillsets.

- 5 If you want priority to be given to the oldest call in the system, check Oldest. If you want priority to be given to the first call in the queue, check First in queue. For more information on these options, see “Example: Call age preference” on page 188.

6 Click Save.

**Result:** The skillset is added to the list in the Skillsets window.

7 To return to the SMI window, choose File → Close.

# Changing the global skillset properties

## Introduction

The following properties apply to all skillsets:

- system default skillset
- the Recorded Announcement (RAN) for the system default skillset
- agent idle time preference

## Restriction

The default skillset can be either a network or a local skillset. If the default skillset is a network skillset, the call is queued locally.

## To change global skillset properties

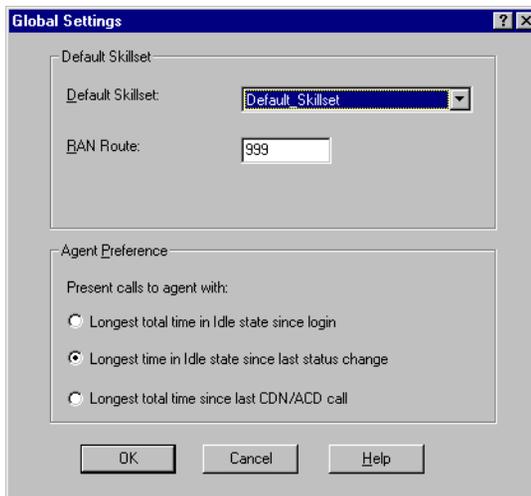
- 1 From the SMI window, choose Call Flow Administration → Skillsets.

**Result:** The Skillsets window opens.



- 2 Choose File → Global Settings.

**Result:** The Global Settings dialog box opens.



- 3 Make the desired changes to the following properties:

**Default Skillset:** The skillset to which calls are queued if they have not been queued to a skillset by the end of script execution.

**RAN Route:** The number of the recorded announcement (RAN) route for the default skillset, as configured at the switch.

**Agent Preference:** The method for interpreting agent idle time. Choose one of the following options:

- Longest total time in Idle state since login—The server presents new calls to the agent who has accumulated the greatest amount of idle time since logging on.
- Longest time in Idle state since last status change—The server presents new calls to the agent who has been idle longest since his or her last change of state. (The agent idle timer starts when an agent ends a call, or goes out of Not Ready or Walkaway state.)
- Longest total time since last CDN/ACD call—The server presents new calls to the agent who has been idle longest since the end of his or her last Symposium Call Center Server or ACD call.

- 4 Click OK.

**Result:** You are returned to the Skillsets window.

- 5 To return to the SMI window, choose File → Close.

# Putting skillsets out of service

## Introduction

You might need to put a skillset out of service for the following reasons:

- A service interruption occurs (for example, the customer database becomes unavailable).
- The skillset is intended for limited-time service (for example, a skillset used to support a marketing campaign).

**Note:** A skillset goes out of service automatically when

- the last agent serving the skillset logs off
- the last agent serving the skillset is put on standby for the skillset (either manually, from the agent's Skillsets property page, or automatically, with an agent-to-skillset assignment)

## To put skillsets out of service

- 1 From the SMI window, choose Call Flow Administration → Skillsets.

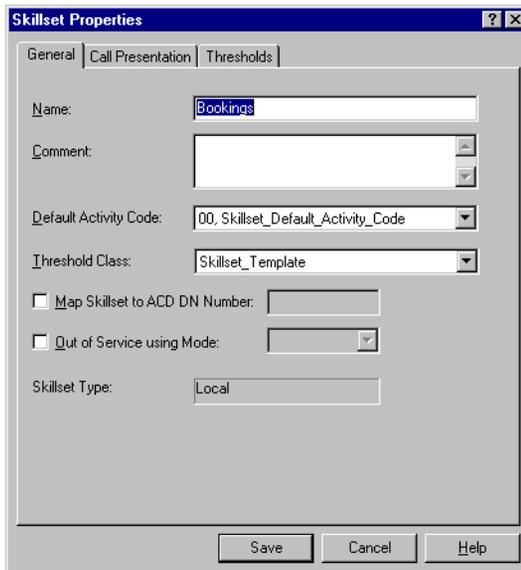
**Result:** The Skillsets window opens.



- 2 Select the skillset you want to put out of service.

3 Choose File → Properties.

**Result:** The Skillset Properties property sheet opens. The General property page is on top.



The screenshot shows the 'Skillset Properties' dialog box with the 'General' tab selected. The dialog has three tabs: 'General', 'Call Presentation', and 'Thresholds'. The 'General' tab contains the following fields and options:

- Name:** A text box containing 'Bookings'.
- Comment:** A text box with a vertical scrollbar.
- Default Activity Code:** A dropdown menu showing '00, Skillset\_Default\_Activity\_Code'.
- Threshold Class:** A dropdown menu showing 'Skillset\_Template'.
- Map Skillset to ACD DN Number:** A checkbox that is unchecked, followed by a text box.
- Out of Service using Mode:** A checkbox that is unchecked, followed by a dropdown menu.
- Skillset Type:** A text box containing 'Local'.

At the bottom of the dialog are three buttons: 'Save', 'Cancel', and 'Help'.

4 Check Out of Service using Mode.

5 Select the out of service mode. If you want all queued calls to be answered before the skillset goes out of service, then select Transition mode. If you want all calls, including waiting calls, to receive night service treatment, then select Night Service mode.

6 Click Save.

**Result:** You return to the Skillsets window.

7 To return to the SMI window, choose File → Close.

# Other procedures for skillsets

## To change skillset properties

From the Skillsets window, select the skillset you want to change and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To preview a list of skillsets

From the Skillsets window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of skillsets

From the Skillsets window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To delete a skillset

### Notes:

- Before deleting a skillset, make sure it is not used in an activated script.
- You cannot delete a skillset that is assigned to an agent.
- You cannot delete a network skillset. Network skillsets must be deleted at the Network Control Center (NCC).

From the Skillsets window, select the skillsets you want to delete, and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



# Chapter 7

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## Managing supervisors

### **In this chapter**

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# Overview

## Introduction

When you add an agent, you assign that agent to one or more supervisors. Supervisors are users who have responsibility for monitoring and supporting their assigned agents.

You must assign each agent a reporting supervisor. You can also assign one or more associated supervisors.

## Reporting supervisors

Each agent must have one reporting supervisor who

- is notified when the user presses the Emergency key
- has keys on his or her phoneset that are mapped to the agent keys

Supervisors can view information about their reporting agents on their real-time displays.

## Associated supervisors

In addition to the reporting supervisor, an agent can have one or more associated supervisors who provide backup when the reporting supervisor is unavailable. Supervisors can view information about their associated agents in the real-time displays.

## Supervisor logon

Supervisors are fixed to a specific phoneset.

## Supervisors and real-time displays

When viewing the real-time displays, supervisors can limit the display to

- all agents for whom they are the reporting supervisor

- all agents for whom they are an associated supervisor
- all agents for whom they are the reporting or associated supervisor
- all other agents (that is, agents for whom they are not a reporting or associated supervisor)
- all agents

**Note:** The options available depend on the access privileges of the supervisor.

## **Supervisors and reports**

The agent performance and short calls reports are sorted by supervisor.

# Adding or changing supervisors

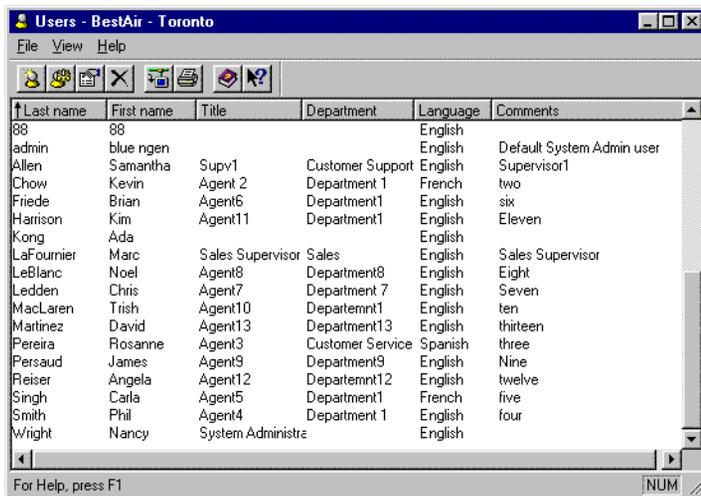
## Before you begin

Make sure the supervisor is defined on the switch. For more information, refer to the *Symposium, MI, and Voice Processing Guide*.

## To add a supervisor

- 1 From the SMI window, choose User Administration → Users.

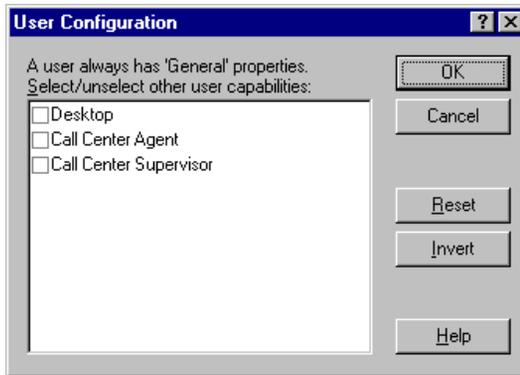
**Result:** The Users window appears.



↑ Last name	First name	Title	Department	Language	Comments
88	88			English	
admin	blue ngen			English	Default System Admin user
Allen	Samantha	Supv1	Customer Support	English	Supervisor1
Chow	Kevin	Agent 2	Department 1	French	two
Friede	Brian	Agent6	Department1	English	six
Harrison	Kim	Agent11	Department1	English	Eleven
Kong	Ada			English	
LaFourmier	Marc	Sales Supervisor	Sales	English	Sales Supervisor
LeBlanc	Noel	Agent8	Department8	English	Eight
Ledden	Chris	Agent7	Department 7	English	Seven
MacLaren	Trish	Agent10	Departemnt1	English	ten
Martinez	David	Agent13	Department13	English	thirteen
Pereira	Rosanne	Agent3	Customer Service	Spanish	three
Persaud	James	Agent9	Department9	English	Nine
Reiser	Angela	Agent12	Departemnt12	English	twelve
Singh	Carla	Agent5	Department1	French	five
Smith	Phil	Agent4	Department 1	English	four
Wright	Nancy	System Administr		English	

- 2 Choose File → New.

**Result:** The User Configuration dialog box appears.

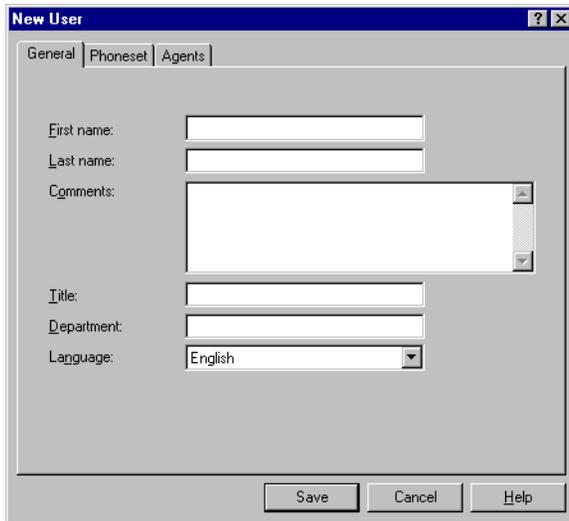


- 3 Select Call Center Supervisor.

**Note:** If this user will also have Agent capabilities, click Call Center Agent. (For more information about setting up agents, see Chapter 8, “Managing agents.”) If this user will also have Desktop capabilities, click Desktop. (For more information about setting up desktop user accounts, see Chapter 2, “Managing security.”)

- 4 Click OK.

**Result:** The New User property sheet appears.



The image shows a screenshot of a 'New User' dialog box with three tabs: 'General', 'Phoneset', and 'Agents'. The 'General' tab is selected. The dialog contains the following fields:

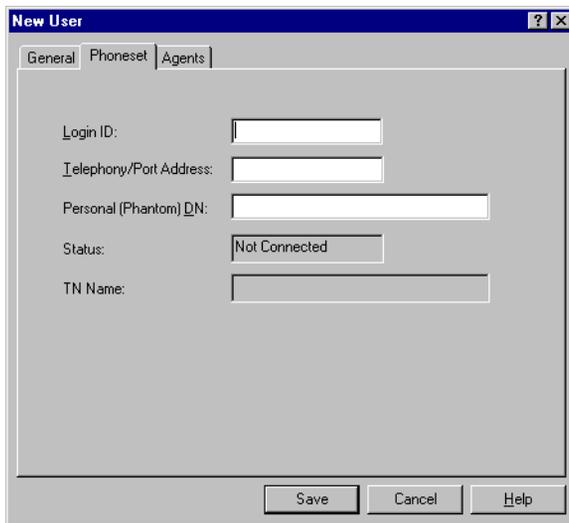
- First name:
- Last name:
- Comments:
- Title:
- Department:
- Language:

At the bottom of the dialog are three buttons: 'Save', 'Cancel', and 'Help'.

- 5 Complete the General property page by entering the contact information for the user.

- 6 Click the Phoneset tab.

**Result:** The Phoneset property page appears.



The screenshot shows a dialog box titled "New User" with three tabs: "General", "Phoneset", and "Agents". The "Phoneset" tab is selected. The dialog contains the following fields and controls:

- Login ID:** A text input field.
- Telephony/Port Address:** A text input field.
- Personal (Phantom) DN:** A text input field.
- Status:** A dropdown menu currently showing "Not Connected".
- TN Name:** A text input field.

At the bottom of the dialog are three buttons: "Save", "Cancel", and "Help".

- 7 Complete the Phoneset property page by entering information into these fields:

**Login ID:** The number the supervisor uses to log on to the system.

**Telephony/Port Address:** The number of the phoneset at which the supervisor logs on. This is the phoneset on which the switch maps the agent keys for agents reporting to this supervisor.

- 8 Click Save.

**Note:** If you click Save before completing the required fields, the system prompts you to finish them.

**Result:** The new supervisor appears in the list in the Users window.

- 9 To return to the SMI window, choose File → Close.

# Viewing the agents assigned to a supervisor

## Introduction

You assign agents to supervisors from the agents' Supervisors property page (see "To assign supervisors" on page 228). From the supervisor's Agents property page, you can view all of the agents assigned to the supervisor.

## To view a supervisor's agents

- 1 From the SMI window, choose User Administration → Users.

**Result:** The Users window appears.

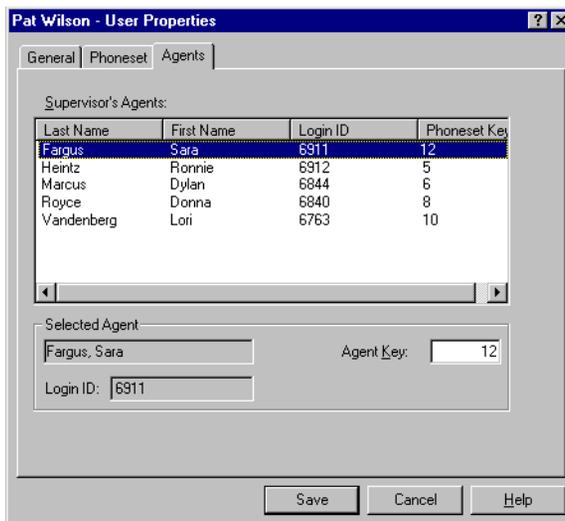
- 2 Select the supervisor whose agents you want to view.

- 3 Choose File → Properties.

**Result:** The User Properties property sheet appears. The General property page is on top.

- 4 Click the Agents tab.

**Result:** The Agents property page appears.



5 Click Save.

**Result:** You return to the Users window.

6 To return to the SMI window, choose File → Close.

# Other procedures for supervisors

## To change a supervisor's capabilities

From the Users window, select the supervisor you want to change and choose File → Configuration.

For step-by-step instructions, press F1 to access the online Help.

## To change a supervisor's properties

From the Users window, select the supervisor you want to change, and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of users

From the Users window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete a supervisor

**Note:** You cannot delete a supervisor who is assigned to an agent as a reporting supervisor. (You can delete supervisors who are assigned as associated supervisors.) Before you delete a reporting supervisor, reassign all agents who report to that supervisor.

From the Users window, select the supervisor you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

# Chapter 8

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## Managing agents

### In this chapter

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# Overview

## Introduction

Agents are users who can receive incoming call center calls on their phonesets. (The phonesets must have been configured on the switch and acquired on the server.) An agent account has the following properties:

- threshold class
- skillsets
- call presentation class
- supervisor

Before you add an agent, you must define the agent's threshold class, skillsets, call presentation class, and supervisor.

## Agent roaming

Supervisors are associated with a specific phoneset, specified in the position ID. This enables the switch to program the keys on the supervisor's phoneset to communicate with the supervisor's agents.

Agents are not associated with a specific phoneset. They can log on to any phoneset, and then a position ID is assigned dynamically. This position ID is automatically mapped to the agent's key on the supervisor's phoneset.

# Adding agents

## Before you begin

Make sure that the agent's phoneset (telephony/port address) is defined on the switch and is acquired on the server. For more information, refer to the *Symposium, MI, and Voice Processing Guide*.

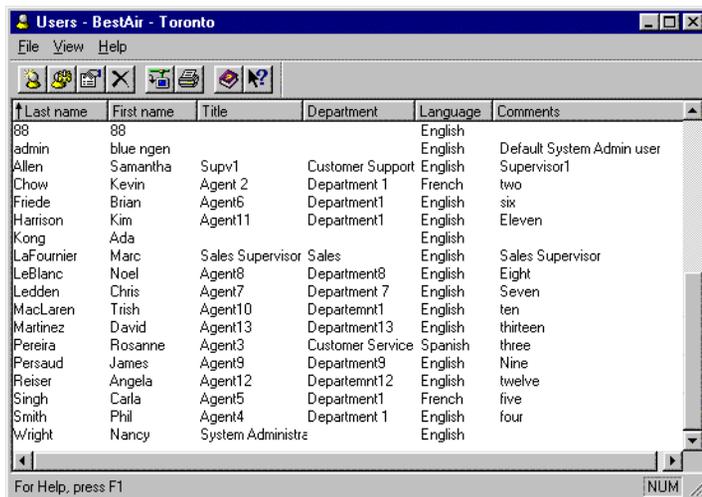
### Note:

- The number of agents you can add is limited by the keycodes installed on your server.
- Each agent you add uses resources on the server. Nortel Networks recommends that you only define the number of agents you need.

## To add an agent

- 1 From the SMI window, choose User Administration → Users.

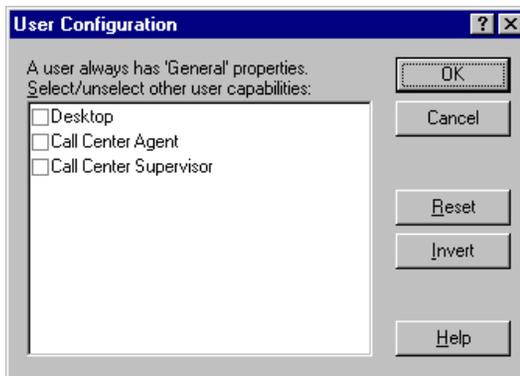
**Result:** The Users window appears.



Last name	First name	Title	Department	Language	Comments
88	88			English	
admin	blue ngen			English	Default System Admin user
Allen	Samantha	Supv1	Customer Support	English	Supervisor1
Chow	Kevin	Agent 2	Department 1	French	two
Friede	Brian	Agent6	Department1	English	six
Harrison	Kim	Agent11	Department1	English	Eleven
Kong	Ada			English	
LaFournier	Marc	Sales Supervisor	Sales	English	Sales Supervisor
LeBlanc	Noel	Agent8	Department8	English	Eight
LeDden	Chris	Agent7	Department 7	English	Seven
MacLaren	Trish	Agent10	Departemnt1	English	ten
Martinez	David	Agent13	Department13	English	thirteen
Pereira	Rosanne	Agent3	Customer Service	Spanish	three
Persaud	James	Agent9	Department9	English	Nine
Reiser	Angela	Agent12	Departemnt12	English	twelve
Singh	Carla	Agent5	Department1	French	five
Smith	Phil	Agent4	Department 1	English	four
Wright	Nancy	System Administrz		English	

- 2 Choose File → New.

**Result:** The User Configuration dialog box appears.



- 3 Select Call Center Agent.

**Note:** If this user will also have Supervisor capabilities, click Call Center Supervisor. (For more information about setting up agents, see Chapter 7, "Managing supervisors.") If this user will also have Desktop capabilities, click Call Center Supervisor and Desktop. (For more information about setting up desktop user accounts, see Chapter 2, "Managing security.")

- 4 Click OK.

**Result:** The New User property sheet appears.

The image shows a 'New User' dialog box with a blue title bar and standard window controls. It features a tabbed interface with the following tabs: 'General', 'Phoneset', 'Call Presentation', 'Thresholds', 'Skillsets', and 'Supervisor'. The 'General' tab is active and contains the following fields:

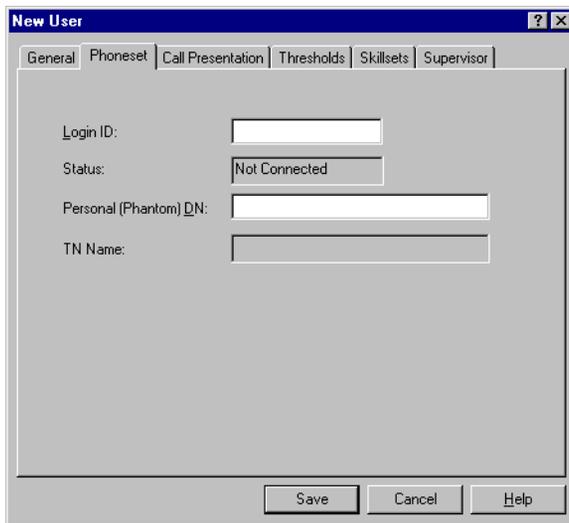
- 'First name:' followed by a text input field.
- 'Last name:' followed by a text input field.
- 'Comments:' followed by a large text area with vertical scrollbars.
- 'Title:' followed by a text input field.
- 'Department:' followed by a text input field.
- 'Language:' followed by a dropdown menu currently showing 'English'.

At the bottom of the dialog, there are three buttons: 'Save', 'Cancel', and 'Help'.

- 5 Complete the General property page by entering the agent's contact information.

- 6 Click the Phoneset tab.

**Result:** The Phoneset property page appears.



The screenshot shows a 'New User' dialog box with a blue title bar and standard window controls. The 'Phoneset' tab is selected, showing a form with the following fields:

- Login ID:
- Status:
- Personal (Phantom) DN:
- TN Name:

At the bottom of the dialog are three buttons: 'Save', 'Cancel', and 'Help'.

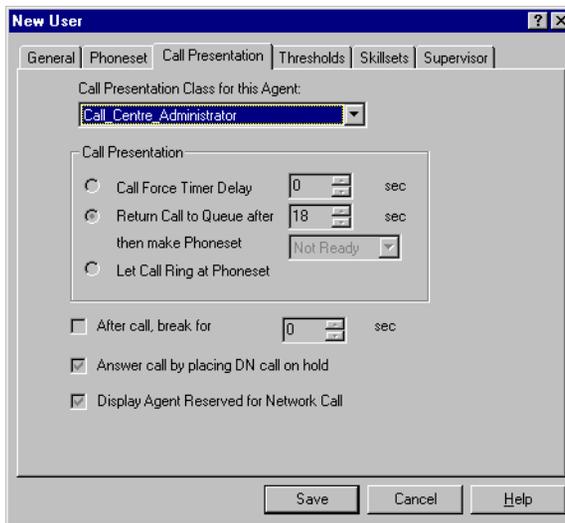
- 7 Complete the Phoneset property page by entering information into these boxes:

**Login ID:** The number the agent uses to log on to the system.

**Personal (Phantom) DN:** The number to which non-ACD calls for this agent are directed.

- 8 Click the Call Presentation tab.

**Result:** The Call Presentation property page appears.



The screenshot shows the 'New User' dialog box with the 'Call Presentation' tab selected. The 'Call Presentation Class for this Agent' dropdown menu is set to 'Call\_Centre\_Administrator'. The 'Call Presentation' section contains three radio button options: 'Call Force Timer Delay' (set to 0 sec), 'Return Call to Queue after then make Phoneset' (set to 18 sec and 'Not Ready'), and 'Let Call Ring at Phoneset'. Below this, there are three checkboxes: 'After call, break for' (set to 0 sec), 'Answer call by placing DN call on hold' (checked), and 'Display Agent Reserved for Network Call' (checked). At the bottom are 'Save', 'Cancel', and 'Help' buttons.

- 9 In the Call Presentation Class for this Agent box, select the call presentation class you want to assign to this agent.

- 10 Click the Thresholds tab.

**Result:** The Thresholds property page appears.

Select Threshold Class for this Agent:

Agent\_Template

The following threshold values will apply to this Agent:

Name	Level 1	Level 2
Active	3	10
Busy	1	2
Call Present	2	5
Idle	5	10
Logout	2	4

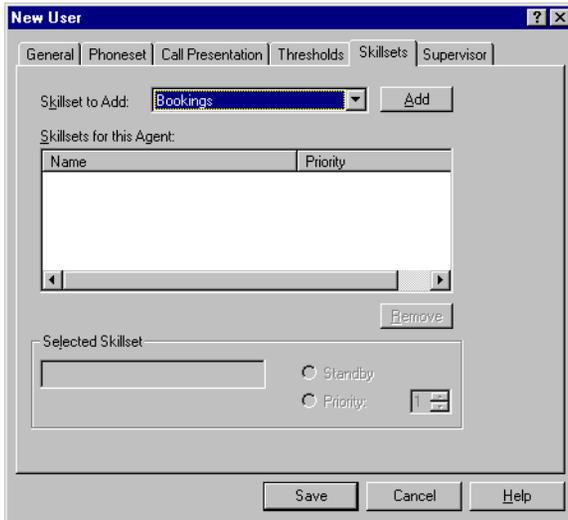
Save Cancel Help

- 11 In the Select Threshold Class for this Agent box, select the threshold class you want to assign to this agent.
- 12 Continue with the following procedure to assign skillsets to the agent.

## To assign skillsets

- 1 In the New User dialog box, click the Skillsets tab.

**Result:** The Skillsets property page appears.



- 2 In the Skillsets to Add box, select a skillset to be assigned to the agent.
- 3 Click Add.
- 4 In the Name column, select the skillset you just added.
- 5 If you want to put the agent on standby for the skillset, click Standby. If you want to set the agent priority for the skillset, click Priority, and set the priority using a value from 1– 48, where 1 is the highest priority and 48 is the lowest priority. For more information on skillset priority, see “Choosing an agent” on page 186.
- 6 Repeat steps 2 to 5 for each skillset to be assigned to the agent.
- 7 Continue with the following procedure to assign supervisors to the agent.

## To assign supervisors

**Note:** You must assign each agent a reporting supervisor. Optionally, you can assign one or more associated supervisors.

- 1 In the New User dialog box, click the Supervisor tab.

**Result:** The Supervisor property page appears.

- 2 In the Available Supervisors table, select the supervisor to be assigned as the Reporting Supervisor.
- 3 Click Report To.
- 4 In the Agent Key box, specify the number of the key that the supervisor can press to call this agent.
- 5 (Optional) You can also select up to five supervisors to be assigned as an associated supervisor. To do so, follow these steps:
  - a. Select the supervisor you want to use as an associated supervisor.
  - b. Click Associate.

Repeat this step for each associated supervisor you want to assign.
- 6 Click Save.

**Result:** The new agent is added to the list in the Users window.

- 7 To return to the SMI window, choose File → Close.

## Other procedures for agents

### To change an agent's capabilities

**Note:** You cannot assign an agent desktop capabilities, unless you also give that agent supervisor capabilities.

From the Users window, select the agent you want to change and choose File → Configuration.

For step-by-step instructions, press F1 to access the online Help.

### To change an agent's properties

You can change an agent's contact information, logon ID, call presentation class, threshold class, supervisor assignments, and skillset assignments.

From the Users window, select the agent you want to change, and choose File → Properties.

**Note:** When you change an agent's skillset assignments, the server waits for the agent's active calls to end (if any), and then puts the agent into Not Ready state.

### To print a list of users (including agents)

From the Users window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete an agent

**Note:** Before you delete an agent, make sure that

- the agent is not the only agent assigned to active skillsets
- the agent is not specifically referred to in scripts

From the Users window, select the agent and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

# Chapter 9

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## Managing agent to supervisor assignments

### In this chapter

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Running agent to supervisor assignments immediately	240
Other procedures for agent to supervisor assignments	241

# Overview

## Introduction

Each agent has one reporting supervisor. A reporting supervisor

- is notified when an assigned agent presses the Emergency key
- has keys on his or her phoneset that are mapped to the agent keys

Supervisors can view all reporting agents on their real-time displays, and the agent performance and short calls reports are sorted by supervisor.

You assign reporting supervisors to agents on the agents' Supervisors property page. For more information, see "Adding agents" on page 221. You can also assign reporting supervisors with agent to supervisor assignments.

## Using agent to supervisor assignments

You might need to temporarily change agents' reporting supervisors for the following reasons:

- for early morning and late evening shifts, when few supervisors are available
- to cover supervisors' coffee and lunch breaks
- when supervisors are sick, on vacation, or on a course

You can manually assign temporary supervisors on the agents' Supervisors property page, and reassign the normal supervisors when they return. You can also set up automatic agent to supervisor assignments, scheduling assignments for known breaks or vacations.

**Example 1:  
Supervisor is sick**

Pat Wilson, one of BestAir's supervisors, calls in sick for the day. The call center manager sets up an agent to supervisor assignment that assigns half of Pat's agents to Chris Konings, and the other half to Cindy Wong. The manager runs the assignment immediately, and all agents are assigned to their temporary supervisors for the day. Another assignment, scheduled for next day, automatically reassigns all agents back to Pat.

**Example 2:  
Supervisor is on vacation**

Pat has booked vacation from the 17th to the 28th of August. BestAir's call center manager has set up an agent to supervisor assignment that reassigns Pat's agents for that period. The manager schedules the assignment to run at 8:30 a.m. on August 17th. Another assignment, which runs at 5:00 p.m. on August 28th, reassigns the agents to Pat.

**Example 3:  
Supervisor is on regularly scheduled training**

At BestAir, all supervisors are required to participate in regular upgrading. Every four weeks, the supervisor must spend half a day in training. Training sessions are staggered to ensure adequate supervision of the call center. Pat's training occurs every third Thursday of the month. The call center manager has set up agent to supervisor assignments that automatically reassign Pat's agents for that time, and then restore their original assignments when Pat returns.

**Example 4:  
Providing supervisory coverage for shifts**

At BestAir, agents are usually assigned to supervisors who have experience with the agents' skillsets. However, during the early morning and evening periods, only one supervisor is on duty. The call center manager has set up agent to supervisor assignments to reassign agents for those periods.

For example, from 8:00 a.m. to 9:00 a.m., Cindy Wong is the only supervisor on duty. All agents who start work at 8:00 a.m. are temporarily assigned to her. Other assignments take effect at 9:00 a.m. and 10:00 a.m., as other supervisors arrive.

**Example 5:**  
**Providing supervisory coverage for breaks and lunch**

As supervisors go on break, their agents must be reassigned. For example, when Cindy goes on break at 10:00 a.m. to 10:15 a.m., an agent to supervisor assignment assigns all of her agents to Pat and Chris. When she returns at 10:15 a.m., another assignment reassigns her agents to her.

# Adding agent to supervisor assignments

## To add an agent to supervisor assignment

**Note:** Each agent to supervisor assignment uses system resources when it runs. The amount of resources it uses depends on the number of agents reassigned, and how often you run it.

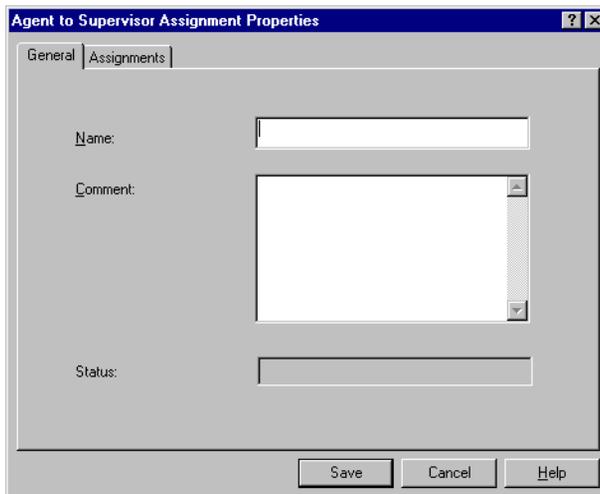
- 1 Choose Assignments → Agent to Supervisor Assignments.

**Result:** The Agent to Supervisor Assignments window appears.



- 2 Choose File → New.

**Result:** The Agent to Supervisor Assignment Properties property sheet appears.



- 3 Complete the General property page by entering information into these boxes:

**Name:** The name of the assignment. Use a descriptive name that will help you to identify the purpose of the assignment (for example, “Pats\_vacation”).

**Comment:** Optional. Additional information about the assignment.

- 4 Click the Assignments tab.

**Result:** The Assignments property page appears.

The screenshot shows a dialog box titled "Agent to Supervisor Assignment Properties" with two tabs: "General" and "Assignments". The "Assignments" tab is active. At the top, there is a dropdown menu labeled "Show available agents" with "Konings, Chris 7870" selected and "(Supervisor)" to its right. Below this is a table with columns "Name" and "Phone Login ID". The table contains three rows: "Chung, Steven" with "8851", "Davidson, Terry" with "8959", and "Katerberg, Bert" with "6789". To the right of the table are "Select All" and "Add" buttons. Below the table is a section labeled "Agents included in this assignment:" with a table that has columns "Name", "Phone Login ID", and "Assign to Supervisor". This table is currently empty. At the bottom of the dialog, there is a dropdown menu labeled "Assign agent(s) to:" and a "Remove" button. At the very bottom are "Save", "Cancel", and "Help" buttons.

- 5 In the Show available agents box, select the supervisor whose agents you want to assign.

**Result:** The agents assigned to that supervisor appear in the Show available agents list box.

- 6 To add an agent to the supervisor assignment, click the agent’s name, and then click Add. Repeat this step for each agent to be reassigned.

**Tip:** To add all agents assigned to this supervisor, click Select All, and then click Add.

**Result:** The selected agents appear in the Agents included in this assignment list box.

- 7 Repeat steps 5 and 6 for each supervisor with agents to be added to the supervisor assignment.

- 8 In the Agents included in this assignment list box, select an agent.
- 9 In the Assign Agent(s) to list box, select the supervisor to whom you want to assign the agent.
- 10 Repeat steps 8 and 9 for each agent you want to assign to another supervisor.
- 11 Click Save.  
**Result:** The new assignment is added to the list in the Agent to Supervisor Assignment window.
- 12 To return to the SMI window, choose File → Close.

## After you finish

If you want to schedule the assignment to take effect at a future time, you must schedule it (see “Scheduling agent to supervisor assignments” on page 238).

If you want the agent to supervisor assignment to take effect immediately, you must run it (see “Running agent to supervisor assignments immediately” on page 240).

# Scheduling agent to supervisor assignments

## Introduction

If you want an agent to supervisor assignment to run at a future date, or if you want it to run regularly, you must schedule it.

## To schedule an agent to supervisor assignment

- 1 From the SMI window, choose Assignments → Agent to Supervisor Assignments.

**Result:** The Agent to Supervisor Assignments window appears.

- 2 Select the agent to supervisor assignment you want to schedule.
- 3 Choose File → Edit Schedule.

**Result:** The Schedule property page appears.

The screenshot shows a 'Schedule' dialog box with the following fields and options:

- Schedule:** A dropdown menu currently set to 'Daily'.
- Days:** A list of days from Sunday to Saturday, each with a checked checkbox.
- Start:** A time input field set to 10:00 AM.
- End:** A time input field set to 11:59 PM.
- Interval:** A time input field set to 00:00.
- Extension:** A time input field set to 00:05.
- Buttons:** 'Clear', 'Invert', 'Save', 'Cancel', and 'Help' buttons are visible.

- 4 Complete the Schedule property page by entering information into the following boxes. For example, you might want to apply an assignment at two-hour intervals, starting at 9:00 a.m. and ending at 5:00 pm.

**Schedule:** The frequency with which you want to run the assignment. When you select a schedule, additional boxes appear.

**Day/Date/Month:** The day, date, and month (as applicable) that you want to run the assignment.

**Start:** The time on the selected day that you want to run the assignment. For the above example, enter 9:00 a.m. in this box.

**End:** For assignments run at intervals (specified in the Interval box). The time you want to stop running the assignment. For the above example, enter 5:00 p.m. in this box.

**Interval:** The frequency, in 15-minute increments, with which the assignment is to be run between the start and end times. For the above example, you would enter 2:00.

**Extension:** The amount of time the system should wait after a system interruption before abandoning the agent to supervisor assignment schedule.

**Note:** If system recovery takes place before the Extension time expires, the agent to supervisor assignment schedule runs.

5 Click Save.

**Result:** You are returned to the Agent to Supervisor Assignments window.

6 To return to the SMI window, choose File → Close.

# Running agent to supervisor assignments immediately

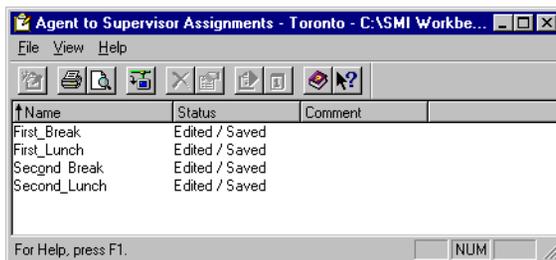
## When to use

Follow this procedure to make an assignment (either scheduled or unscheduled) effective immediately.

## To run an agent to supervisor assignment immediately

- 1 From the SMI window, choose Assignments → Agent to Supervisor Assignments.

**Result:** The Agent to Supervisor Assignments window appears.



- 2 Select the agent to supervisor assignment you want to apply.
- 3 Choose File → Run Now.
- 4 A message appears asking Are you sure you want to run this assignment now? Click Yes.
- 5 To return to the SMI window, choose File → Close.

# Other procedures for agent to supervisor assignments

## To change an agent to supervisor assignment

You can change the properties (the name and comments) of an agent to supervisor assignment, add agents to, or remove agents from, the assignment, and change agents' supervisor assignments.

From the Agent to Supervisor Assignments window, select the assignment and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

**Note:** Changes to an agent to supervisor assignment take effect the next time the agent to supervisor assignment runs.

## To preview a list of an agent to supervisor assignment

From the Agent to Supervisor Assignments window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To print a list of agent to supervisor assignments

From the Agent to Supervisor Assignments window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

## To delete an agent to supervisor assignment

To delete an agent to supervisor assignment, on the Agent to Supervisor Assignments window, select the assignment and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



# Chapter 10

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## Managing agent to skillset assignments

### In this chapter

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Scheduling agent to skillset assignments	251
Running agent to skillset assignments immediately	253
Other procedures for agent to skillset assignments	254

# Overview

## Introduction

A skillset is a group of agents with the expertise necessary to answer a specific type of call. Each agent is assigned to one or more skillsets. Skillsets are used to set up skill-based routing to ensure that callers are matched to the agent best able to meet their needs.

You can make an agent active for a skillset on the agents' Skillsets property page (see "Adding agents" on page 221). You can also use agent to skillset assignments to make agents active for skillsets.

## Using agent to skillset assignments

You might need to temporarily assign agents to different skillsets for the following reasons:

- for shifts when fewer agents assigned to a skillset are available
- to cover other agents' breaks
- when agents are sick, on vacation, or on a course

You can manually assign temporary skillsets on the agents' Skillsets property page, or you can use automatic agent to skillset assignments.

To use an automatic agent to skillset assignment, assign agents to skillsets on their Skillsets property page. If you do not want the agent to be active in the skillset immediately, put the agent into Standby mode for this skillset. Then, use the agent to skillset assignment to change the agent's priority for the skillset (thus activating the agent for the skillset) at the desired time.

# Scenarios to ensure coverage of skillsets

## **Example 1: Agents are sick**

Mark Schultz, an agent in BestAir's Cargo Tracing skillset is sick and absent from work today. This has left the Cargo Tracing skillset understaffed, particularly for the period from 10:00 a.m. to 4:00 p.m., the skillset's busiest time. The call center manager creates an agent to skillset assignment that assigns Rose Stefanopolis (an agent who has worked in this skillset before) to the Cargo Tracing skillset. The manager runs the agent to skillset assignment immediately. The manager creates another assignment that restores Rose to her normal skillset when Mark returns to work.

## **Example 2: Coffee and lunch breaks**

As agents go on break, their skillsets become understaffed. To improve skillset coverage for coffee and lunch breaks, BestAir's call center manager reassigns agents during these periods.

## **Example 3: Shifts**

During the early morning and evening periods, few agents are available. As a result, many skillsets, such as Bookings, are understaffed. Others, such as the Cargo Tracing skillset, are only in service from 9:00 a.m to 5:00 p.m. BestAir's call center manager has set up an agent to skillset assignment to automatically assign members of the Cargo Tracing skillset to Bookings, the busiest skillset, during early morning and evening periods.

**Example 4:  
Agents are on vacation**

Mark has booked vacation time from the 29th of June to the 10th of July. BestAir's call center manager has set up a scheduled agent to skillset assignment that reassigns Rose to the Cargo Tracing skillset for that period. The manager schedules the assignment to run automatically on June 29th at 8:30 a.m., and schedules another agent to skillset assignment to run on July 10th at 5:00 p.m., restoring Rose's normal skillset assignments.

**Example 5:  
Agents are on a course**

At BestAir, all agents are expected to participate in regular upgrading of their skills, requiring them to be absent while they attend courses. In June, all members of the Europe skillset must attend a one-day course to learn about changes to the company's European vacation packages. To provide adequate coverage while the agents are on course, the call center manager has set up an agent to skillset assignment to assign other qualified staff to the Europe skillset. The manager has scheduled the assignment to run on the day of the course. Another assignment, scheduled to run the next day, restores the agents' normal skillset assignments.

# Adding agent to skillset assignments

## Introduction

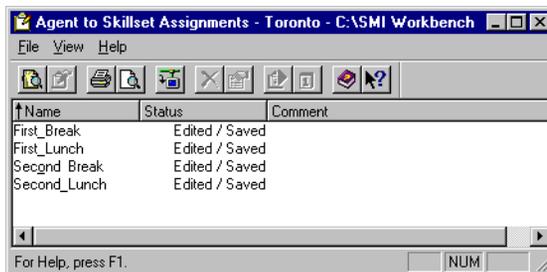
When you use the Agent to Skillset Assignments window, you can add an agent to skillset assignment and change an agent's priority for a currently assigned skillset. You can only change the priority for skillsets that have already been assigned to an agent on the agent's Skillsets property page (see "To assign skillsets" on page 227).

**Note:** Each agent to skillset assignment uses system resources when it runs. The amount of resources it uses depends on the number of agents reassigned, and how often you run it.

## To add an agent to skillset assignment

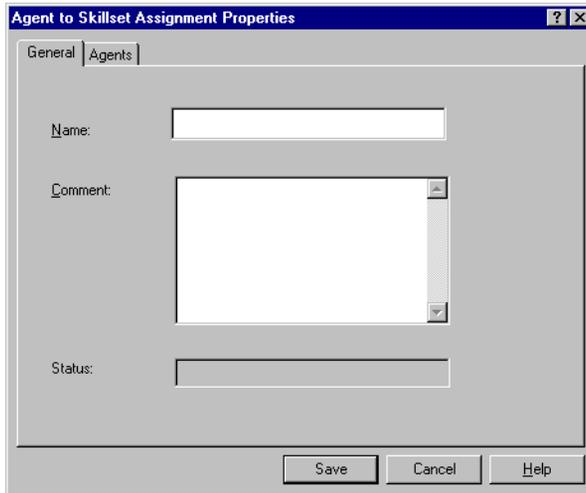
- 1 Choose Assignments → Agent to Skillset Assignments.

**Result:** The Agent to Skillset Assignments window appears.



**2** Choose File → New.

**Result:** The Agent to Skillset Assignment Properties property sheet appears.



The screenshot shows a dialog box titled "Agent to Skillset Assignment Properties" with a "General" tab selected. The dialog contains three input fields: "Name:" with a text box, "Comment:" with a text area, and "Status:" with a text box. At the bottom, there are three buttons: "Save", "Cancel", and "Help".

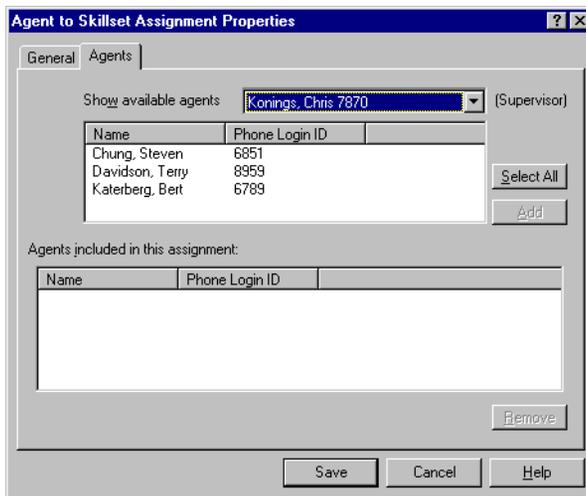
**3** Complete the General property page by entering information into these boxes:

**Name:** The name of the assignment. Use a descriptive name that allows you to identify the purpose of the assignment (for example, "Early\_morning").

**Comment:** Optional. Additional information about the assignment.

- 4 Click the Agents tab.

**Result:** The Agents property page appears.



- 5 From the Show available agents drop-down list, select the supervisor whose agents you want to assign.

**Result:** The agents assigned to that supervisor appear in the Show available agents list box.

- 6 To add an agent to the skillset assignment, select the agent's name, and then click Add. Repeat this step for each agent to be reassigned.

**Hint:** To add all agents assigned to this supervisor, click Select All, and then click Add.

**Result:** The selected agents appear in the Agents included in this assignment list box.

- 7 Repeat steps 5 and 6 for each supervisor with agents to be added to the skillset assignment.

- 8 Click Save.

**Result:** The new assignment is added to the list in the Agent to Skillset Assignment Properties window.

- 9 Select the new agent to skillset assignment.

- 10 Choose File → Open.

**Result:** The agent to skillset assignment matrix appears. The matrix shows the skillsets to which each agent is assigned, and the agent's priority for each skillset.

User Name	Bookings	Vacations	European_Vacations
Jones, James	4	2	1
Morelli, Toni	4	1	2
Woo, Bran...	1	-	-
Vandenber...	1	-	-
Royce, Do...	1	-	-
Marcus, Dyl...	1	-	-
Gogolek, Fr...	1	-	-

- 11 To change an agent's priority for a skillset, select the priority (the number appearing in the cell opposite the agent's name, and under the desired skillset) and select a new priority from the drop-down list. Repeat this step for each priority you want to change.
- 12 Choose File → Save.
- Result:** A confirmation dialog box appears, asking if you want to save the assignment.
- 13 Click Yes.
- 14 Choose File → Close.
- Result:** You return to the Agent to Skillset Assignments window.
- 15 To return to the SMI window, choose File → Close.

## After you finish

If you want to schedule the assignment to take effect at a future time, you must schedule it (see "Scheduling agent to skillset assignments" on page 251).

If you want the agent to skillset assignment to take effect immediately, you must run it (see "Running agent to skillset assignments immediately" on page 253).

# Scheduling agent to skillset assignments

## When to use

If you want an agent to skillset assignment to take place at a future date, you must schedule it.

**Note:** When you change an agent's skillset assignments, the server waits for the agent's active calls to end (if any), and then puts the agent into Not Ready state.

## To schedule an agent to skillset assignment

- 1 From the SMI window, choose Assignments → Agent to Skillset Assignments.

**Result:** The Agent to Skillset Assignments window appears.

- 2 Select the agent to skillset assignment you want to schedule.

- 3 Choose File → Edit Schedule.

**Result:** The Schedule property page appears.

The screenshot shows a 'Schedule' dialog box with the following elements:

- Title Bar:** 'Schedule' with a question mark icon and a close button (X).
- Tab:** 'Schedule'.
- Frequency:** A dropdown menu currently set to 'Daily'.
- Days:** A list of days from Sunday to Saturday, each with a checked checkbox.
- Time Fields:** Four time selection fields: 'Start' (10:00 AM), 'End' (11:59 PM), 'Interval' (00:00), and 'Extension' (00:05).
- Buttons:** 'Clear' and 'Invert' buttons are located below the days list. 'Save', 'Cancel', and 'Help' buttons are located at the bottom of the dialog.

- 4 Complete the Schedule property page by entering information into these boxes:

**Schedule:** The frequency with which you want to run the assignment. When you select a schedule, additional boxes appear.

**Day/Date/Month:** The day, date, and month (as applicable) that you want to run the assignment.

**Start:** The time on the selected day that you want to run the assignment.

**End:** For assignments run at intervals (specified in the Interval box). The time you want to stop running the assignment.

**Interval:** The frequency, in 15-minute increments, with which the assignment is to be run between the start and end times.

**Extension:** The amount of time the system should wait after a system interruption before abandoning the agent to skillset assignment schedule.

**Note:** If system recovery takes place before the Extension time expires, the agent to skillset assignment schedule runs.

- 5 Click Save.

**Result:** You return to the Agent to Skillset Assignments window.

- 6 To return to the SMI window, choose File → Close.

# Running agent to skillset assignments immediately

## To run an agent to skillset assignment immediately

**Note:** When you change an agent's skillset assignments, the server waits for the agent's active calls to end (if any), and then puts the agent into Not Ready state.

- 1 From the SMI window, choose Assignments → Agent to Skillset Assignments.  
**Result:** The Agent to Skillset Assignments window appears.
- 2 Select the agent to skillset assignment you want to apply.
- 3 Choose File → Run Now.
- 4 The following message appears: Are you sure you want to run this assignment now? Click Yes.
- 5 To return to the SMI window, choose File → Close.

# Other procedures for agent to skillset assignments

## To change the properties of an agent to skillset assignment

You can change the name or comments of an agent to skillset assignment or add agents to or remove agents from the assignment.

From the Agent to Skillset Assignments window, select the assignment and choose File → Properties.

For step-by-step instructions, press F1 to access the online Help.

**Note:** Changes to an agent to skillset assignment take effect the next time the agent to skillset assignment runs.

## To change agents' skillset priorities

From the Agent to Skillset Assignments window, select the assignment and choose File → Open.

For step-by-step instructions, press F1 to access the online Help.

**Note:** Changes to an agent to skillset assignment take effect the next time the agent to skillset assignment runs.

## To preview a list of agent to skillset assignments

From the Agent to Skillset Assignments window, choose File → Print Preview.

For step-by-step instructions, press F1 to access the online Help.

## To delete an agent to skillset assignment

From the Agent to Skillset Assignments window, select it and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

# Chapter 11

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## Working with alarms and events

### In this chapter

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# Overview

## Introduction

The Event Browser and Alarms Monitor both show events that occur on the server. These programs provide many common features for viewing events. The table below lists features and identifies the program that offers the feature.

**Note:** To view client events, such as successful logon or logoff, or failure to connect, use the PC Events utility on the SMI workbench.

## Event Browser

The main advantages of the Event Browser are as follows:

- It allows you to filter events by several categories including severity and event code range.
- It allows you to limit the display to the most recent events.

### Notes:

- In the Alarm Monitor, you can only filter events by severity.
- The Alarm Monitor does not display Information events.

## Alarm Monitor

The main advantage of the Alarm Monitor is that it automatically appears in the foreground of the desktop when an event occurs, thus alerting you to problems immediately. You can specify whether the Alarm Monitor displays in the foreground for only critical events, major and critical events, all events, or whether it stays in the background.

## Event Browser versus Alarm Monitor feature matrix

Feature	in Event Browser?	in Alarm Monitor?
view events	Yes	Yes

<b>Feature</b>	<b>in Event Browser?</b>	<b>in Alarm Monitor?</b>
view online Help for an event	Yes	Yes
sort events by category	Yes	Yes
save a list of events	Yes	<b>No</b>
print a list of events	Yes	Yes
view minor, major, critical events	Yes	Yes
view information events	Yes	<b>No</b>
filter events by code, type, severity, latest events	Yes	<b>No</b>
filter events using Event Preferences graphical user interface	Yes	Yes
automatically show the graphical user interface in the foreground when an event occurs	<b>No</b>	Yes
clear an event	<b>No</b>	Yes



# Section A: Viewing events

## In this section

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Saving a list of events from the Event Browser	265
Changing the filtering criteria for events	267

# Overview of viewing events

## Introduction

This section describes how to view and filter events with the Event Browser.

### Notes:

- You can also use the Windows NT Event Viewer to view events. For detailed instructions, see the *Software Installation and Maintenance Guide*.
- The Symposium Call Center Server also supports Simple Network Management Protocol (SNMP) traps. You can use SNMP to send Symposium Call Center Server events to a Network Management System (NMS) on your network. For more information, see the *Software Installation and Maintenance Guide*.

This chapter describes procedures for the following tasks:

- viewing, sorting, and printing the event log using the Event Browser on the client
- changing the filtering criteria for the Event Browser
- using the event throttling option to prevent events from repeating in the event log

## Events

Events are log entries that record activities on the Symposium Call Center Server, such as

- sending or receiving messages
- opening or closing applications
- errors

Some events are for information purposes only, while others can indicate problems. Events are categorized by severity.

## Event severity

Events are assigned a default severity of Information, Minor, Major, or Critical. The Alarm Monitor does not report Information-level events.

### Information

These events indicate that something noteworthy has happened on the system, but do not mean that there is a problem. For example, an information-level event can indicate that a service has started or stopped. These events appear in the Event Browser but not in the Alarm Monitor.

### Minor

These events indicate that a non-service-affecting fault condition exists, and that you must take corrective action to prevent a more serious fault. For example, a minor event is generated when the file system is 90 percent full.

### Major

These events indicate that a service-affecting condition has developed and an urgent corrective action is required. The event condition can cause severe degradation in server performance, and you must restore full capacity. For example, a major event is generated when the file system is 100 percent full.

### Critical

These events indicate that a service-affecting condition has occurred and an immediate corrective action is required. Critical events are reported when a component is completely out of service and you must take immediate action to restore it. For example, a critical event is generated when the file system crashes.

# Opening the Event Browser

## Introduction

The Symposium Call Center Server generates alarms to notify you when minor, major, and critical system events occur. It also issues information messages. Alarms are displayed events in both the Alarm Monitor and the Event Browser on the client PC. Information messages appear only in the Event Browser.

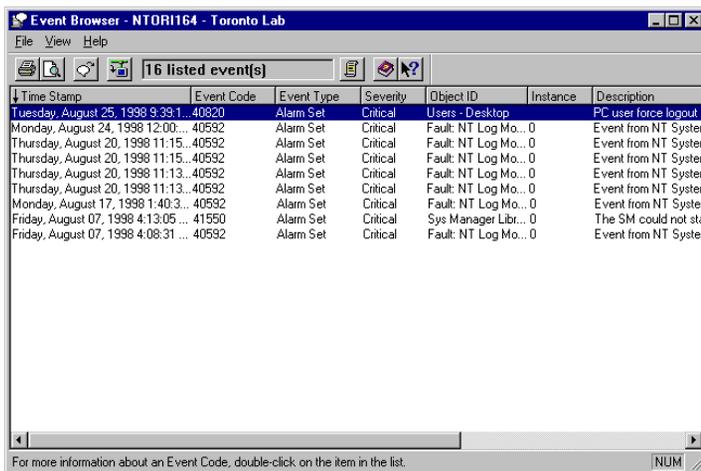
**Note:** By default, only the latest 100 *critical* events appear in the Event Browser. You can configure the filter to display all events. For more information, see “Changing the filtering criteria for events” on page 267.

Follow the procedure in this section to view events in the Event Browser.

## To open the Event Browser

From the SMI window, choose System Administration → Alarms & Events → Event Browser.

**Result:** The Event Browser window opens.



To adjust the column widths, place the cursor on the bar between the column heading names and scroll to the left or right.

## To sort events

Click the header of the column by which you want to sort. For example, to sort the events by type, click the Event Type header.

**Note:** The default order lists the latest event first.

# Viewing online Help for an event

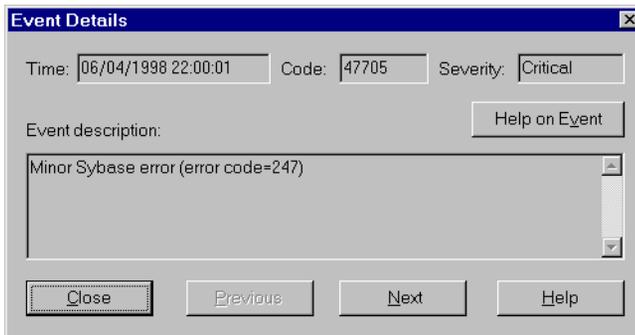
## Introduction

You can view online Help for a selected event. The online Help might provide a recommended action to correct the problem or more information about the event.

## To view online Help for an event

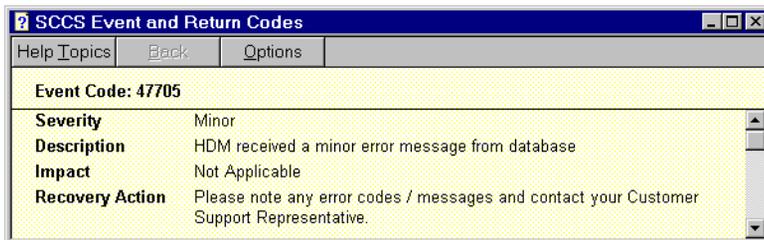
- 1 In the Event Browser or Alarm Monitor, double-click the event that you are investigating.

**Result:** An Event Details dialog box appears.



- 2 Click Help on Event.

**Result:** The online Help for the selected event appears.



# Saving a list of events from the Event Browser

## Introduction

Nortel Networks recommends printing or saving any relevant sections of the event log in the event of a problem with your system. The log helps technical support representatives to conduct a thorough analysis of your system.

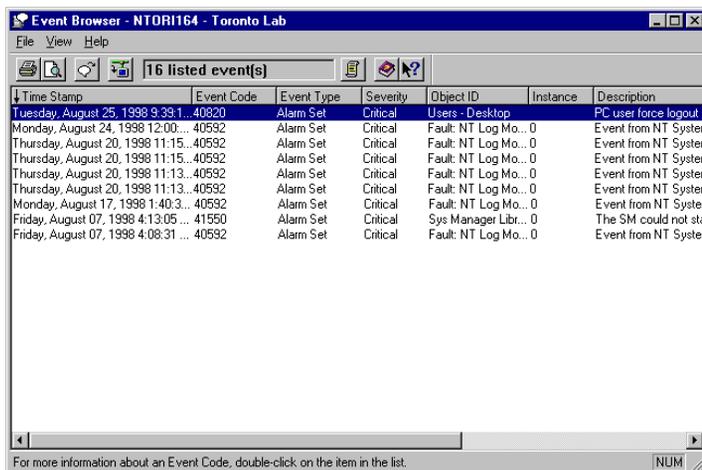
## Before you begin

Make sure that the filter settings are set to show the type and number of events you want to save. For more information, see “Changing the filtering criteria for events” on page 267.

## To save events

- 1 From the SMI window, choose Alarms & Events → Event Browser.

**Result:** The Event Browser appears.



- 2 Choose File → Save Event Log.

**Result:** The Save Event dialog box appears.

- 3 Choose one of the following options:
  - To save all of the events in the Event Browser, check All events.
  - To save only the events that are currently selected, check Selected event(s).
- 4 Click OK.

**Result:** A dialog box appears for you to provide a file name and select a location.
- 5 Enter a recognizable file name and location.
- 6 Click Save.

## To print a list of events

From the Event Browser window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

# Changing the filtering criteria for events

## Introduction

If you want to reduce the number of events shown in the Event Browser at one time, you can screen the log to view a specific number of the most recently filtered events.

## Filter settings

You can set the event log filter to display

- a specific number of latest events, or all events (all events available on or retrieved from the system)
- events of a certain severity (critical, major, minor, information)
- a specific event code range, or all event codes
- a specific type of alarm (alarm set, alarm cleared, or message)
- events that occurred during a specific date and time interval

**Note:** The Set Event Filter Properties tabs work with one another.

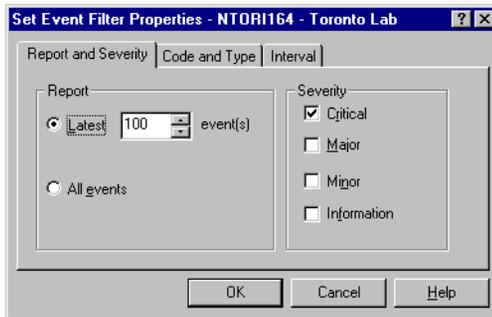
## Example

At BestAir, system engineer Jane Oliver is testing a new server component. Before she performs the tests, she changes the filtering criteria to display all events, including information events. (These events tell her whether system components are starting up.) When Jane finishes her tests, she changes the filtering criteria back to the default setting.

## To view all events

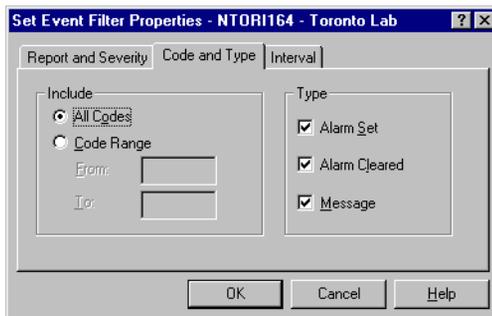
- 1 From the SMI window, choose Alarms & Events → Event Browser.
- 2 Choose File → Change Filter criteria.

**Result:** The Set Event Filter Properties property sheet appears. The Report and Severity page appears first.



- 3 Click All events.
- 4 Click all the Severity levels.
- 5 Click the Code and Type tab.

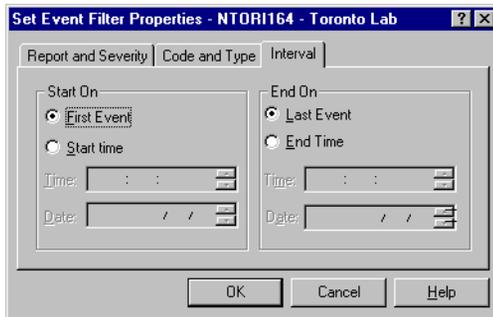
**Result:** The Code and Type page appears.



- 6 Select All Codes.
- 7 Select each box in the Type column.

- 8 Select the Interval tab.

**Result:** The Interval page appears.



- 9 To view all events, ensure that the date and time boxes are blank.
- 10 Click OK to change the filter.

## To filter the events

Follow the steps in “To view all events” on page 268, except specify the criteria you are looking for. Events that match the criteria on all tabs in the Set Event Filter Properties property sheet are listed in the Event Browser.

### Report and Severity tab

On this tab, specify the number of latest events to view, or select all events to view all events that match the other filter criteria. Also, specify the severity of events to view.

### Code and Type tab

On this tab, specify the range of event codes to view, or select all codes. Also, specify the types of alarms to view.

### Interval tab

On this tab, you can specify that you want to view events from a specific date and time range. If you do not want to restrict the list of events to a certain date and time range, leave the date and time range blank.



## Section B: Managing event preferences

### In this section

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Throttling all events	275
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# Overview

## Introduction

This section describes how to change the classification of particular events. For example, you can choose to treat a major event as a minor event if you are aware it exists and the situation is being resolved.

You can create an event preference to override the default severity or throttling parameters of any event code. You might want to change the preferences of an event for the following reasons:

- to increase the severity of an event (for example, from Information to Minor). By increasing an event's severity, you ensure that the event appears in the Alarm Monitor when it occurs.
- to reduce the severity of a recurring alarm to Information. By reducing an event's severity, you prevent it from appearing in the Alarm Monitor.
- to set the throttling parameters to reduce the frequency an event is generated

Previous occurrences of the event are not affected. You can revert to the default event definition at any time by deleting the event preference for that event code.

## Example

At BestAir, the Symposium Call Center Server is generating a critical alarm because of a database error. The system engineer, Jane Oliver, has ordered a replacement for the malfunctioning disk drive that is causing the problem. Since she is aware of the problem, Jane does not want to see an alarm on her console every time the error occurs.

Jane can use the event preferences to reduce the severity of the error from Critical to Information. After the new disk is installed, she can delete the event preference to restore the severity to Critical.

# Adding event preferences

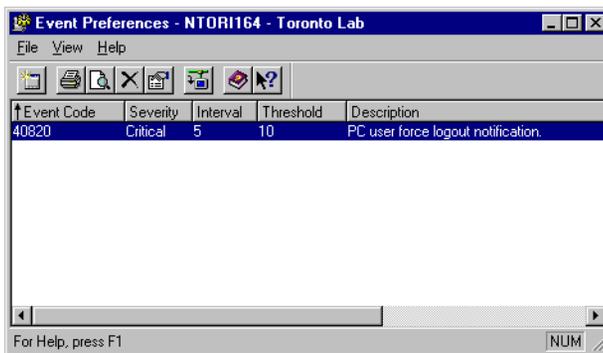
## Introduction

To create an event preference for an event, follow the procedure in this section. If an event preference has already been defined for the event, you can change the event severity. See “To change an event preference” on page 277.

## To add an event preference

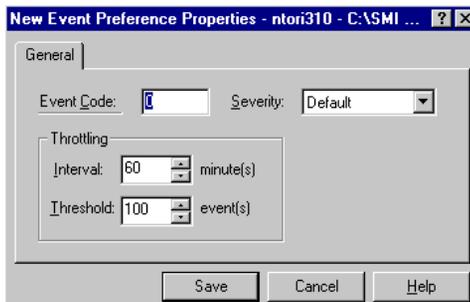
- 1 From the SMI window, choose System Administration → Alarms & Events → Event Preferences.

**Result:** The Event Preferences window appears.



- 2 Choose File → New.

**Result:** The New Event Preferences Properties property sheet appears.



- 3 In the Event Code box, type the event code number for the event you want to add.

**Note:** The Symposium Call Center Server does not accept unrecognized event codes. For a complete list of valid event codes, go to the Event Browser and select Event Code Reference from the Help menu.

- 4 From the Severity drop-down list box, select the severity you want to assign to the event.

- 5 In the Interval box, type the throttling interval (the time interval during which the event can be logged a specified number of times).

**Example:** In 30 minutes (the interval), allow the event to be logged a maximum of 10 times (the number).

- 6 In the Threshold box, type the number of instances of the event that can be logged during the specified interval.

- 7 Click Save to return to the Event Preferences window.

**Result:** The new event is added to the list of events.

- 8 To return to the SMI window, choose File → Close.

# Throttling all events

## Introduction

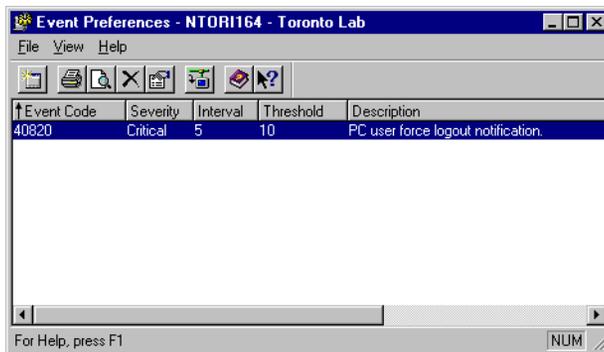
Event throttling lets you control the frequency with which events are recorded by the server log. You can throttle all events to prevent the log from becoming overcrowded. If too many instances of each event are recorded, there might not be enough space in the log to record more important events. Too many instances of the same event can distract users, causing them to overlook other important events.

**Note:** To set throttling on specific event codes, see “Adding event preferences” on page 273.

## To throttle all events

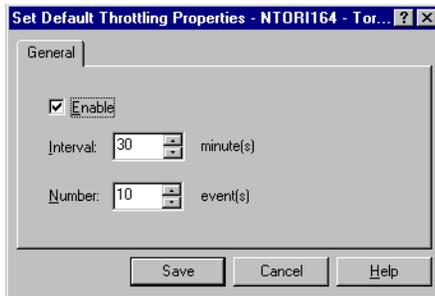
- 1 From the SMI window, choose Alarms & Events → Event Preferences.

**Result:** The Event Preferences window appears.



- 2 Choose File → Default Throttling.

**Result:** The Set Default Throttling Properties property sheet appears.



- 3 Select Enable.
- 4 In the Interval box, type the interval for which you want events logged.
- 5 In the Number box, type the number of instances of each event that you want logged.
- 6 Click Save to return to the Event Preferences window.
- 7 To return to the SMI window, choose File → Close.

## Other procedures for event preferences

### To change an event preference

From the Event Preferences window, select the event preference you want to change and choose File → Properties.

**Note:** If the event code that you want does not appear in the list, define an event preference first. For information about creating a new event preference, see “Adding event preferences” on page 273.

For step-by-step instructions, press F1 to access the online Help.

### To print the list of event preferences

From the Event Preferences window, choose File → Print.

For step-by-step instructions, press F1 to access the online Help.

### To delete an event preference

When you delete an event preference, the event settings for severity and throttling revert to their default values.

From the Event Preferences window, select the event preference you want to delete and choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.



# Section C: Using the Alarm Monitor

## In this section

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# Overview

## When to use

This section describes how to view and manage alarms. The Symposium Call Center Server generates alarms to notify you when minor, major, and critical system events occur.

You can configure the Alarm Monitor to appear in either of the following locations when a new alarm is registered:

- the foreground
- the background

In the Alarm Monitor, you can access, clear, and print system alarm information.

## Preventing recurring alarms

You can prevent an alarm from recurring in the following ways:

- Change the throttling parameters for all events (see “Throttling all events” on page 275).
- Change the throttling parameters for a specific event (see “Adding event preferences” on page 273).
- Override the default severity of the event so it no longer appears in the Alarm Monitor. For more information, see “Adding event preferences” on page 273.

# Viewing events in the Alarm Monitor

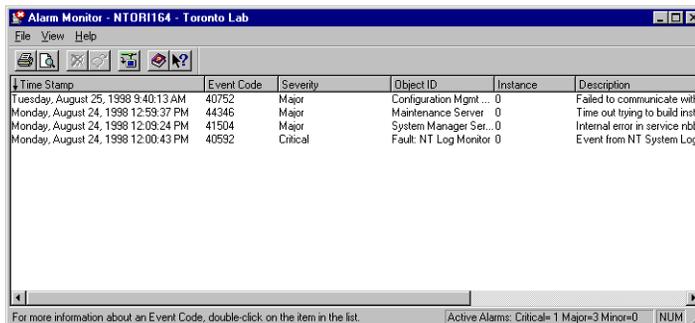
## When to use

By default, the Alarm Monitor appears in the foreground when a critical, major, or minor event occurs. If you cannot see the Alarm Monitor or if it has been closed, follow the steps in this section to open it.

## To open the Alarm Monitor

- 1 From the client PC, log on to the server.
- 2 From the SMI window, choose System Administration → Alarms & Events → Alarm Monitor.

**Result:** The Alarm Monitor window appears.



The screenshot shows the 'Alarm Monitor - NTOR1164 - Toronto Lab' window. It contains a table with the following data:

Time Stamp	Event Code	Severity	Object ID	Instance	Description
Tuesday, August 25, 1998 9:40:13 AM	40752	Major	Configuration Mgmt...	0	Failed to communicate with
Monday, August 24, 1998 12:59:37 PM	44346	Major	Maintenance Server	0	Time out trying to build insta
Monday, August 24, 1998 12:09:24 PM	41504	Major	System Manager Ser...	0	Internal error in service rbbi
Monday, August 24, 1998 12:00:43 PM	40592	Critical	Fault: NT Log Monitor	0	Event from NT System Log

At the bottom of the window, there is a status bar that reads: 'For more information about an Event Code, double-click on the item in the list. Active Alarms: Critical=1 Major=3 Minor=0 NUM'.

To adjust the column widths, click the cursor on the bar between the column heading names and drag the cursor to the left or right.

## To refresh the Alarm Monitor

From the Alarm Monitor window, choose View → Refresh.

**Note:** After you refresh the Alarm Monitor, the number of alarms might decrease. Any alarms that have been cleared by other processes are removed from the Alarm Monitor.

## To sort events

From the Alarm Monitor window, click the header of the column by which you want to sort. For example, to sort the events by type, click the Event Type header.

**Note:** By default, events are sorted on Timestamp in reverse chronological order.

## To specify when the Alarm Monitor appears in the foreground

By default, the Alarm Monitor appears in the foreground when any event occurs (that is, it takes the focus from the currently active window). You can configure the severity of alarm that will force the Alarm Monitor to appear in the foreground.

From the SMI window, on the Utilities menu, click one of the following options:

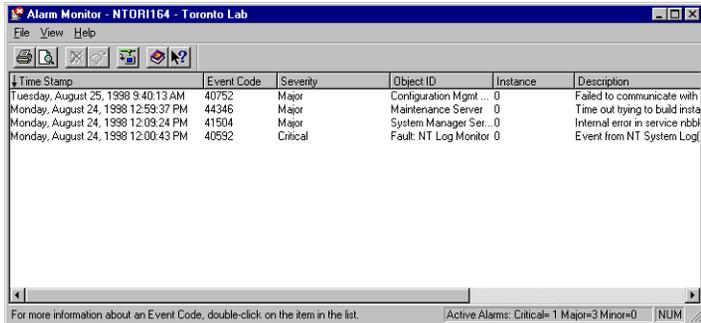
- Alert All Alarms - This option shows the Alarm Monitor window every time an alarm is registered or updated.
- Alert Major and Critical Only - This option shows the Alarm Monitor window every time a Major or Critical alarm is registered or updated.
- Alert Critical Only - This option shows the Alarm Monitor window every time a Critical alarm is registered or updated.

## To configure the Alarm Monitor to appear in the background

If you do not want to see the Alarm Monitor every time it receives and updates a new alarm, you can force it to appear in the background of your display.

- 1 From the SMI window, choose System Administration → Alarms & Events → Alarm Monitor.

**Result:** The Alarm Monitor window opens.



- 2 From the SMI window Utilities menu, click Alerting Off.

**Result:** The Alarm Monitor is moved to the background. When a critical alarm is registered, the Alarm Monitor window taskbar flashes until the Alarm Monitor window is brought to the foreground.

**Note:** If you select Alerting Off and then minimize the Alarm Monitor, the minimized Alarm Monitor flashes when a critical alarm is registered until the Alarm Monitor window is restored.

## To obtain more information about an alarm

- 1 Double-click an alarm's entry in the Alarm Monitor.
- 2 The Event Details dialog box appears.
- 3 Click Help on Event.

# Clearing active alarms

## When to use

Alarms are cleared from the Alarm Monitor in one of two ways:

- The Symposium Call Center Server automatically clears alarms when the alarm condition changes.
- You can clear alarms manually.

When you clear an alarm, you remove the selected alarm (but not the event that raised it) from the event log. The action also removes the selected alarm from the list shown in the Alarm Monitor. If the event occurs again, however, the alarm reappears in the Alarm Monitor.

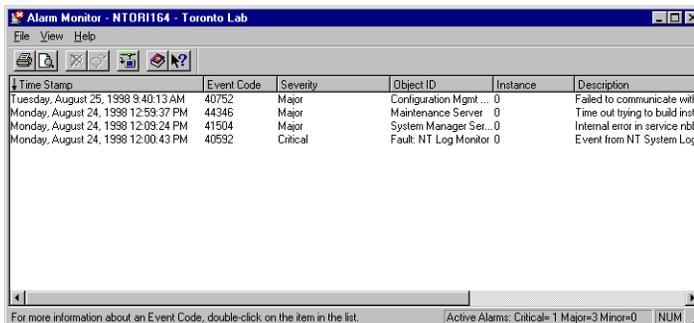
## Example

At BestAir, an alarm appears with the description “Disk is 90% full.” Mark Brown, the system administrator, checks the system disk space, removes temporary files, and might even decide to order a larger hard drive. Only after he has resolved the problem does he clear the alarm from the Alarm Monitor.

## To clear an alarm

- 1 From the SMI window, choose System Administration → Alarms & Events → Alarm Monitor.

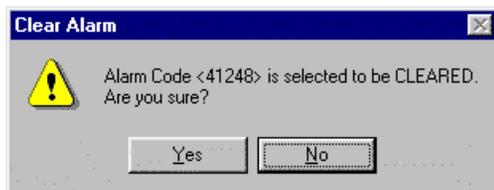
**Result:** The Alarm Monitor window opens.



- 2 Select the alarm you want to clear.

- 3 Choose File → Clear Alarm.

**Result:** A dialog box asks you to confirm that you want to clear the selected alarm.



- 4 Click Yes.

**Result:** The alarm entry is removed from the Alarm Monitor.



# Chapter 12

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## Managing voice prompts

### In this chapter

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# Overview

## Introduction

You can set up and manage the voice prompts (messages) used by your Interactive Voice Response system. To do so, use the Voice Prompt Editor.

**Note:** To use the Voice Prompt Editor to manage your voice prompts, you must use Meridian Mail as your voice processing system.

## Voice segments

Each voice prompt consists of segments. To minimize the storage required for your voice prompts, you can create modular segments. You can use these segments in different combinations to produce your voice prompts.

### Example

You can have a voice prompt similar to the following prompt:

*Welcome to the BestAir Booking line.  
To verify the departure time of one of today's flights, press 1.  
To book a flight, press 2.  
To obtain schedule information, press 3.  
For any other information, please remain on the line.*

When the user presses 1, he or she hears the following message:

*Flight BA971 to Munich is delayed one hour, and is now scheduled for departure at 2:19 p.m. All other flights are on time.*

These prompts consist of a number of segments. One voice segment contains the word “press,” which is used several times in the first prompt. Other voice segments contain the numbers, 1, 2, 3, 7, 9, and 19, and the phrases “p.m.” and “flights.”

## Voice files

Voice segments are stored in voice files. You can use voice files to organize your voice segments.

**Note:** Nortel Networks recommends that you create no more than two voice files.

## Play groups

Within each voice file, you can organize voice segments into play groups. A play group is a set of voice segments. You can use play groups to play back multiple segments during testing.

# Logging on to and exiting from the Voice Prompt Editor

## Introduction

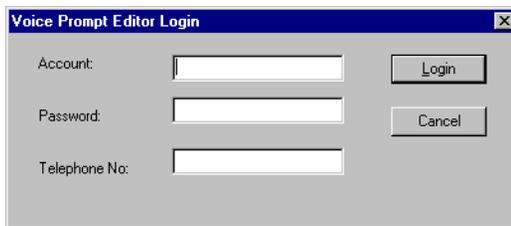
To create and manage voice files and voice prompts, you must log on to use the Voice Prompt Editor. When you are finished using the Voice Prompt Editor, you can exit.

## To log on

To log on to the Voice Prompt Editor, follow these steps.

- 1 From the SMI window, double-click System Administration.
- 2 Double-click Voice Prompt Editor.

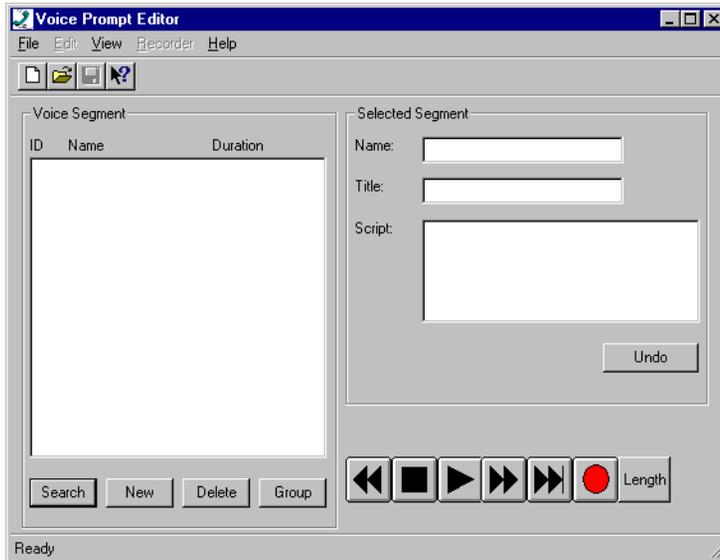
**Result:** The Voice Prompt Editor Login dialog box appears.

The image shows a dialog box titled "Voice Prompt Editor Login". It has a blue title bar with a close button (X) on the right. The dialog box contains three text input fields: "Account:", "Password:", and "Telephone No:". To the right of the "Account:" field is a "Login" button. To the right of the "Password:" field is a "Cancel" button. The "Telephone No." field does not have a button next to it.

- 3 In the Account box, type the Meridian Mail mailbox containing the voice prompts you want to work with.
- 4 In the Password box, type the password for that mailbox.
- 5 In the Telephone No. box, type the telephone number of the phoneset you want to use to record or play back voice segments.

## 6 Click Login.

**Result:** The Voice Prompt Editor Login dialog box closes, and the Voice Prompt Editor window appears.



## To exit

Exit from the Voice Prompt Editor in one of the following ways:

- To exit completely, choose File → Exit (or simply click the X in the upper right corner of the window).
- To log off, choose File → Login. The program prompts for confirmation. Click OK.

**Result:** You are logged off of the current session, any open voice files are closed, and the Voice Prompt Editor Login window appears.



# Section A: Working with voice files

## In this section

Creating a voice file	294
Opening a voice file	295
Other procedures for voice files	297

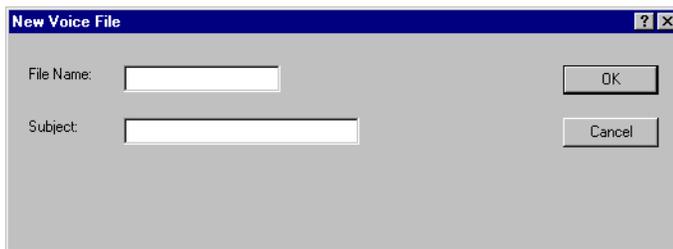
# Creating a voice file

## To create a voice file

**Note:** Nortel Networks recommends that you create no more than two voice files.

- 1 From the Voice Prompt Editor window, choose File → New.

**Result:** The New Voice File dialog box appears.



- 2 Enter information into the following boxes:

**File Name:** The name of the new voice file.

**Note:** Voice file names are case-sensitive. When you reference voice files in scripts and variables, make sure that the filename matches the name you create here.

**Subject:** Optional. A description of the new voice file.

- 3 Click OK.

**Result:** You return to the Voice Prompt Editor window.

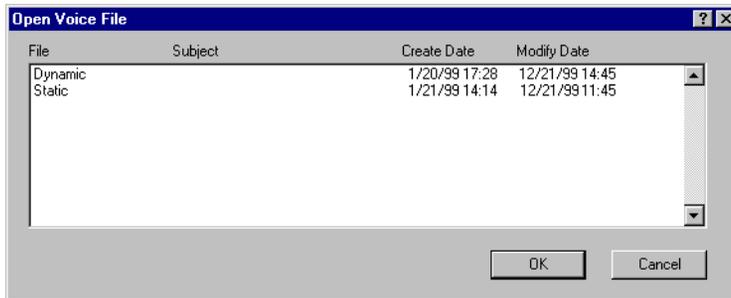
Before you work with the voice file, you must open it. See “Opening a voice file” on page 295.

# Opening a voice file

## To open a voice file

- 1 From the Voice Prompt Editor window, choose File → Open.

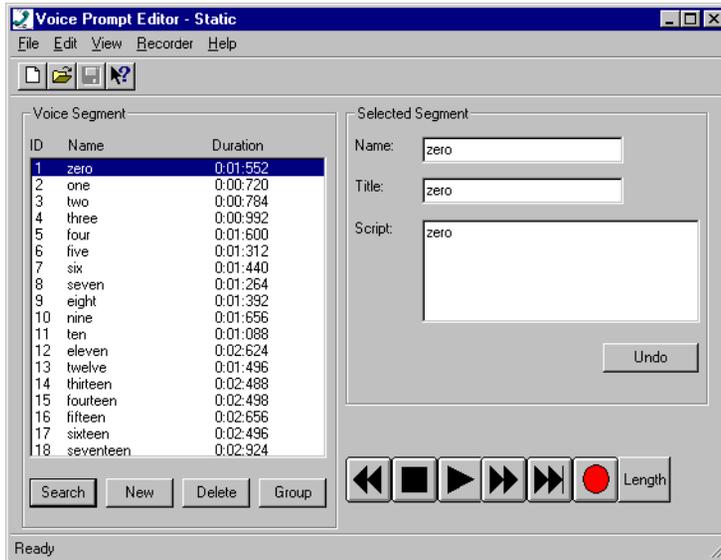
**Result:** The Open Voice File dialog box appears.



- 2 Select the file you want to open.

3 Click OK.

**Result:** You return to the Voice Prompt Editor window. The window contains the list of segments in the selected voice file.



## Other procedures for voice files

### To save a voice file

From the Voice Prompt Editor window, choose File → Save.

### To revert to a previously saved voice file

If you make changes to a voice file and then you decide that you do not want the changes you have made, you can restore the last-saved copy of the voice file.

From the Voice Prompt Editor window, choose File → Revert.

For step-by-step instructions, press F1 to access the online Help.

### To copy a voice file

**Note:** The voice file you are copying must not be open.

From the Voice Prompt Editor window, choose File → Copy.

For step-by-step instructions, press F1 to access the online Help.

### To rename a voice file

**Note:** The voice file you are renaming must not be open.

From the Voice Prompt Editor window, choose File → Rename.

For step-by-step instructions, press F1 to access the online Help.

## To delete a voice file

### Notes:

1. The voice file you are renaming must not be open.
2. The voice file is not deleted until you log off the Voice Prompt Editor. Until then, you can undelete any voice file that you have marked for deletion.

From the Voice Prompt Editor window, choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

## To Undelete a voice file

If you delete a voice file, and then decide you do not want to delete it, you can cancel the deletion, provided that you have not logged off the Voice Prompt Editor since deleting the file.

From the Voice Prompt Editor window, choose File → Undelete.

For step-by-step instructions, press F1 to access the online Help.

## Section B: Working with voice segments

### **In this section**

Creating a voice segment	300
Recording a voice segment	301
Playing a voice segment	302
Creating and playing a group of voice segments	303
Searching for a voice segment	305
Editing a voice segment's length	307
Editing the length of all voice segments in a voice file	310
Other procedures for voice segments	313

# Creating a voice segment

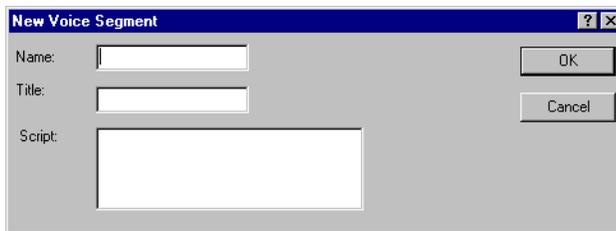
## Before you begin

Open the voice file to which you are adding a new voice segment (for more information, see “Opening a voice file” on page 295).

## To create a voice segment

- 1 In the Voice Prompt Editor window, in the Voice Segment group box, click New.

**Result:** The New Voice Segment dialog box appears.



**Note:** If you choose File → New, you create a new voice file.

- 2 Enter information into the following boxes:

**Name:** The name of the new voice segment.

**Title:** A description of the new voice segment.

**Script:** The text that the new segment is to contain. (This is for reference information only.)

- 3 Click OK.

**Result:** The New Voice Segment dialog box closes and the new segment is created.

- 4 Continue with the following procedure to record the voice segment.

# Recording a voice segment

## To record a voice segment

- 1 In the Voice Prompt Editor window, select the voice segment you want to record.
- 2 Click Record ()  
**Result:** The phoneset you specified during logon rings.
- 3 Answer the phone.
- 4 After the tone, say the words you want to record in the voice segment.
- 5 Click Stop ()  
**Note:** The segment is automatically saved when recording stops.
- 6 To record another segment, follow these steps:
  - a. Select the segment.
  - b. Click Record ()
  - c. After the tone, say the words you want to record in the voice segment.
  - d. Click Stop ()
- 7 Repeat step 6 until you are finished recording segments.
- 8 To play your voice segments, continue with step 2 on page 302.
- 9 Hang up.

You might find that you have recorded too much silence either at the beginning or at the end of the segment. To edit the silence, see “Editing a voice segment’s length” on page 307.

# Playing a voice segment

## To play a voice segment

**Note:** If you have just recorded a voice segment, start at step 2.

- 1 In the Voice Prompt Editor window, select the voice segment you want to play.
- 2 Click Play ()  
**Result:** If the phoneset you specified during logon is on hook, it rings. Continue with the next step. If the phoneset is off hook, the segment starts to play. Continue with step 4.
- 3 Answer the phone.  
**Result:** The segment starts to play.
- 4 To move backward or forward by increments of five seconds, click Skip Backward () or Skip Forward ()
- 5 To play the next voice segment in the Voice Segment list box, click Play Next ()
- 6 To stop, click Stop ()
- 7 Hang up.

You might find that you have recorded too much silence either at the beginning or at the end of the segment. To edit the silence, see “Editing a voice segment’s length” on page 307.

# Creating and playing a group of voice segments

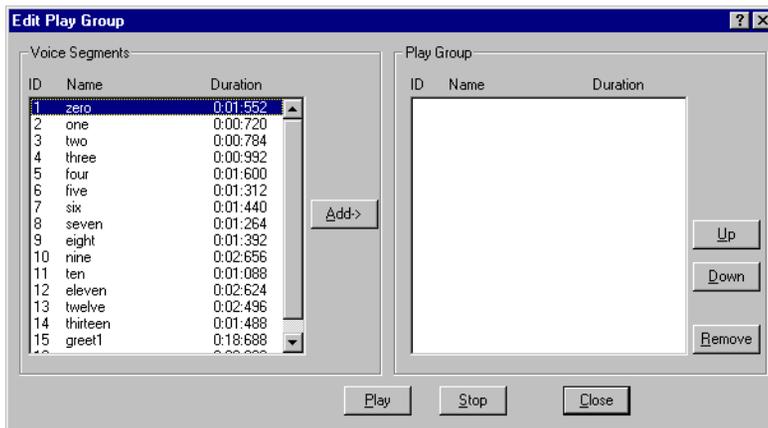
## When to use

You might want to play a group of voice segments after recording them to see how they fit together, and to find out if the silence of any segment needs to be adjusted.

## To play a group of voice segments

- 1 In the Voice Prompt Editor window, click Group.

**Result:** The Edit Play Group dialog box appears.



- 2 In the Voice Segments list box, click a voice segment that you want to add to the play group.

- 3 Click Add.

**Result:** The voice segment is added to the list in the Play Group list box.

- 4 Repeat steps 2 and 3 until you have the voice segments you need in the play group.

**Note:** To remove a voice segment from the group, click the voice segment in the Play Group list box. Then click Remove.

5 Click Play.

**Note:** If you need to move a voice segment up or down, click the voice segment in the Play Group list box, and then click Up or Down.

6 When you have finished playing the group, click Stop.

7 Click Close to return to the Voice Prompt Editor window.

# Searching for a voice segment

## Introduction

You can search for a voice segment by its segment ID or by one or more of the following elements:

- the name of the voice segment
- the title of the voice segment
- the words used in the voice segment (as specified in the Script box)
- the duration of the voice segment

## To search for a voice segment

- 1 On the Voice Prompt Editor window, click Search.

**Result:** The Search for Segment dialog box appears.

The screenshot shows a dialog box titled "Search for Segment". It has a standard Windows-style title bar with a question mark icon and a close button. The dialog contains two radio buttons: "Segment ID" (which is selected) and "Text Fields". Under "Text Fields", there are four input fields: "Name:", "Title:", "Script:", and "Duration:". The "Duration:" field has a placeholder text "mm:ss (> and < allowed)". On the right side of the dialog, there are two buttons: "Eind Next" and "Cancel".

**2** What do you want to do?

<b>IF you want to</b>	<b>THEN</b>
search on the segment ID	a. click Segment ID. b. type theID number of the voice segment in the Segment ID box.
search on name, title, script, or duration	a. click Text Fields. b. type the text you want to find in the Name, Title, Script, or Duration box.

**3** Click Find Next.**4** Click Find Next again to find the next segment that satisfies the search conditions.**5** When you are finished, click Cancel to close the Search for Segment dialog box.

# Editing a voice segment's length

## When to use

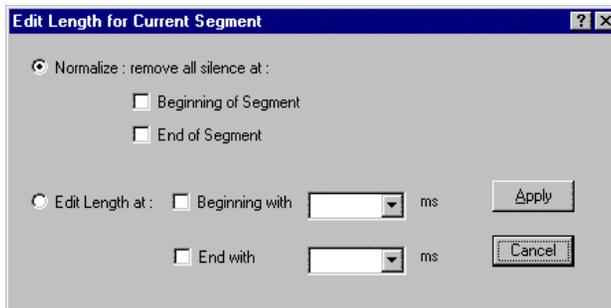
After recording a voice segment, you might find that you have too much or too little silence in the segment, or you simply want to shorten the recording. This section provides instructions for

- shortening a voice segment
- lengthening (adding silence to) a voice segment
- removing all silence from a voice segment

## To shorten a voice segment

- 1 In the Voice Prompt Editor window, select the voice segment.
- 2 Click Length.

**Result:** The Edit Length for Current Segment dialog box appears.



- 3 Click Edit Length at.
- 4 To remove voice, noise, or silence from the beginning of the voice segment, follow these steps:
  - a. Click Beginning with.
  - b. In the Beginning with list box, select a negative number of milliseconds.
- 5 To remove voice, noise, or silence from the end of the voice segment, follow these steps:

- a. Click End with.
  - b. In the End with list box, select a negative number of milliseconds.
- 6 Click Apply.

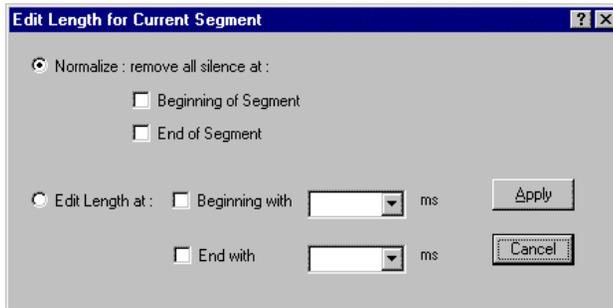
**Result:** The Edit Length for Current Segment dialog box closes, and the voice segment is shortened.

To check that you have removed the correct amount of silence or noise, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

## To lengthen a voice segment

- 1 In the Voice Prompt Editor window, select the voice segment.
- 2 Click Length.

**Result:** The Edit Length for Current Segment dialog box appears.



- 3 Click Edit Length at.
- 4 To add silence to the beginning of the voice segment, follow these steps:
  - a. Click Beginning with.
  - b. In the Beginning with list box, select a positive number of milliseconds.
- 5 To add silence to the end of the voice segment, follow these steps:
  - a. Click End with.
  - b. In the End with list box, select a positive number of milliseconds.

- 6 Click Apply.

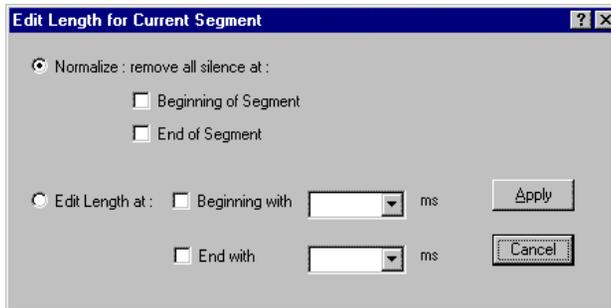
**Result:** The Edit Length for Current Segment dialog box closes, and the voice segment is lengthened.

To check that you have added the correct amount of silence, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

## To remove all silence from a voice segment

- 1 In the Voice Prompt Editor window, select the voice segment.
- 2 Click Length.

**Result:** The Edit Length for Current Segment dialog box appears.



- 3 Click Normalize.
- 4 To remove voice, noise, or silence from the beginning of the voice segment, click Beginning with.
- 5 To remove voice, noise, or silence from the end of the voice segment, click End with.
- 6 Click Apply.

**Result:** The Edit Length for Current Segment dialog box closes, and all silence is removed from the beginning or end of the voice segment, or from both.

To check that you have removed the correct amount of silence or noise, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

# Editing the length of all voice segments in a voice file

## When to use

After recording voice segments, you might find that you have too much or too little silence in the segments, or you simply want each voice segment to have the same amount of silence. This section provides instructions for

- shortening all voice segments
- lengthening (adding silence to) all voice segments
- removing all silence from all voice segments

## To remove a specified length from all voice segments

- 1 From the Voice Prompt Editor window, choose File → Length.

**Result:** The Edit Segment Lengths in Voice File dialog box appears.

- 2 Click Edit Length.

- 3 To remove voice, noise, or silence from the beginning of the voice segments, follow these steps:

- a. Click Beginning with.

- b. In the Beginning with list box, select a negative number of milliseconds.

- 4 To remove voice, noise, or silence from the end of the voice segments, follow these steps:

- a. Click End with.

- b. In the End with list box, select a negative number of milliseconds.

- 5 Click Apply.

**Result:** The Edit Segment Lengths in Voice File dialog box closes, and all voice segments are shortened.

To check that you have removed the correct amount of silence or noise, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

## To add a specified length to all voice segments

- 1 From the Voice Prompt Editor window, choose File → Length.  
**Result:** The Edit Segment Lengths in Voice File dialog box appears.
- 2 Click Edit Length at.
- 3 To add silence to the beginning of the voice segments, follow these steps:
  - a. Click Beginning with.
  - b. In the Beginning with list box, select a positive number of milliseconds.
- 4 To add silence to the end of the voice segments, follow these steps.
  - a. Click End with.
  - b. In the End with list box, select a positive number of milliseconds.
- 5 Click Apply.  
**Result:** The Edit Segment Lengths in Voice File dialog box closes, and all voice segments are lengthened.

To check that you have added the correct amount of silence, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

## To remove all silence from all voice segments

- 1 From the Voice Prompt Editor window, choose File → Length.  
**Result:** The Edit Segment Lengths in Voice File dialog box appears.
- 2 Click Normalize.
- 3 To remove voice, noise, or silence from the beginning of the voice segment, click Beginning with.
- 4 To remove voice, noise, or silence from the end of the voice segment, click End with.
- 5 Click Apply.  
**Result:** The Edit Segment Lengths in Voice File dialog box closes, and all silence is removed from the beginning or end of all voice segments, or from both.

To check that you have removed the correct amount of silence or noise, play the voice segment (see “Playing a voice segment” on page 302). Repeat this procedure as many times as necessary until it is correct.

## Other procedures for voice segments

### To change the attributes of a voice segment

In the Voice Prompt Editor window, select the voice segment. Change the desired attributes.

For step-by-step instructions, press F1 to access the online Help.

### To delete a voice segment

In the Voice Prompt Editor window, click the voice segment in the Voice Segment list box. Click Delete.

**Result:** The deletion mark (\*\*d\*\*) appears beside the selected voice segment.

**Note:** The voice segment is not deleted until you close the voice file or log off the Voice Prompt Editor. Until then, you can undelete any voice segments that are marked for deletion.

For step-by-step instructions, press F1 to access the online Help.

### To undelete a voice segment

If you delete a voice segment, and then decide you do not want to delete it, you can cancel the deletion, provided that you have not closed the voice file since deleting the segment.

In the Voice Prompt Editor window, click the voice segment marked for deletion. Click Undo.

**Result:** The deletion mark (\*\*d\*\*) disappears from beside the selected voice segment.

For step-by-step instructions, press F1 to access the online Help.



# Chapter 13

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## Maintaining and troubleshooting Meridian Link

### In this chapter

Maintenance and diagnostic tools	316
Meridian Link troubleshooting	319
Using the Meridian Link API tool	321
Using the Meridian Link Trace tool	332
Using the TSM OA&M tool	333

# Maintenance and diagnostic tools

## Introduction

Symposium Call Center Server Release 4.0 includes a number of maintenance and diagnostic tools to assist technicians with maintaining and troubleshooting the operation of the Meridian Link. These tools are normally used to query the status of Meridian Link-related processes and resources, and to trace the message flows associated with Meridian Link operation.

In the Symposium Call Center Server, most Meridian Link activity is handled by the following processes:

- MLSM—Meridian Link Services Manager is responsible for the message flow between the external, third-party Meridian Link-based application and Telephony Services Manager (TSM).
- TSM—Telephony Services Manager is responsible for handling MLSM requests to acquire and monitor resources, and to register applications and DNs. It is also responsible for all of the message flow between the MLSM process and the Meridian 1 over the Application Module Link (AML).

**Note:** Due to the architectural differences between the current Application Module-based Meridian Link (AM Meridian Link) product and MLSM on Symposium Call Center Server, there are significant differences in the tools that are used for maintenance and diagnostic purposes.

## Application Simulator tool

Use this tool to simulate an application that uses the same TSM API that is available to the other applications (for example, MLS, ASM, and TFE). With this tool, you can

- verify the status of the links (AML and Access)
- test the acquiring process
- test monitoring

If you suspect that TSM is acting abnormally, then this is the most appropriate tool to use.

## Meridian Link API tool

Use this tool if you suspect that MLS is causing problems. The tool simulates a Meridian Link application. With this tool, you can verify

- Meridian Link connectivity
- the registration process
- the general state of MLS (whether various functions are working correctly and being propagated to TSM and Meridian 1, and whether response messages are built correctly, and so on)

## SMonW

Use this tool to query the status of Symposium Call Center Server services. The most common status values are described in the following table:

STARTING	When the system first comes up, most services have this status.
UP	During a normal startup, services move into this status from STARTUP.
UNKNOWN	Services have this status if they are down. This status can mean that a service has been shut down, or that it has crashed. The tool does not indicate which condition applies.

For more information, see the *Software Installation and Upgrade Guide*.

## Performance Monitor

Use this tool to diagnose details of system utilization. You can use this tool to analyze each process or service, or even individual threads. With this tool, you can monitor memory use, processing time, and a variety of other factors.

## Services Manager

Use this tool to start up or shut down services, or to view the status of a service. The only status reported in this window is Started. In most circumstances, this is equivalent to SMonWs UP status.

## Meridian Link Trace tool

Use this tool to turn on and off tracing and recording of message flow between the Symposium Call Center Server and the external Meridian Link application. This tool provides the same functionality as the Meridian Link User (mlusr) commands on the AM Meridian Link provide to the Application Module-based Meridian Link product.

## Telephony Services Manager OA&M

Use this tool to trace the following:

- AML messages
- Access link messages
- messages for each application association (that is, from TSM to MLS)

You can also use this tool to query application associations and resources (that is, registered applications and monitored or acquired devices). TSM OAM provides functionality that is similar to that provided by Meridian Link User (mlusr) commands on the AM Meridian Link.

# Meridian Link troubleshooting

## Introduction

This section provides guidelines for troubleshooting problems with Meridian Link.

## To troubleshoot problems with Meridian Link applications

- 1 Use the Meridian Link Trace tool to verify the validity of the third-party Meridian Link application's actions (that is, make sure that the requests the application is making are correct and valid).
- 2 If the requests and responses are correct, and the problem is with the message content, kinds of messages received, execution of a request, and so on, use the Meridian Link API tool to verify that MLS is operating correctly.

If this tool does not reveal problems, the problem is probably with the third-party application.

- 3 If the Meridian Link API tool reveals problems, use the Application Simulator tool to verify the links, and make sure TSM is operating properly.

If this tool does not reveal problems, the problem might be caused by

- problems within the MLS process
- user errors, such as failure to register an application or acquire devices

- 4 If the Application Simulator tool reveals problems, use the TSM OA&M tool to troubleshoot TSM.

## To troubleshoot failure to respond by MLSM process

- 1 Use SMonW or the Services Manager to see if MLSM has been started.

If the service is up in one window but down in the other, MLSM has crashed. Check the event log (the server might have logged appropriate error messages), and use the Meridian Link Trace tool to find out why.

- 2 If both SMonW and the Services Manager indicate that the service is up, try connecting, registering, and using the Meridian Link API tool.

If you cannot connect, register, or send messages, then MLSM is in an unusable state (even though it has not crashed). Use the Performance Monitor to see if MLS has a heartbeat (that is, see if there is a sign of any activity from the MLS threads or process). Although this does not remedy the situation, it can provide a clue to technicians as to what went wrong.

- 3** Restart the MLSM service.

# Using the Meridian Link API tool

## Command line options

The Meridian Link executable can be run with four command line options:

- p: (processing)—prevents the tool from translating the hex-stream into a semi-English format, used to increase the tool's processing speed
- bo: (buffer out)—prints the outgoing hex-stream
- bi: (buffer in)—prints the incoming hex-stream
- np: (no poll)—stops automatic poll response

## To start the Meridian Link API tool

- 1 Check SMonW to make sure that the TSM and OAM services are up.
- 2 If you want to log on agents, make sure that ASM is up.
- 3 Run MLS on the server either as a service or a process.
- 4 Run `mmlink_tool.exe` by double-clicking the file in Windows Explorer. The file is located in the path `Nortel\iccm\bin`.

- 5 Type the CLAN IP address of the server to which you want to connect (the one running MLS). Press Enter.

**Result:** The API Tool menu appears.

```
API Tool
-----
1  Quit
2  Tag/Msg Administration
3  Send a message
4  Receive messages
5  Set Options
```

**Note:** If the tool window disappears, MLS is probably not up yet. Wait a few minutes and try again.

## To register an application

- 1 Type **3** (Send a Message) and press Enter.

**Result:** The following main menu appears:

```
Send ML Message
-----
1   Previous Menu
2   Registration
3   Resource Acquisition
4   Call Processing
5   Voice Processing
6   Link Status
7   Administration
8   Use Script File
9   Any Message
10  Raw Message
```

First, you must always register an application. You can do so using a script (see “About scripts” on page 327) or manually, using the menus. For this procedure, use the sample script in “Application Registration” on page 327.

- 2 Type **8** (Use Script File), and press Enter.

**Result:** The tool prompts for the file name.

- 3 Type the complete path name for the script file (for example, d:\nortel\iccm\applreg01.srp).
- 4 For the number of iterations (the number of times you wish to execute the script file), type **1**.

**Result:** After a few seconds, you should receive a confirmation from MLS showing the result of your request:

```
Received : REG_APPL_RSPNS
ML_ASSOC_ID: 1
```

```

ML_REF_ID: 32768
ML_NUM_SERVICES: 0
ML_SERV_LIST: NONE
ML_STATUS: 0
ML_CAUSE: NONE

```

- 5 If you want to register other applications, run `mmlink_tool` again and repeat steps 1 to 4.

## Understanding the results

The following table describes the components of this message:

Component	Description
ML_ASSOC_ID	A unique non-zero ID that represents this particular client application. All messages sent to MLS from this application must use this association ID.
ML_REF_ID	(Optional) An identifier used by a client application to pair requests and responses (see Interface Specification on appropriate reference ID usage). Unsolicited messages sent by MLS have an ML_REF_ID of 0 (as no client message was sent requesting it).
ML_STATUS/ ML_CAUSE	A value other than 0 or NONE, respectively, indicates the request failed. Thus, if a status or cause value greater than 0 appeared in the registration application response message above, the application was not able to register (see Interface Specification for meaning of cause value).

## Poll requests

You can request polling in your script by entering a value from 1 to 60 (poll times in increments of 10 seconds) in the second-last field in the application registration. If you do not request polling in your script, but you acquire a resource, polling is automatically enabled, and the poll time is set to six (one minute).

Polling messages appear if there is no message flow for the poll time

```
Received : ASSOC_POLL
          ML_ASSOC_ID: 1
          ML_REF_ID: 0
```

and the Meridian Link API tool's response is

```
Returning Poll...
```

Polling messages do not affect the tool in any way, so if one appears while you are entering information, ignore it. They simply let you know that the connection is still alive (and remind you of the `assoc_id`).

## To register and release DNs and position IDs

- 1 Make sure the switch has all of the DNs, Position IDs, CDNs, and so on, configured correctly. Keys corresponding to DNs or Position IDs should be set with the AST option. If you are using CDNs for applications other than Symposium Call Center Server, verify that the default ACD group is the group to which your Position IDs belong.

- 2 The easiest method to register is through scripts (see “DN or Position ID registration” on page 327). However, the manual method is fairly quick. To use the manual method, from the main menu, type **2** (Registration) and press Enter.

- 3 Choose DN registration.

**Result:** The following prompt appears: `ML_ASSOC_ID [numeric] (NONE) >`.

- 4 Type the association ID of the application and press Enter.

**Result:** The following prompt appears: `ML_REF_ID [numeric] (NONE) >`.

- 5 Optionally, type a reference ID and press Enter. If you do not want to use a reference ID, simply press Enter.

**Result:** The following prompt appears: `ML_NUM_DN [numeric] (NONE) >`.

- 6 Specify the number of DNs you want to register, and press Enter.

**Result:** The following prompt appears: `ML_DN_LIST [string list] (NONE) >`.

- 7 Enter the DNs you want to register. To enter multiple DNs, separate them by spaces, as in the following example:

```
ML_DN_LIST [string list] (NONE)> 3153 3154 2153
```

**Result:** The following prompt appears: ML\_DN\_TYPES [numeric list] (NONE) > .

- 8 Enter the types of the DNs you want to register. If you entered multiple DNs, you must specify the type of each DN, separated by spaces, as in the following example:

```
ML_DN_TYPES [numeric list] (NONE)> 129 129 130
```

The following table lists valid types:

For DNs of type	enter
DNs, ACD-DNs, CDNs	129
Position IDs	130

**Result:** The following prompt appears: ML\_MORE [numeric] (NONE) > .

- 9 Type a dash (–) and press Enter.

You release DNs and Position IDs in the same way, from the same menu. You should release all acquired devices at the end of testing.

## Testing

Now that the application is registered and devices have been acquired, you can execute the other functions. If you want to do any repeat testing (for example, make a call, answer a call, and repeat this 1000 times), you must use a script (for the number of iterations, enter the number of times you want the script to execute). For simple one-time commands, use the menu. All call processing (make-call, answer-call, release-call) is under Call Processing in the main menu. If you want to acquire a CDN or Voice Channel (which has been configured correctly on the switch or Meridian Mail), use Resource Acquisition. For tests involving more complex commands, refer to the Interface Specification and full.txt for message requirements, formats, and so on.

## About scripts

Scripts save you time because they

- allow you to easily enter the same information many times
- allow the tool to send out requests more quickly (this is important when response is needed within a time limit)
- permit multiple processing of requests (that is, being able to make a call several times)

However, you often have to modify scripts.

### Application Registration

The script (applreg01.srp) looks like this:

```
REG_APPL_REQ      |1|-|endurance|-|3|97 98 100|-|-|0|SL16|-|-|-|
```

where	is
the string in caps	the message type. You only need to look up the type (if it is not already in the menus) in one of the header files.
field 3 (endurance)	the application's string ID. This is any name you want to provide. If you are running multiple client applications, simply change this name, save the file under a new filename, and use this file instead of applreg01.srp for the new applications registration process.
field 9 (0)	the customer number. You might need to adjust this number so that devices can be acquired correctly. Do this before registering.

Fields are delimited by the | character.

### DN or Position ID registration

You can register DNs and position IDs manually (see “To register and release DNs and position IDs” on page 325), or with a script like the following (dnreg01.srp):

```
REG_DN_REQ|1|-|1|3118|129|-|
DELAY 3
```

```
REG_DN_REQ|1|-|1|2119|130|-|
DELAY 3
```

The following table describes the fields for the REG\_DN\_REQ statement in the script. These fields correspond to the prompts displayed when you register DNs and position IDs manually:

Field	Description
1 (ML_ASSOC_ID)	A unique non-zero ID that represents this particular client application. All messages sent to MLS from this application must use this association ID.
2 (ML_REF_ID)	(Optional) An identifier used by a client application to pair requests and responses (see the Interface Specification on appropriate reference ID usage). Unsolicited messages sent by MLS have an ML_REF_ID of 0 (as no client message was sent requesting it).
3 (ML_NUM_DN)	The number of DNs and Position IDs you want to acquire.
4 (ML_DN_LIST)	The DN or Position ID to be acquired, as configured on the switch.
5 (ML_DN_TYPES)	The DN type, either 129 (for DNs, ACD-DNs, or CDNs), or 130 (for position IDs).
6 (ML_MORE)	Specifies whether to continue entering information.

You can use the DELAY command at any time. It causes the tool to pause for the given number of seconds before continuing. The delay can be zero seconds or more. This is most useful for the action scripts.

### Action Scripts

These scripts, which are used for the actual testing, include stress01.srp and full.txt. The script stress01.srp simply makes some calls from DNs to DNs, delays a few seconds, answers the calls, and delays again:

```
APPL_MAKE_CALL |1|-|8|3150|-|8|3151|-|1|
APPL_MAKE_CALL |1|-|8|3152|-|8|3153|-|1|
```

```

DELAY 2
ANSWER_CALL      | 1 | - | 8 | 3151 |
ANSWER_CALL      | 1 | - | 8 | 3153 |
DELAY 2

```

The following table describes the fields for the APPL\_MAKE\_CALL statement in the script:

Field	Description
1	Association ID. A unique non-zero ID that represents this particular client application. All messages sent to MLS from this application must use this association ID.
2	(Optional) Reference ID. An identifier used by a client application to pair requests and responses (see the Interface Specification on appropriate reference ID usage). Unsolicited messages sent by MLS have an ML_REF_ID of 0 (as no client message was sent requesting it).
3	The DN type, with one of the following values: <ul style="list-style-type: none"> <li>■ 8 (internal DN)</li> <li>■ 16 (ACD-DN)</li> <li>■ 22 (CDN)</li> <li>■ 30 (position ID)</li> </ul>
4	Origination address (the call from phone).
5	Destination address (the phone being called).
9	Manner. This field has the following values: <ul style="list-style-type: none"> <li>■ 0 (polite—only goes through if the destination is free)</li> <li>■ 1 (belligerent—goes through even if the destination is busy)</li> </ul> <p>The example script uses the belligerent manner because calls are not released at the end of each cycle. Therefore, on the next pass, the destination is busy.</p>

For the ANSWER\_CALL statement, the fields are assoc\_id, ref\_id, type, and origination. If the types are now getting confusing, leave them out. As far as origination is concerned in this last context, it refers to the DN or Position ID from which you want to answer the call.

## Error messages and unsolicited messages

An important part of using the tool involves understanding the parts of the incoming messages. You are likely to receive the following messages:

- register application response
- DN register response
- call service response (for example, answer call or release call response)
- call progress
- call offered
- unsolicited status
- polls

The key is to check the STATUS and CAUSE values. A value other than 0 or NONE is an error, and must be examined. The following table shows errors and possible causes. For other messages (or specific cause values), refer to the Interface Specification. If the cause of the error is not self-explanatory, contact your Nortel Networks Customer Support representative.

### Message response that received non-zero

STATUS/CAUSE value	Possible cause
application registration rspns	<ul style="list-style-type: none"> <li>■ The TSM is not up, or needs to be restarted.</li> <li>■ The MLSM version is incompatible with TSM/dlls.</li> <li>■ The Service list is (partially) invalid.</li> <li>■ The Application ID has already been used by an existing application.</li> </ul>

**Message response that  
received non-zero  
STATUS/CAUSE value****Possible cause**

---

dn registration rspns

The switch is not configured correctly. Make sure the keys corresponding to DN/PosID are AST and not already acquired by another server.

call service rspns

Trying to make a call from Position ID. SECU field in overlay 17 is set to NO for this ELAN.

---

# Using the Meridian Link Trace tool

## Introduction

You can use the trace tool to turn on and off tracing and recording of message flow between the Symposium Call Center Server and a host computer running a Meridian Link application.

## Trace file

The trace file generated by this tool is called `MLSMTraceFile.txt`. It is stored in the `Nortel\iccm\bin` directory. This method of tracing Meridian Link messages is equivalent to tracing link 1 under Meridian Link Release 4 or 5.

## To enable tracing

- 1 Start the Meridian Link Trace tool by double-clicking `ml_trace.exe` in the Windows Explorer, or running it from a Windows command line. The file is located in the path `Nortel\iccm\bin`.

**Result:** An ICCM Meridian Link Services Manager Trace Tool window appears.

- 2 Click Configuration and select Trace.

**Result:** A dialog box appears.

- 3 Choose the association IDs of the applications you want to trace.

- 4 Click ON, and then click Activate.

- 5 Click Done.

**Result:** The dialog box disappears.

- 6 When you are finished, turn off tracing by clicking Configuration, selecting trace again, clicking OFF, and then clicking Done.

For tracing of AML messages, similar to a link 0 trace under Meridian Link Release 4 or 5, use the TSM OA&M (see the following section).

# Using the TSM OA&M tool

## Introduction

You can use the TSM OA&M tool to perform the following tasks:

- Query TSM for information about one session (association) or all sessions.
- Query TSM for information about acquired resources.
- Query TSM for information about monitored resources.
- Turn AML tracing on and off.
- Trace TSM sessions (applications).
- Turn ACCESS tracing on and off.

## Stopping traces

Traces do not stop when you exit the TSM OA&M tool. You can stop a trace from the session in which you start it, or from another session (that is, after exiting and restarting the tool).

## No trace status querying

You cannot check whether tracing is on or off. However, the tool allows you to turn on a trace that is already active and turn off a trace that is inactive. If you attempt to turn on a trace that is active, the program asks whether you want to clear the current trace file or append to it.

## To start the TSM OA&M tool

- 1 Check SMonW to make sure that the TSM service is up.
- 2 If you want to turn on AML tracing, make sure that the Ethernet connection to the switch is active.
- 3 If you want to turn on ACCESS tracing, make sure that the ACCESS connection to Meridian Mail is active.

- 4 Run `tsm_oam.exe` by double-clicking the file in Windows Explorer. The file is located in the path `Nortel\iccm\bin`.

**Result:** The tool registers with TSM, and the TSM OAM menu appears.

```
Telephony Services Manager - OAM
```

```
OAM Main Menu
```

- 1 Quit
- 2 Query Sessions
- 3 Query Acquired Resources
- 4 Query Monitored Resources
- 5 Enable Session Trace
- 6 Disable Session Trace
- 7 Enable AML Trace
- 8 Disable AML Trace
- 9 Enable MML Trace
- 10 Disable MML Trace
- 11 Change to Verbose

```
Enter selection >
```

## To query TSM for session information

- 1 Type **2** (Query Sessions), and press Enter.

**Result:** The program prompts Enter Session ID (0 for all sessions) :

- 2 Type **0** for information about all sessions, or type the session number. Then press Enter.

**Result:** The tool shows information about the specified session.

```

PRIM_QUERY_SESSIONS_RESP
Request Parms
Association ID = 1
Reference ID = 45
Received Event is = AS_QUERY_ASSOCIATIONS

##### SESSIONS #####

Session ID = 17, Name = tsm_oam,
Number of services = 2, Service Numbers = 100, 99

Session ID = 1, Name = __tsm_executive_task,
Number of services = 0, Service Numbers =
Machine Name = ??, Machine Type = , Customer Number =
Machine Name = , Machine Type = , Customer Number = 0

Session ID = 3, Name = ASM,
Number of sessions = 3, Service Numbers = 99, 0
Machine Name = M1, Machine Type = 1, Customer Number = 2
Machine Name = , Machine Type = 0, Customer Number = 0

```

## To query TSM for information about acquired resources

- 1 Type 3 (Query Acquired Resources), and press Enter.

**Result:** The program prompts Enter Session ID :

- 2 Type the session number and press Enter. (To find out the session number, use the Query Sessions option.)

**Result:** The tool shows information about resources acquired by the specified session.

```
PRIM_QUERY_ACQUIRES_RESP received
Request Parms
Association ID = 1
Reference ID = 47

##### ACQUIRES #####

TSM Session ID = 3

TN = (Loop=12, shelf=0, card=8, unit=6), Device ID = 101
Monitor Mask, CP=0x3AF1198, DM=0x1F3DFB0, exclusive acq,
Pos ID=2993

TN = (Loop=12, shelf=0, card=8, unit=5), Device ID = 100
Monitor Mask, CP=0x3AF1198, DM=0x1F3DFB0, Pos ID=5356
##### END ACQUIRES #####
```

## To query TSM for information about monitored resources

- 1 Type 4 (Query Monitored Resources), and press Enter.

**Result:** The program prompts Enter Session ID :

- 2 Type the session number and press Enter. (To find out the session number, use the Query Sessions option.)

**Result:** The tool shows information about resources monitored by the specified session.

```
PRIM_QUERY_MONITORS_RESP received
Request Parms
Association ID = 1
Reference ID = 48

##### MONITORS #####

TSM Session ID = 3

TN = (Loop=12, shelf=0, card=8, unit=6), Device ID = 101
Monitor Mask, CP=0x3AF1198, DM=0x1F3DFB0

TN = (Loop=12, shelf=1, card=8, unit=13), Device ID = 96
Monitor Mask, CP=0x3AF1198, DM=0x1F3DFB0

##### END MONITORS #####
```

## To enable tracing for a TSM session

- 1 Type **5** (Enable Session Trace), and press Enter.

**Result:** The tool prompts for the session ID.

- 2 Type **0** to enable tracing for all sessions, or type the session ID. Then press Enter. (To find out the session number, use the Query Sessions option.)

**Result:** The tool prompts Enter a File Name or simply press ENTER to choose `tsmnnn.trc`, where `nnn` is the session number. For example, if you enable tracing for session 2, the trace file name is `tsm002.trc`.

**Notes:**

- If you enable tracing for a session for which tracing is already active, the tool prompts for a new trace filename. If you enter a new trace filename, the open trace file is closed. If you enter the trace filename that is in use, you can choose whether to clear it or append to it.
  - When you enter 0, tracing is enabled for all sessions registered at the time of the request. To trace new sessions, you must enable tracing again.
- 3 If you want to use a different file, type the filename.
  - 4 Press Enter.

**Note:** Polling messages are not logged to the trace file.

**To disable tracing for a TSM session**

- 1 Type **6** (Disable Session Trace), and press Enter.  
**Result:** The tool prompts for the session ID.
- 2 Type **0** to disable tracing for all sessions, or type the session ID. Then press Enter. (To find out the session number, use the Query Sessions option.)  
**Result:** The tool displays the message `PRIM_TRACE_OFF_RESP received`.

**To enable AML tracing**

- 1 Type **7** (Enable AML Trace), and press Enter.  
**Result:** The tool prompts `Trace File Name`.
- 2 Type the filename and press Enter.  
**Result:** The tool displays the message `PRIM_TRACE_ON_RESP received`.

**To disable AML tracing**

Type **8** (Disable AML Trace), and press Enter.

**Result:** The tool displays the message `PRIM_TRACE_OFF_RESP received`.

# Appendix A

---

## Troubleshooting

### In this appendix

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Troubleshooting the connection to the server	342
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# Overview

## Introduction

This section provides troubleshooting checklists and procedures in case you experience any problems with the application software or with connecting to the network or server.

# Troubleshooting problems with application software

## Introduction

Problems with the client application software can result from improper network cabling, improper network card configuration, and incorrect configuration of Windows NT on the server.

## To troubleshoot problems with the client application software

- 1 Ensure that all cables are installed correctly. See the maintenance guide for your server for detailed information.
- 2 Verify that the system board jumpers are set correctly. See the maintenance guide for your hardware platform for detailed information.
- 3 Verify that the Windows NT is properly configured for the system. See the *Software Installation and Maintenance Guide* for instructions on configuring Windows NT.

If the problem persists, contact your Nortel Networks Customer Support representative for assistance and more information.

# Troubleshooting the connection to the server

## Introduction

If the client cannot connect to the server, it displays a dialog box with the message `IP address is unreachable. Connection failed.` Click **OK** to dismiss the dialog box, and follow the steps in this section to solve the problem.

### ATTENTION

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If you discover that you must change the server's CLAN or ELAN IP address, see the *Software Installation and Maintenance Guide*. You must make IP address changes in Symposium Call Center Server utilities as well as in the Network control panel.

## Things to check first

- 1 Make sure that you are using the drivers that are shipped on the system configuration software CD for the CLAN/ELAN network controller.
- 2 Make sure that the driver is loaded and the protocols are bound.
- 3 Ensure that the network cable is securely attached to the connector at the system back panel and that the network controller link LED is on and visible at the back panel. If the cable is attached but the problem persists, try a different cable.
- 4 Ensure that the hub port is configured for the same duplex mode as the network controller.
- 5 Check with your LAN administrator about the correct networking software that needs to be installed.
- 6 If you are directly connecting two servers, some hubs might also require a crossover cable. Check your hub documentation for more information on crossover cables.
- 7 Check the visible network controller LEDs through an opening at the system back panel.

- 8 From the client, try to ping the server's CLAN IP address. If you are using a dial-up connection, establish the modem connection before pinging.

**Result:** If the ping is successful, then the network is fine between the server and the client. If the ping is not successful, then you might be using the wrong IP address for the server, or there might be a network problem.

## To check the client PC

### If using a dial-up connection to the server

- 1 Check that the Dial-Up Networking connection profile that you are using for the SMI system to connect to the server is set up correctly. Check that the dial-up connection information is correct (IP address for the server and phone number).
- 2 Try to connect to other PCs on the local network to ensure that you are not having a local network problem.

### If connecting to the server over the LAN

- 1 Check that the connection information for the SMI system is correct (IP address or computer name for the server). See "Adding servers" on page 12.
- 2 Try to connect to other PCs on the LAN to ensure that you are not having a local network problem.

## To check the server

- 1 Check that the network card TCP/IP addresses are correct. See the *Software Installation and Maintenance Guide*.

**Note:** If you must change the server's CLAN or ELAN IP address, see the *Software Installation and Maintenance Guide*.

### (The remaining steps apply only if the client is using a dial-up connection to the server)

- 2 Check that the client PC's IP address is in the range of IP addresses defined for Remote Access Service (RAS) on the server. See the *Software Installation and Maintenance Guide*.
- 3 Check that Remote Access Service is started. See the *Software Installation and Maintenance Guide*.

# Troubleshooting problems with the network

## Network problems

If you are having network problems, check the following list for possible solutions.

### **The network driver fails to start or hangs the server on starting**

- Use the SCU software to verify interrupt and other system resource settings. For more information, refer to the *Software Installation and Maintenance Guide*.
- Verify that the proper Windows NT Service Pack is loaded.
- Verify that diagnostics on the card pass.

### **Diagnostics pass but the connection fails**

- Ensure the network cable is securely attached.
- Ensure you specify the correct frame type in your net.cfg file.

### **The Link LED does not light**

- Ensure you have loaded the network drivers.
- Check all cable connections.
- Try another port on the hub.
- Ensure you have the correct type of cable between the adapter and the hub. Some hubs require a crossover cable, while others require a straight-through cable. For more information about crossover cabling, see the manufacturer's hub directions.

### **The Activity LED does not light**

- Ensure you have loaded the correct network drivers.
- The network might be idle. Try to access a server.

**The controller stopped working when an add-in adapter was installed**

- Ensure the cable is connected to the port from the onboard network controller.
- Ensure your PCI BIOS is current. Try the “PCI installation tips” on page 348.
- Ensure that the adapter is not attempting to share interrupts, since Windows NT does not support shared interrupts. See the “PCI installation tips” on page 348.
- With the system powered down, try reseating the add-in adapter.

**The add-in adapter stopped working without apparent cause**

- With the system powered down, try reseating the adapter. If the problem persists, try installing the card in a different slot. This helps you identify whether the problem is with the adapter or with the slot.
- The network driver files might be corrupt or deleted. Delete and then reinstall the drivers.
- Run the diagnostics.

# Troubleshooting problems with pcAnywhere

## Starting pcAnywhere

### **A blue screen appears when restarting pcAnywhere after Version 9.2 installation**

This is caused by an incompatible video driver in Windows NT.

- 1 Press Reset to restart Windows NT.
- 2 When prompted, select the option to run Windows NT VGA mode.
- 3 When the message `Last Known Configuration` appears, press Reset.
- 4 Repeat steps 2 and 3.
- 5 When prompted, select the option to run Windows NT VGA mode.
- 6 This enables Windows NT to start with the Last known good configuration (after three failed restart attempts pcAnywhere switches to Fault Tolerant start mode).
- 7 If the message `A video compatibility problem caused pcAnywhere32 to switch to "Compatibility" video mode` appears, click OK.
- 8 Uninstall pcAnywhere. For more information, see the *Software Installation and Maintenance Guide*.

## Access problems

### **You do not have rights to modify this file**

This message appears if pcAnywhere is installed on an NTFS drive. The permissions on the pcAnywhere data folder are set incorrectly.

- 1 Exit pcAnywhere.
- 2 Use Windows NT Explorer to browse to the path  
`windows\Profiles\All Users\Application\Data\Symantec\pcAnywhere`  
where *windows* is WinNT3.5 (if you have converted your server OS from Windows NT 3.51) or WinNT.
- 3 Right-click in the folder window, and choose Properties.

- 4** Click the Security tab.
- 5** Click Permissions.
- 6** Select Administrators, and set the type of access to Full Control.
- 7** Check the Replace permissions on existing files.
- 8** Click OK.
- 9** Click OK to exit the Properties property sheet.

# PCI installation tips

## Checklist

Here are two useful PCI tips:

- Reserve interrupts (IRQs) and memory addresses specifically for ISA adapters. This prevents PCI cards from trying to use the same settings that ISA cards are using. Use the SCU to keep track of the ISA adapter resources.
- Certain drivers might require interrupts that are not shared with other PCI drivers. The SCU can be used to adjust the interrupt numbers for PCI devices. For certain drivers, you might have to alter settings so that interrupts are not shared. Interrupt sharing is not supported on this platform.

# 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 the Symposium Call Center Server and Meridian Mail.

### **ACCESS voice port**

A Meridian Mail 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 the Symposium Call Center Server. Resources must be configured with matching values on both the switch and the Symposium Call Center Server.

**activated script**

A script that is processing calls or is ready to process calls. Before you can activate a script, you must first validate it.

**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. 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 maintaining the Symposium Call Center Server.

**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 in. 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.

**application**

1. A logical entity that represents a Symposium Call Center Server 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 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.

**Automatic call distribution directory number**

DNs associated with an ACD group. Calls made to these DNs 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 Call Center Server are 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.

**call destination**

The site to which an outgoing network call is sent. *See also* call source.

**call intrinsic**

A script element that stores call-related information assigned when a call enters the Symposium Call Center Server. *See also* intrinsic, skillset intrinsic, time intrinsic, and traffic intrinsic.

**call presentation class**

A collection of preferences that determines how calls are presented to an agent. A call presentation class specifies whether a break time between calls is allowed, whether an agent can put DN calls on hold for incoming ACD calls, and whether an agent phoneset displays that the agent is reserved for a network call.

**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 source**

The site from which an incoming network call originates. *See also* call destination.

**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* global variable, variable.

**Calling Line Identification**

This is 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 Call Center Server that runs on a personal computer or workstation and relies on the server to perform some operations. *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 Call Center Server. When a call arrives at this number, the switch notifies the application and waits for routing instructions, which are performed by scripts in Symposium Call Center Server.

**Customer local area network**

The LAN to which your corporate services and resources connect. The Symposium Call Center Server and client both connect to the CLAN. Third-party applications that interface with the server also connect to this LAN.

**D****DBMS**

Database Management System

**deactivated script**

A script that does not process any new calls. If a script is in use when it is deactivated, calls continue to be processed by the script until they are completed.

**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. Each skillset has a defined default activity code.

**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.

**desktop user**

A configured user who can log on to the Symposium Call Center Server from a client PC.

**destination site**

The site to which an outgoing network call is sent. *See also* source site.

**DHCP**

*See* dynamic host configuration protocol.

**Dial-Up Networking**

*See* Remote Access Services.

**Dialed Number Identification Service**

An optional service that allows Symposium Call Center Server 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. A DLL can be used by several applications at the same time.

**E****ELAN**

*See* embedded local area network.

**embedded local area network**

A dedicated Ethernet TCP/IP LAN that connects the Symposium Call Center Server 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 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.

**expression**

A building block used in scripts to test for conditions, perform calculations, or compare values within scripts. *See also* logical expression, mathematical expression, and relational expression.

**F****filter timer**

The length of time after the system unsuccessfully attempts to route calls to a destination site, before that site is filtered out of a routing table.

**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 outside this value.

**G****global settings**

Settings that apply to all skillsets or IVR ACD-DNs that are configured on your system.

**global variable**

A variable that contains values that can be used by any script on the system. The value of a global variable can only be changed in the Script Variable Properties sheet. It cannot be changed in a script. *See also* call variable, variable.

**I****Incalls key**

The key on an agent phoneset to which incoming ACD and Symposium Call Center Server calls are presented.

**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. For customers using NSBR, site IP addresses must be unique and correct. 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 can be an IP address.

**intrinsic**

A word or phrase used in a script to gain access to system information about skillsets, agents, time, and call traffic that can then be used in formulas and decision-making statements. *See also* call intrinsic, skillset intrinsic, time intrinsic, and traffic intrinsic.

**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.

**local call**

A call that originates at the local site. *See also* network call.

**local skillset**

A skillset that can be used at the local site only. *See also* network skillset, skillset.

**logical expression**

A symbol used in scripts to test for different conditions. Logical expressions are AND, OR, and NOT. *See also* expression, mathematical expression, and relational expression.

**M****M1**

Meridian 1 switch

**master script**

The first script executed when a call arrives at the Symposium Call Center Server. A default master script is provided with Symposium Call Center Server, but it can be customized by an authorized user. It can be deactivated but not deleted. *See also* network script, primary script, script, and secondary script.

**mathematical expression**

An expression used in scripts to add, subtract, multiply, and divide values. Mathematical expressions are addition (+), subtraction (-), division (/), and multiplication (\*). *See also* expression, logical expression, and relational expression.

**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.

**Meridian MAX**

A Nortel Networks product that provides call processing based on ACD routing.

**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****NACD call**

A call that arrives at the server from a network ACD-DN.

**NCC**

*See* Network Control Center.

**network call**

A call that originates at another site in the network. *See also* local call.

**Network Control Center**

The server on a Symposium Call Center Server system where NSBR is configured and where communication between servers is managed.

**network script**

The script that is executed to handle error conditions for Symposium Call Center Server calls forwarded from one site to another, for customers using NSBR. The network script is a system-defined script provided with Symposium Call Center Server, but it can be customized by an authorized user. It can be deactivated but not deleted. *See also* master script, primary script, script, and secondary script.

**Network Skill-Based Routing**

An optional feature with Symposium Call Center Server that provides skill-based routing to multiple networked sites.

**network skillset**

A skillset that is common to every site on the network. Network skillsets must be created at the Network Control Center (NCC).

**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.

**NSBR**

*See* Network Skill-Based Routing.

**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. *See also* local skillset, network skillset, and skillset.

**P****PBX**

*See* private branch exchange.

**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 Call Center Server 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.

**personal directory number**

A DN on which an agent can be reached directly, usually for private calls.

**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.

**primary script**

A script that is executed or referenced by the master script. A primary script can route calls to skillsets, or it can transfer routing control to a secondary script. *See also* master script, network script, script, and secondary script.

**private branch exchange**

A telephone switch, typically used by a business to service its internal telephone needs. A PBX usually offers more advanced features than are generally available on the public network.

**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.

**relational expression**

An expression used in scripts to test for different conditions. Relational expressions are less than (<), greater than (>), less than or equal to (<=), greater than or equal to (>=), and not equal to (<>). *See also* expression, logical expression, and mathematical expression.

**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.

**round robin routing table**

A routing table that queues the first call to the first three sites in the routing table, then the second three sites, then the third three sites, and so on, until an agent is reserved at one of the sites. *See also* sequential routing table.

**route**

A group of trunks. Each trunk carries either incoming or outgoing calls to the switch. *See also* music route, RAN route.

**routing table**

A table that defines how calls are routed to the sites on the network. *See also* round robin routing table, sequential routing table.

# S

## **sample script**

A script that is installed with the Symposium Call Center Server client. Sample scripts are stored as text files in a special folder on the client. The contents of these scripts can be imported or copied into user scripts to create scripts for typical call center scenarios.

## **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. *See also* master script, network script, primary script, and secondary script.

## **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.

## **secondary script**

Any script (other than a master, network, or primary script) that is referenced from a primary script or any other secondary script. There is no pegging of statistics for actions occurring during a secondary script. *See also* master script, network script, primary script, and script.

## **sequential routing table**

A routing table method that always queues a call to the first three active sites in the routing table. *See also* round robin routing table.

## **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. The Symposium Call Center Server is used to configure the operations of the call center. *See also* client.

**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 set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network and then analyzing the responses.

**site**

1. A system using Symposium Call Center Server that can be accessed using SMI. 2. A system using Symposium Call Center Server and participating in Network Skill-Based Routing.

**skillset**

A group of capabilities or knowledge required to answer a specific type of call. *See also* local skillset, network skillset.

**skillset intrinsic**

A script element that inserts information about a skillset in a script. Skillset intrinsics return values such as skillsets, integers, and agent IDs. These values are then used in queuing commands. *See also* call intrinsic, intrinsic, time intrinsic, and traffic intrinsic.

**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.

**source site**

The site from which an incoming network call originates. *See also* destination site.

**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, 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 Call Center Server. *See also* acquired resource.

**Symposium Call Center Server call**

A call to a CDN that is controlled by the Symposium Call Center Server. The call is presented to the Incalls key on an agent's phoneset.

**system-defined scripts**

The Master\_Script and the Network\_Script (if NSBR is enabled). These scripts can be customized or deactivated by a user, but cannot be deleted. These scripts are the first scripts executed for every local or network call arriving at the call center.

# T

## **target site**

*See* destination site.

## **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.

## **time intrinsic**

A script element that stores information about system time, including time of day, day of week, and week of year. *See also* call intrinsic, intrinsic, skillset intrinsic, and traffic intrinsic.

## **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.

## **traffic intrinsic**

An intrinsic that inserts information about system-level traffic in a script. *See also* call intrinsic, intrinsic, skillset intrinsic, and time intrinsic.

## **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.

**trunk**

A communications link between a PBX and the public central office, or between PBXs. Various trunk types provide services such as Direct Inward Dialing (DID trunks), ISDN, and Central Office connectivity.

**U****user-created script**

A script that is created by an authorized user on the Symposium Call Center Server system. Primary and secondary scripts are user-created scripts.

**user-defined script**

A script that is modified by an authorized user on the Symposium Call Center Server system.

**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****validation**

The process of checking a script to ensure that all the syntax and semantics are correct. A script must be validated before it can be activated.

**variable**

A placeholder for values calculated within a script, such as CLID. Variables are defined in the Script Variable Properties sheet and can be used in multiple scripts to determine treatment and routing of calls entering the Symposium Call Center Server. *See also* call variable, global variable.

**voice port**

A connection from a telephony port on the switch to a port on the IVR system.

**W****WAN**

*See* 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.

**workload scenarios**

Sets of configuration values defined for typical patterns of system operations. Five typical workload scenarios (entry, small, medium, large, and upper end) are used in the Capacity Assessment Tool for capacity analysis for the Symposium Call Center Server.



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# **Nortel Networks Symposium Call Center Server**

## **for the Meridian 1 Administrator's Guide**

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