Communication Server 2100

Getting Started with Optivity Telephony Manager User Guide

555-4001-316

Document status: Standard
Document version: 02.01
Document date: 20 October 2006

Contents

New in this release

There have been no updates to the document in this release.

About this document

Purpose and audience

This document introduces the Optivity Telephony Manager for Meridian SL-100, 2.0. This document's audience is service provisioning, administrative, and network management personnel.

Structure

This document contains the following sections:

- "Introduction" (page 9) - describes the Optivity Telephony Manger for Meridian SL-100 client-server architecture and the element and network management features it offers.
- "Optivity Telephony Manager for Meridian SL-100 server" (page 15) - describes the server application and shows how to use it.
- "Optivity Telephony Manager for Meridian SL-100 client" (page 21) - describes the client application and shows how to use it.
- "Optivity Telephony Manager for Meridian SL-100 quick start" (page 59) - provides procedures to help users start and use Optivity Telephony Manager for the Meridian SL-100.
- "Terminology" (page 81) - contains acronyms and abbreviations of terms used in this document.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers (for example, 01.01).

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but re-released in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

ATTENTION

To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in the *Communication Server 2100 Commercial Systems Master Index of Publications* (555-4031-001).

References in this document

This guide references the following documents for additional information:

- *DMS-100 Customer Data Schema Reference Manual* (297-8001-351)
- *Meridian SL-100 Feature Description Manual* (444-4031-801)
- *Optivity Telephony Manger* online help documentation included on the application CD-ROM
- *Communication Server 2100 M3900 Meridian Digital Telephones Reference Guide* (555-4001-136)

Introduction

The Optivity Telephony Manager for Meridian SL-100, 2.0, is built on a client-server architecture to offer element and network management features for the Meridian SL-100 switch. With required equipment and network interfaces, Optivity Telephony Manager for Meridian SL-100 provides several switch management features including the following:

- retrieval of switch equipment information
- receipt of switch events
- storage of both switch equipment and event information
- database queries of switch equipment inventory and events
- in-service transfer of software loads to Enhanced Peripheral Equipment (EIPE) modules
- maintenance of firmware loads for M3900 series telephones through EIPEs

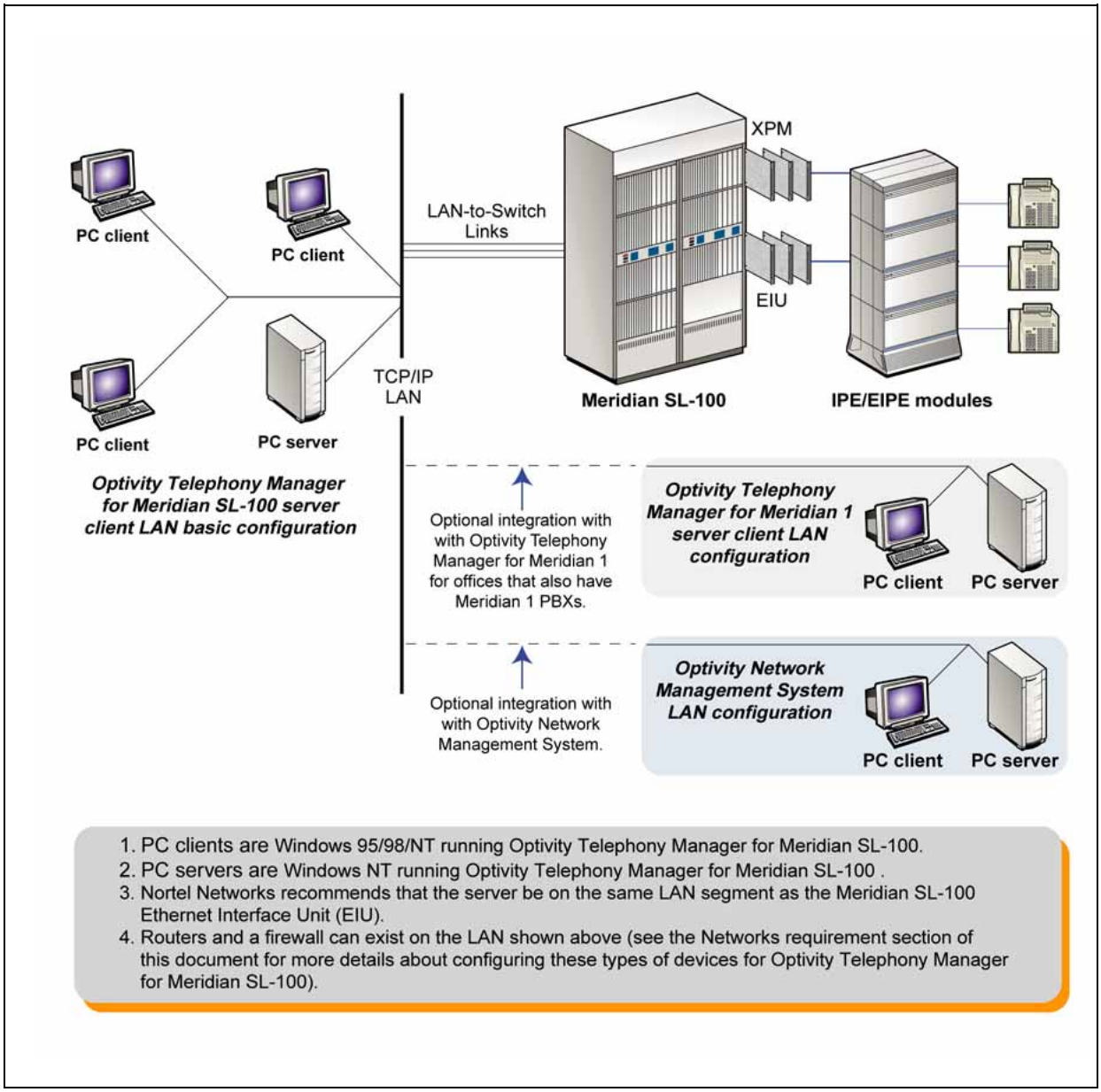
Optivity Telephony Manager for Meridian SL-100 provides the capability to distribute Meridian SL-100 event information into an Optivity Network Management System (NMS) for surveillance capability of the switch from the NMS platform.

The Optivity Telephony Manager for Meridian SL-100's purpose is to provide a modern tool to supplement the existing MAP application currently used for Operation, Administration, Maintenance, and Provisioning (OAMP) of a Meridian SL-100 Enterprise switch. The application offers a graphical interface to the Meridian SL-100, and it provides basic monitoring and Telnet capabilities. Additionally, it offers the following:

- watcher functionality
- EIPE controller card load management functionality
- Meridian Digital Terminals (that is, M3900 sets) firmware download and maintenance functionality
- integration with the Optivity NMS

Release 2.0 implements distributed, multi-tier, system architecture with an integrated Database Management System (DBMS). In short, the Optivity Telephony Manager for Meridian SL-100 application is designed as a client-server system. The server provides a framework and execution environment for a number of services that collect, organize, persist, and distribute Meridian SL-100 switch equipment and status information. The server accepts and manages multiple client connections over an IP network for access to the services. Figure 1 "Optivity Telephony Manager for Meridian SL-100 configuration" (page 11) shows the Optivity Telephony Manager for Meridian SL-100 configuration.

Figure 1
Optivity Telephony Manager for Meridian SL-100 configuration



System Overview

Optivity Telephony Manager for Meridian SL-100's client-server architecture delivers server and client applications that can run on the same or different Windows platforms. The client application provides the user interface for accessing features and tools that run on the server. The server application provides the framework for all services and the supporting processes for features and tools. The Meridian SL-100 switch provides the interfaces for the server application to request and receive switch information and for

driving certain maintenance operations for the Enhanced IPE. The services and functions provided by the Optivity Telephony Manager for Meridian SL-100 server include the following:

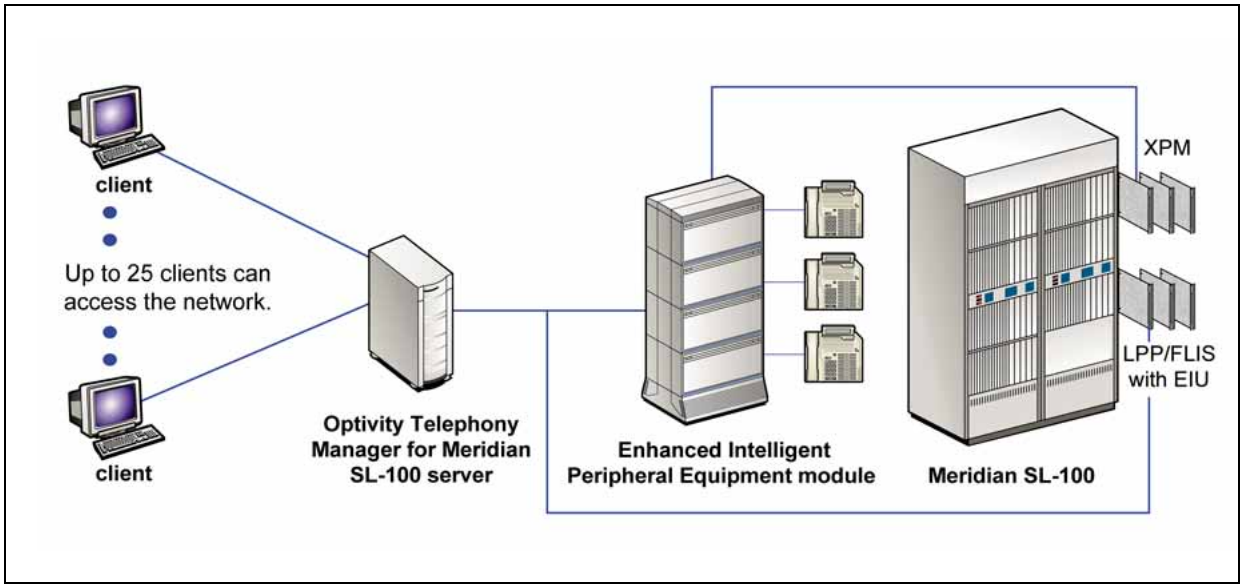
- management of client connections and communications
- persistence of all data
- communications with the Meridian SL-100 and peripherals by secured Simple Network Management Protocol (SNMP) and other protocols
- synchronization of switch data with the Optivity Telephony Manager for Meridian SL-100 database
- scheduling of tasks

Besides the ability to add features more easily, two key advantages of the new architecture are as follows:

- much greater capacity for log event storage
- reduction of SNMP messaging over the network to the Meridian SL-100 when multiple clients are in use

The database provides storage for all log events and switch equipment data on the server and has been tested to support 500MB of event logs. The actual number of event logs the database can store is dependent upon available hard drive space. Figure 2 "Optivity Telephony Manager for Meridian SL-100, Release 2.0, system architecture" (page 12) shows the Release 2.0 system architecture.

Figure 2
Optivity Telephony Manager for Meridian SL-100, Release 2.0, system architecture



M3900 firmware download

Optivity Telephony Manager for Meridian SL-100 provides firmware management for the M3900 series digital telephones: M3902, M3903, M3904, and M3905. The firmware download process is executed in Optivity Telephony Manager for Meridian SL-100 using the Expec controller card (NT7D07BA) in the EIPE.

Note: Since there is no upgradeable firmware load for the M3901 set, the M3901 set is not supported with this tool.

Optivity Telephony Manager for Meridian SL-100 enables the user to:

- view firmware loads on the connected EIPE
- initiate the transfer of M3900 firmware to the EIPE
- delete firmware loads from the EIPE
- view the space remaining on the EIPE for M3900 firmware loads
- initiate the transfer of a firmware file to multiple EIPEs
- provide the same FTP functionality as the Expec Service
- determine the location and access to the FTP server (FTP server requirements and options)
- view descriptions of the EIPE file system, requirements, and limitations

Through this tool, M3900 firmware loads can be downloaded to one M3900 series set or to all M3900 terminals of the same type on an EIPE. The same can be done for multiple EIPEs. The transfer and downloads of firmware to a single or multiple EIPEs can be scheduled to execute at a later time.

Using the M3900 Firmware Management main window, the user can access information such as the following:

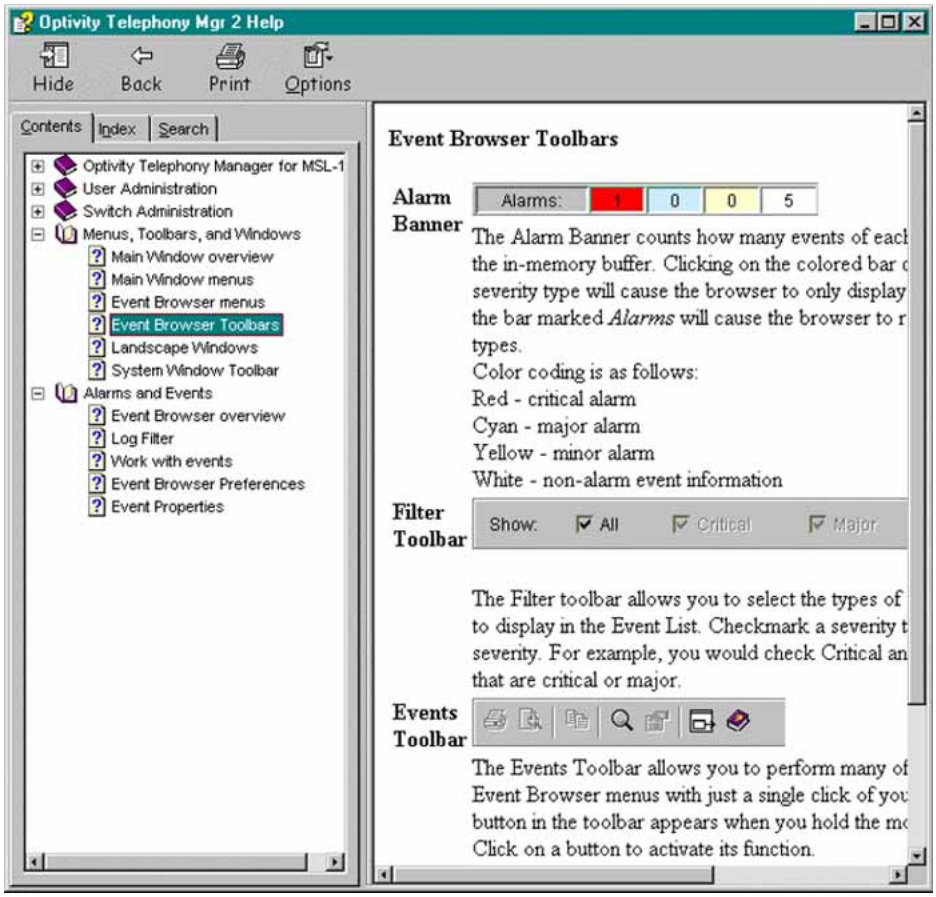
- scheduling capabilities and limitations (that is, the ability to schedule the download of the Firmware to M3900 sets)
- network considerations
- transfer results and recovery (the system generates a log file after each firmware download session is complete)
- generate a record of the completion of each firmware load operation

See the *Communication Server 2100 M3900 Meridian Digital Telephones Reference Manual* (555-4001-136) for detailed procedural information.

Help

You can access Help from the menu bar in both the Optivity Telephony Manager for Meridian SL-100 server and client. The server and the client provide Help Topics and About Optivity Telephony Manager for Meridian SL-100 menu items. Figure 3 "Optivity Telephony Mgr 2 Help window" (page 14) shows an example of the Help environment.

Figure 3
Optivity Telephony Mgr 2 Help window



Access Help from the Optivity Telephony Manager for Meridian SL-100 server by selecting Help and then selecting Help Topics from the menu bar. The Help window allows a user to navigate using back and forward buttons. Both a **Print** button and a **Page Setup** button are provided for print capabilities. The left frame displays tabs on the top of the frame to show help by topic, index, or search. The right frame displays the help topic selected. To print the entire Help file, use the pdf file in the docs directory.

Optivity Telephony Manager for Meridian SL-100 server

Functional description

Introduction

The Optivity Telephony Manager for Meridian SL-100 server provides the core services and data storage for the application. These services include the following:

- user administration
- security for client logons
- client communications for access to all services and tools
- SNMP access to the Meridian SL-100 for switch data queries and responses and for receipt of log events by SNMP traps
- log event reception, storage, and distribution to clients
- equipment synchronization between the Meridian SL-100 and Optivity Telephony Manager for Meridian SL-100 database
- forwarding of log events to SNMP management stations
- maintenance of loads for the EIPE and M3900 series sets

Server requirements

Release 2.0 is delivered to customers as two separate applications: the Optivity Telephony Manager for Meridian SL-100 server application; and the Optivity Telephony Manager for Meridian SL-100 client application. These are combined in the application.

Meridian SL-100 switch requirements

To work with Optivity Telephony Manager for Meridian SL-100, 2.0, a Meridian SL-100 switch must be equipped with a Link Interface Shelf (LIS) or Fiber Link Interface Shelf (FLIS) shelf on which an Ethernet Interface Unit (EIU) is installed. Only one EIU is required for operation of Optivity Telephony Manager for Meridian SL-100, 2.0; however, two EIUs provide redundancy. The EIU must be connected to the same LAN segment as the Windows systems on which the Optivity Telephony Manager for Meridian

SL-100 application runs. Necessary patches must be applied before running the application. These include, JDT02 and JDT05 to be installed on MSL11, 12, and 14. ITN32 is required for MSL11, 12 14, and 15.

Hardware Requirements

The Optivity Telephony Manager for Meridian SL-100 server must meet the following minimum hardware requirements:

- 500 MHz Pentium II/III or equivalent processor
- 128 MB of RAM-minimum (256 MB recommended)
- 150 MB of available hard drive space-minimum (testing to verify 256 MB recommended)
- additional hard drive space for database capacity (at least 100 MB for each switch added)
- color monitor, mouse, and network interface card
- sound card and speakers for audio notifications

While co-residency is possible, Nortel Networks does not advise this. It is advisable to have a second server of equal capability on which to run the Optivity Telephony Manager for Meridian 1 application when interfacing with the NMS Management platform.

Software requirements

The Optivity Telephony Manager for Meridian SL-100 server must have the following software installed to run correctly:

- NT 4.0 with SP5 or Windows 2000
- TCP/IP
- network card drivers

Network requirements

The Optivity Telephony Manager for Meridian SL-100 server must be connected to the Enterprise LAN with a path to the Meridian SL-100 EIU. It is strongly recommended that the server be on the same management LAN segment as the Meridian SL-100 EIU. The LAN segment that both systems are on should be protected by a firewall. It should be accessible only to persons authorized to perform OAMP tasks on the Meridian SL-100. Additionally, multicast must be enabled between the Optivity Telephony Manager for Meridian SL-100 client and server.

Other requirements

To use e-mail notification in the Watcher feature, a Simple Mail Transfer Protocol (SMTP) server must be operational on the same network as the Optivity Telephony Manager for Meridian SL-100 server.

Installing the Optivity Telephony Manager for Meridian SL-100 server

The following is the sequence of activities and events associated with installation and set up of the Optivity Telephony Manager for Meridian SL-100 server.

Installation of the Optivity Telephony Manager for Meridian SL-100 server application requires at least local administrator privileges on the Windows NT computer on which it is installed. To ensure compliance with the terms of the software license agreement and the methods used to prevent piracy of the application software, an InstallShield application is provided for installing both the Optivity Telephony Manager for Meridian SL-100 client and server applications. The InstallShield application requires that the user accept the terms of the license agreement, before the application can be installed. The measures taken to prevent the terms of the licensing agreement from being violated may include obtaining a "serial number" from Nortel Networks prior to installation.

The following sections describe the installation of the Optivity Telephony Manager for Meridian SL-100 server application and its subcomponents.

Prerequisites

Windows NT with SP5 or 2000 must be installed on the server machine.

Server installation process

Push the Install server button on the OTM_Install menu dialog or run the setup.exe in the server directory on the CD to begin the installation process. The following is a list of dialogs that are presented to the user during installation:

- Welcome.
- License agreement information.
- Information Dialog: contains Read Me information.
- User Information: user name, company and serial number.
- Registration Confirmation.
- Choose Destination Directory: WARNING: Currently, this directory must not be greater than eight characters due to limitations in the maximum size limit of a command line in Windows NT. This is where the application will be installed.
- Setup Type: Choose from Typical, Compact, or Custom. If "Typical" is selected, all components will be installed. If "Compact" is selected, only the program files will be installed and no help files. If "Custom" is selected, a dialog is displayed to select only the components the user wants to install.

- Select Program Folder: This is the folder where the program icon will be added. The user can select an existing folder or create a new folder.
- Start Copying: This displays a summary of the selections made in the previous dialogs.
- Optivity Telephony Manager for Meridian SL-100 Server Install Progress Dialog.
- Setup Complete: Click **Finish** to complete the installation. It is recommended that the machine be rebooted, before running the application in order for the installed components to properly register with the system.

Services

The server has several services that the clients access which are described in the following sections.

Messaging

Provides the mechanism for communication between Optivity Telephony Manager for Meridian SL-100 client and server services and between services on the Optivity Telephony Manager for Meridian 1 server.

Security

Security is provided through the setup and maintenance of user accounts and passwords. Administrator accounts are special user accounts with the extra privileges enabled to allow maintenance of user accounts.

Persistence

Persistence is provided through database services running on the server which use an embedded database for persistence of switch equipment inventory, switch events, event annotations, and users.

SNMP

SNMP provides communication with the Meridian SL-100. Upon startup and connection to a defined switch, the SNMP service sends requests over the Ethernet LAN to verify the IP address supplied by the administrator and to discover the basic properties of the Meridian SL-100. All Meridian SL-100 equipment is discovered through SNMP requests using SNMP Management Information Bases (MIB) appropriate for the release of Meridian SL-100 software. The SNMP service also receives event log reports in the form of SNMP traps from the switch.

Event logs

Meridian SL-100 event logs are based on the Meridian SL-100 log reports from the switch log subsystem.

Synchronization

This service enables synchronizing switch data stored by the Optivity Telephony Manager for Meridian SL-100 server, which is required to maintain an accurate view of the switch. Synchronization is performed when a new switch is defined and when an administrator requests the synchronization. Switch inventory that can be synchronized includes core nodes, peripheral and Application Specific Unit (ASU) nodes, C-side links, trunks, carriers, Line Equipment Numbers (LENs), and Directory Numbers (DNs).

Scheduler service

This service provides the basic scheduling function used by other services. By itself it is not visible to users. Services or tools that require scheduling make use of the core scheduling service.

Using the Optivity Telephony Manager for Meridian SL-100 server

The following sections describe using the Optivity Telephony Manager for Meridian SL-100 server.

Starting the server

Once the installation is complete, an administrator should start the Optivity Telephony Manager for Meridian SL-100 server. The necessary services are also started automatically. A server window then appears.

Server setup

The following configuration items must be performed for the server to operate and provide services for all features:

- Set the administrator's password.
- Create client accounts and set account privileges.
- Create a view of the switch to be monitored.
- Establish a database archiving policy by selecting from the following options:
  - maintain last X days of logs and dispose of remainder
  - filter out logs by any combination of type, severity, or description content
- Establish a switch synchronization policy by selecting one of the following options:
  - now
  - daily at a specific time
  - weekly, on a specific day and time

— monthly, on a specific date and time

— one time at a future date

Additionally, the server configuration must be setup for log event handling options as follows:

- Define the Simple Mail Transfer Protocol (SMTP) mail server for use by the Watcher e-mail notification feature.
- Set Open Alarm configuration for distribution of log events to Optivity NMS and Optivity Telephony Manager for Meridian 1, if applicable.

Optivity Telephony Manager for Meridian SL-100 client

Functional description

Introduction

The Optivity Telephony Manager for Meridian SL-100 client is a Windows application that requires an Optivity Telephony Manager for Meridian SL-100 server to be accessible over the IP network. For more information about the server, see "Optivity Telephony Manager for Meridian SL-100 server" (page 15). Optivity Telephony Manager for Meridian SL-100 clients must logon to the Optivity Telephony Manager for Meridian SL-100 server to enable access to features. The client provides the user interfaces for working with most of the Optivity Telephony Manager for Meridian SL-100 features. Access to features depends on the user's privileges. The client user interface does not present features unavailable to a user.

Client requirements

Hardware requirements

The Optivity Telephony Manager for Meridian SL-100 client must meet the following minimum hardware requirements:

- Intel Pentium II/III, or equivalent, processor, 300 MHz or faster CPU
- 100 MB (or greater) free hard drive space (500 MB of free space, plus customer data storage requirements is recommended)
- 128 MB of RAM-minimum (256 MB recommended)
- color monitor, mouse, and network interface card

Software requirements

The Optivity Telephony Manager for Meridian SL-100 client must have the following software installed to run correctly:

- Windows NT Workstation 4.0 with SP5, or Windows 98, or Windows 95
- TCP/IP protocol
- network card drivers

Network requirements

The Optivity Telephony Manager for Meridian SL-100 client must be connected to the Enterprise LAN with a path to the Optivity Telephony Manager for Meridian SL-100 server. It is recommended that the Optivity Telephony Manager for Meridian SL-100 client be on the same management LAN segment as the Optivity Telephony Manager for Meridian SL-100 server without firewalls or routers between them (see "Server requirements" (page 15)). If the Optivity Telephony Manager for Meridian SL-100 client must run where a firewall or router exists between it and the Optivity Telephony Manager-Meridian SL-100 server, some reconfiguration of the firewall may be needed to allow the client and server to communicate. Additionally, multicast must be enabled on the routers and the firewall.

Installing the Optivity Telephony Manager for Meridian SL-100 client

The following sections describe the installation of the Optivity Telephony Manager for Meridian SL-100 client application and its subcomponents.

Prerequisites

Windows 95, NT with SP5 or 2000 must be installed on the client machine.

Client installation process

The client installation program is packaged as a self-extracting file. Once all prerequisites are met, this file can be double-clicked to begin the Install application. The following is a list of dialogs that are presented to the user during installation:

- Welcome.
- License agreement.
- Information.
- User Information: user name, company, and serial number.
- Choose Destination Directory: WARNING: Currently, this directory must not be greater than eight characters due to limitations in the maximum size limit of a command line in Windows NT. This is where the application will be installed.
- Setup Type: Choose from Typical, Compact, or Custom. If "Typical" is selected, all components will be installed. If "Compact" is selected, only the program files will be installed. If "Custom" is selected, a dialog is displayed to select only the components the user wants to install.
- Select Program Folder: This is the folder where the program icon will be added. The user can select an existing folder or create a new folder.
- Start Copying Files: This displays a summary of the selections made in the previous dialogs.

- Optivity Telephony Manager for Meridian SL-100 Server Install Progress Dialog.
- Setup Complete: Click **Finish** to complete the installation.

Using the Optivity Telephony Manager for Meridian SL-100 client

The main client window has a standard Windows application look and feel with drop-down menus and a toolbar for invoking feature tools. Feature tools present their own windows when working with the feature.

Client Main window

Figure 4 "Nortel Networks Optivity Telephony Manager for the MSL-100 Client window" (page 24) shows the client main window used to display menus and toolbars. Table 1 "Optivity Telephony Manager for Meridian SL-100 client File menu options" (page 24) through Table 5 "Optivity Telephony Manager for Meridian SL-100 client toolbar options" (page 25) describe the Optivity Telephony Manager for Meridian SL-100 client menus and toolbar options.

Figure 4
Nortel Networks Optivity Telephony Manager for the MSL-100 Client window

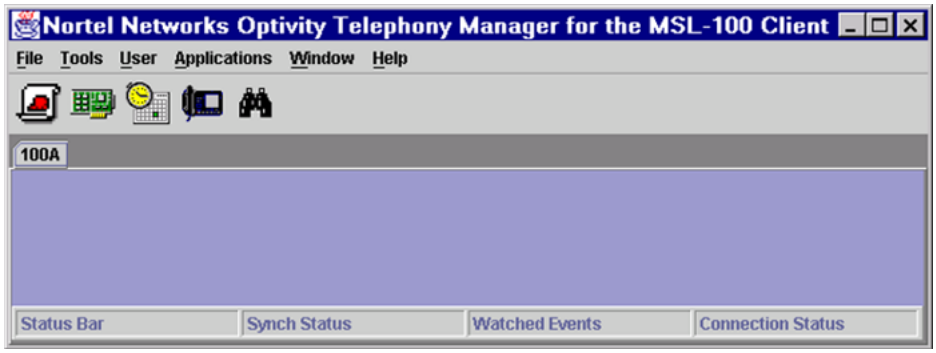


Table 1
Optivity Telephony Manager for Meridian SL-100 client File menu options

File menu item	Description
Logoff	Logs off the Optivity Telephony Manager (OTM) Server.
Exit	Logs off the OTM Server and exits the client.

Table 2
Optivity Telephony Manager for Meridian SL-100 client Tools menu options

Tools menu item	Description
Switch Admin	Invokes switch demonstration tool for adding and deleting switches and for changing switch connection properties.
Synchronize with Switch	Invokes synchronization tool for synchronization of data between client and server and between server and switch.
Switch Inventory	Displays switch inventory.
Connect to Switch	Displays switch selection box.

Table 3
Optivity Telephony Manager for Meridian SL-100 client User menu options

User menu item	Description
User Administration	Invokes a dialog for adding and deleting users and for changing user privileges.

User menu item	Description
Change Password	Opens the User Password Dialog for changing passwords.
Update Information	Opens the User Information Dialog for viewing and changing User name, roles, phone numbers, and e-mail addresses.

Table 4
Optivity Telephony Manager for Meridian SL-100 client Applications menu options

Applications menu item	Description
Event Browser	Invokes the Event Browser tool.
EXPEC	Invokes the EXPEC (EIPE) Load Management tool.
M3900	Invokes the M3900 Firmware Maintenance tool.
Event Watcher	Invokes the Watcher tool.

Table 5
Optivity Telephony Manager for Meridian SL-100 client toolbar options

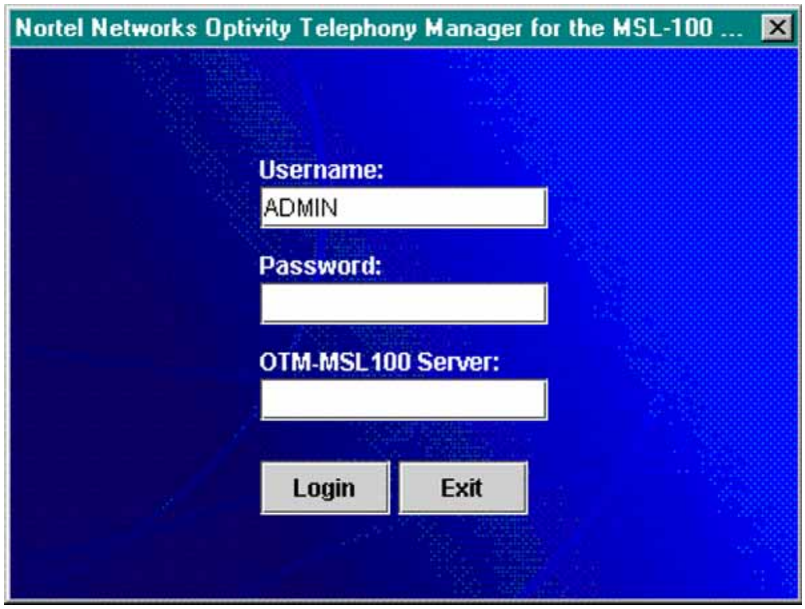
Toolbar item	Description
	Event Browser
	EXPEC (EIPE) Load Management Tool
	Scheduler

Toolbar item	Description
	M3900 Firmware Maintenance Tool
	Event Watcher

User login

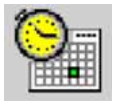
Figure 5 "User Login window" (page 26) shows the user login window.

Figure 5
User Login window



To access other features of this application and to learn to use the application, browse the various capabilities by accessing each of the main window icons available with the GUI interface (see Table 6 "Main window icons" (page 27)).

Table 6
Main window icons

Icon	Description
	New Event Browsing features with event annotation.
	New EIPE controller card loading, while in-service.
	Scheduler functionality. Most functions can be scheduled (synchronizations and firmware downloads to telephones are the two most frequently used functions of scheduler).
	Meridian 3900-series phone set firmware maintenance through EIPE.
	Watcher feature for event-triggered actions (Watcher can send an e-mail and/or audible alarm if desired).

User administration

The user interface for user administration is provided through the client. There are three categories for Optivity Telephony Manager for Meridian SL-100 users based on the features to which they have access as follows:

- administrators
- standard users
- restricted users

Optivity Telephony Manager for Meridian SL-100 users are defined, maintained, and deleted through the User Administration tool. Only Optivity Telephony Manager for Meridian SL-100 administrators have access to the User Administration tool.

The main user administration dialog box lists user information and the type of access each user has (see Figure 6 "User Admin Dialog" (page 28)).

Figure 6
User Admin Dialog

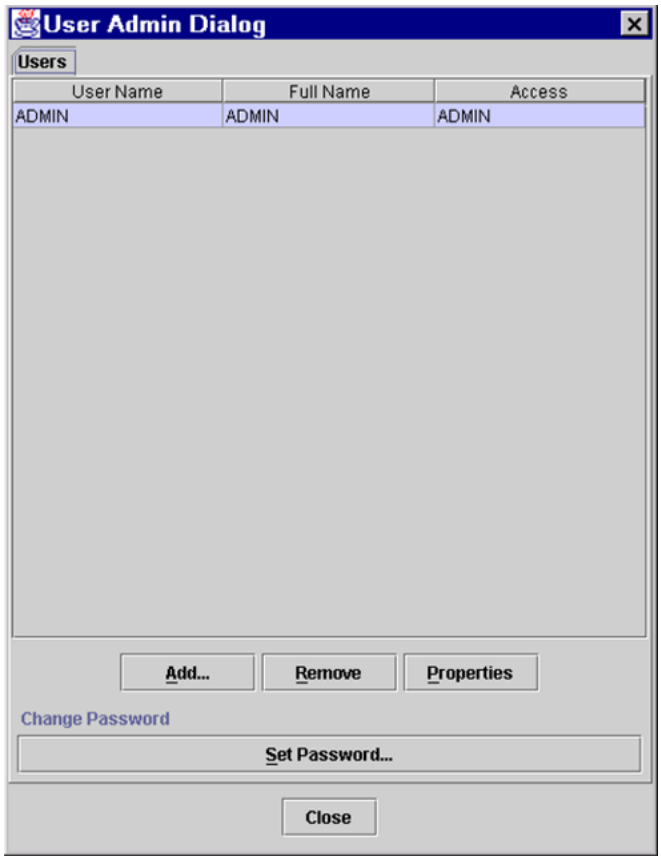


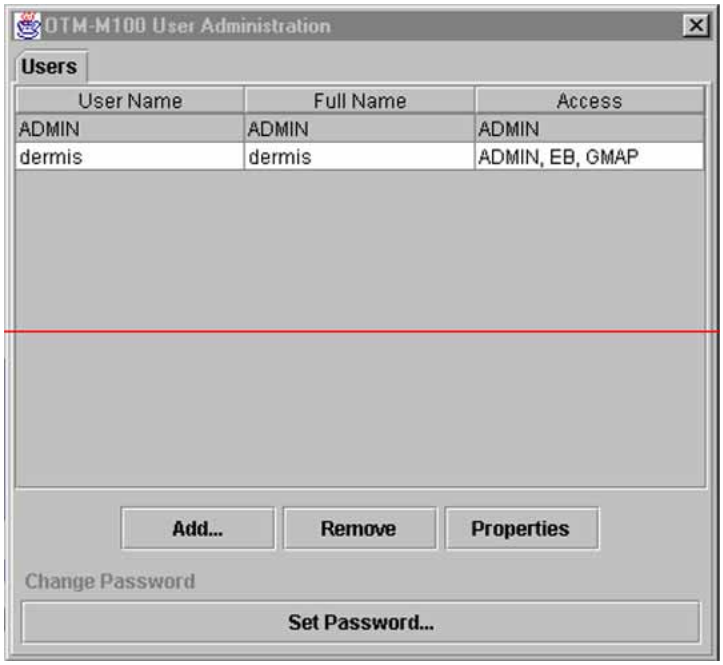
Table 7
User Admin Dialog window options

Item	Description
User List	Show user names, full names, and access type.
Add button	Add a user.
Remove button	Remove a user.
Properties button	View or change user information (properties).

Item	Description
Set Password button	Set user password.
Close button	Close the dialog.

Buttons are provided in the main window to initiate adding a user, removing a user, viewing properties of a user, and changing user passwords. Figure 7 "User Administration window" (page 29) shows the User Administration window.

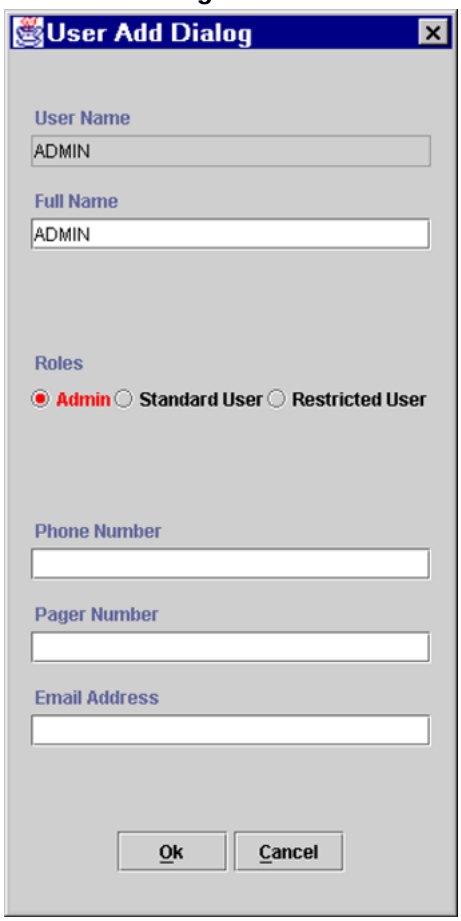
Figure 7
User Administration window



Properties of a user can be viewed or changed by selecting the user's name and then pressing or double-clicking the Properties button. If changes are made to any of the properties, use the **Update** button (visible when Properties window is open) to save the changes.

Figure 8 "Add User Dialog window" (page 30) shows the User Add Dialog window which is accessed by clicking the **Add** ... button.

Figure 8
Add User Dialog window



Adding users

When adding users, enter the following user properties in the Add User Dialog window:

- User Name: this is required and must be unique
- Full Name
- Roles (access levels): Admin, Standard User, Restricted User
- Phone Number
- Pager Number
- E-mail Address

Removing users

Remove users by selecting an entry from the User Administration window and clicking the **Remove** button.

Changing passwords

Change users' passwords by selecting an entry from the User Administration window and clicking the **Set Password** ... button. All user passwords are encrypted.

Switch administration

The client provides the user interface for switch administration.

Optivity Telephony Manager for Meridian SL-100 provides management features for Meridian SL-100 switches residing on the same management LAN. Optivity Telephony Manager for Meridian SL-100 recognizes switches by their switch name and IP address. All switch names and IP addresses are site-specific. The switch names are free form and do not have to correspond to other names with which the switch can be identified, such as a Domain Name System (DNS) name on the LAN. Information about switches is maintained in the Optivity Telephony Manager for Meridian SL-100 server database. The Switch Admin Dialog window lists the names and IP addresses of known switches (see Figure 9 "Switch Admin Dialog Window" (page 31)). From this window, switches can be added, deleted, or modified.

Figure 9
Switch Admin Dialog Window

User interface

Table 8 "Switch Administration Dialog window options" (page 32) shows the options of the Switch Admin Dialog window and describes what can be displayed in each menu.

Table 8
Switch Administration Dialog window options

Item	Description
Switch list	Lists switch names and IP addresses.
Add button	Opens Add Switch dialog used to add a new switch.
Remove button	Removes the switch from Optivity Telephony Manager for Meridian SL-100 server database.
Properties button	Displays properties of switch.
Select button	Selects the switch to make connection and initiate receiving of log events.
Close button	Closes the dialog.

Adding or removing a switch

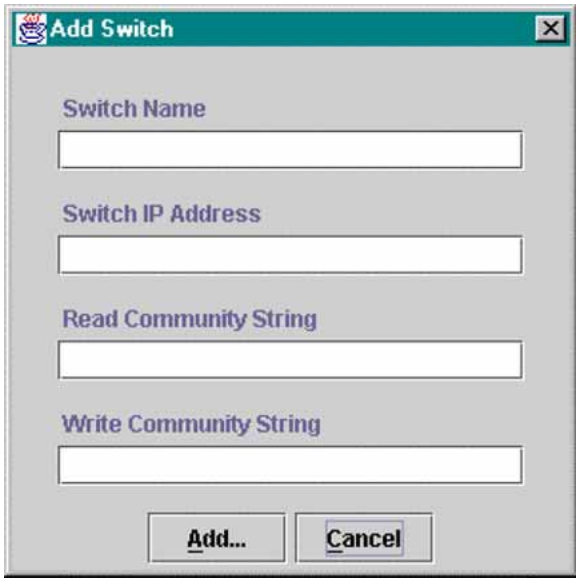
Adding a switch to make it known to the Optivity Telephony Manager for Meridian SL-100 server, or deleting a switch, is done through the Switch Administration tool. The following information is required when defining switch properties and adding them to the Optivity Telephony Manager for Meridian SL-100 server:

- Name
- IP Address of the switch EIU used for SNMP messaging and for telnet sessions
- Read and Write community strings used for SNMP messaging

The switch name can be any character string. The IP address of the switch can be found in the Meridian SL-100 IPNETWRK table. See the *DMS-100 Customer Data Schema Reference Manual* for more details about switch IP addressing. The Read and Write community strings must match those set on the Meridian SL-100 switch. See the *Communication Server 2100 Commercial Systems Feature Description Manual* (555-4031-801) which discusses the SNMPUTIL utility for how to check and set the switch community strings. "Add new Meridian SL-100 switch to Optivity Telephony Manager" (page 77) steps you through how to perform this task.

Figure 10 "Add Switch window" (page 33) shows an example of how the administrator's screen looks when accessing the screens involved in adding or deleting a switch.

Figure 10
Add Switch window



Remove switches from the Optivity Telephony Manager for Meridian SL-100 database by selecting the switch in the Switch Administration Menu (see Figure 8 "Add User Dialog window" (page 30)) and pressing the **Delete** button. Table 9 "Add Switch window fields" (page 33) describes the Add Switch window fields.

Table 9
Add Switch window fields

Item	Description
Switch Name	Enter the switch ID.
Switch IP Address	Enter the IP Address of switch's EIU.
Read Community String	Enter the string that matches Read Community String from the switch.
Write Community String	Enter the String that matches Write Community String from switch.

Note: After a switch is deleted, the system removes all databases from the disk on the server. While only an administrator can initiate this action, all clients are notified of the change. While archived event logs are not removed, this activity cannot be undone. The databases on the server disk are deleted.

Changing switch properties

Properties of switches can be modified from the Switch Administration tool. The IP address and community strings should not be changed, unless the corresponding are changed on the switch using the SNMPUTIL utility.

Consult the *Meridian SL-100 Feature Description Manual*, which discusses the SNMPUTIL utility and provides guidance about changing the IP address for an EIU. The manual also provides descriptions of the SNMPUTIL utility for changing community strings.

A switch is verified as being an Meridian SL-100 containing a load of MSL11 or higher. The IP address and other required parameters are checked as described above. If any of these are incorrect, this operation fails. Figure 11 "Switch Properties window" (page 34) shows the Switch Properties windows. Table 10 "Switch Properties window fields" (page 34) describes the Switch Properties window fields.

Figure 11
Switch Properties window

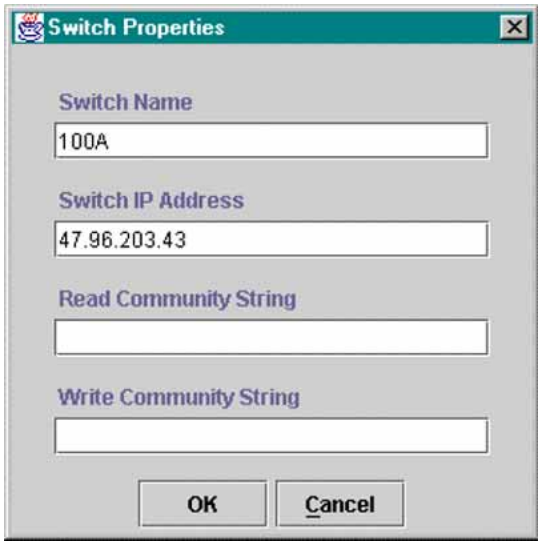


Table 10
Switch Properties window fields

Item	Description
Switch Name	Enter the switch ID.
Switch IP Address	Enter the IP Address of switch's EIU.
Read Community String	Enter the string that matches Read Community String from the switch.
Write Community String	Enter the String that matches Write Community String from switch.

Event Browsing

The event-browsing tool is used to view events received from the switch through the Optivity Telephony Manager for Meridian SL-100 server or retrieved from the Optivity Telephony Manager for Meridian SL-100 server database. The main Event Browser window displays the following event properties (events are listed in order by one of the main properties):

- Severity
- Timestamp
- Module
- Title

Events can be filtered so that only those events of interest to the user are received. Filters settings include: severity; module name; or text strings in the event description.

The screens in Figure 12 "Event Browser Main window" (page 35) and Figure 13 "Event Browser Main window (second view)" (page 36) show two views of the user interface menu window and toolbars available in the Event Browser. Table 11 "Event Browser window options" (page 36) through Table 15 "Event Browser Toolbar options" (page 37) describe views of the Event Browser File and Edit menus and views of some of the toolbars available.

Figure 12
Event Browser Main window

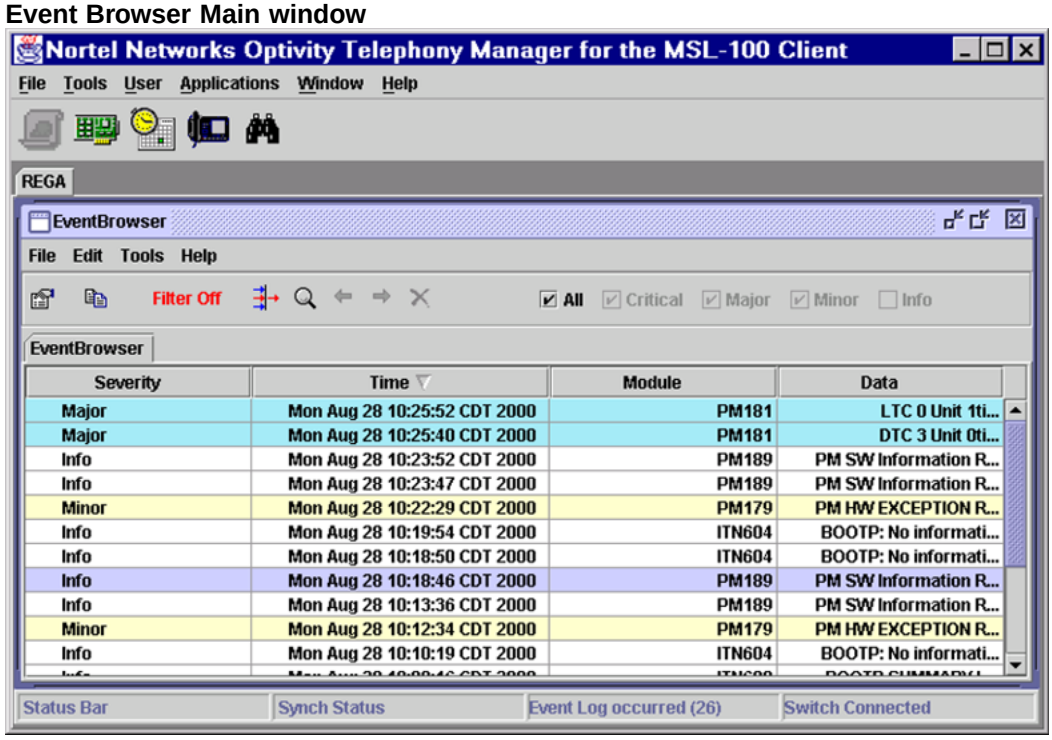


Figure 13
Event Browser Main window (second view)

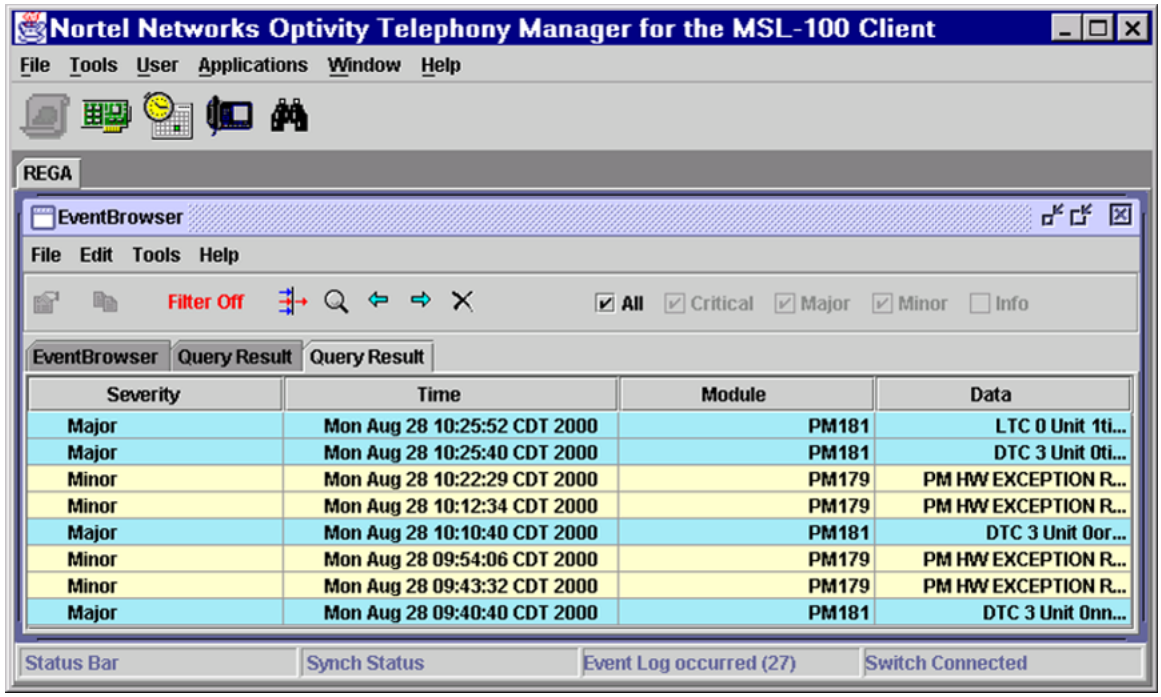


Table 11
Event Browser window options

Item	Description
Menus	Refer to Table 12 "Event Browser File menu options" (page 36) through Table 14 "Event Browser Tools menu options" (page 37).
Event Browser tab	Displays events as they are received from the Optivity Telephony Manager for Meridian SL-100 server. Selecting the column headers will cause the events to be resorted by the selected event data element.
Query Result tab(s)	Displays events retrieved from a query. Initially, events are sorted by date. Selecting the column headers will cause the events to be resorted by the selected event data element.
Toolbar	Each tool in the tools menu can also be invoked using the toolbar. Refer to Table 15 "Event Browser Toolbar options" (page 37).

Table 12
Event Browser File menu options

Item	Description
Properties	Displays full event information in a Log Properties sheet.

Item	Description
Export	Exports selected events to a file. The Event Log Export dialog is opened when this menu item is selected.
Exit	Closes the Event Browser.

Table 13
Event Browser Edit menu options

Item	Description
Copy	Copies selected event information to the clipboard. Multiple events can be selected. The full content of all selected event logs is copied.

Table 14
Event Browser Tools menu options

Item	Description
Filter On/Off	Turns the event receive filter on or off.
Filter Properties	Opens a dialog to set event log receive filter information.
Query	Opens a dialog to initiate a query of events stored in the database.
Previous, Next	Selects previous or next event in browser.
Close Query	Closes the selected event query results window.

Table 15
Event Browser Toolbar options

Item	Description
	Views event log properties.
	Copies selected event logs to clipboard.
Filter On Filter Off	Turns the event filter on or off.
	Opens a dialog to set filter information.

Item	Description
	Selects previous event log.
	Selects next event log.
	Closes selected event log query window.
	Opens a dialog to initiate a query of events stored in the database.
No Icon	Views filter settings used to set the display order of events, according to severity, as they appear in the event browser window. This does not determine which events will be received by the client.

The Event Log Filter dialog, shown in Figure 14 "Event Log Filter window" (page 39) and described in Table 16 "Event Log Filter window options" (page 39), is used to set filters to be applied on events being received. If used, only events matching the filters will be received in the event browser.

Figure 14
Event Log Filter window

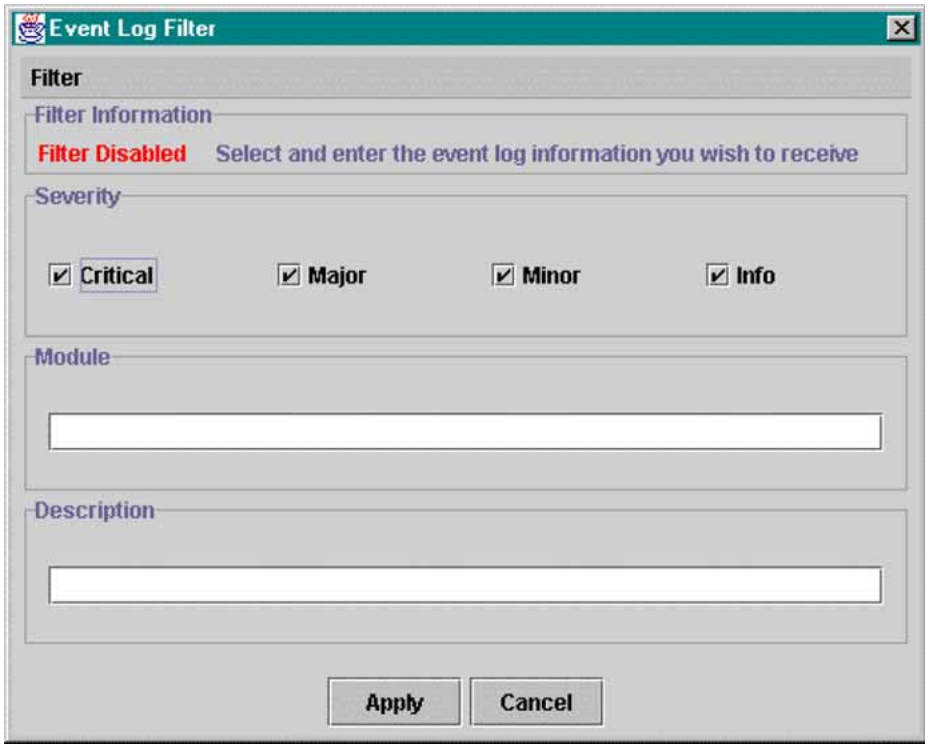


Table 16
Event Log Filter window options

Item	Description
Severity check boxes	Sets the log severities that the user wishes to receive.
Module	Provides a field for the log name and log number combination that the user wishes to receive.
Description	Provides a field for the log text description.
Apply button	Applies the filter settings so they are active.
Cancel button	Cancels filter setting operation.

Working with Event Log Properties and Notes

Log event properties are displayed in a Log Property sheet. All contents of logs as received from the Meridian SL-100 are displayed in fields of the window. User notes can be attached for tracking information about the event for historical purposes. The Log Properties sheet contains a text box for creating and editing log event notes. After editing, log event notes can be saved to the Optivity Telephony Manager for Meridian SL-100 server database. Figure 15 "Log Property window" (page 40) displays the Log Property window and the Log Property Sheet. Table 17 "Log Property options" (page 40) describes the options.

Figure 15
Log Property window

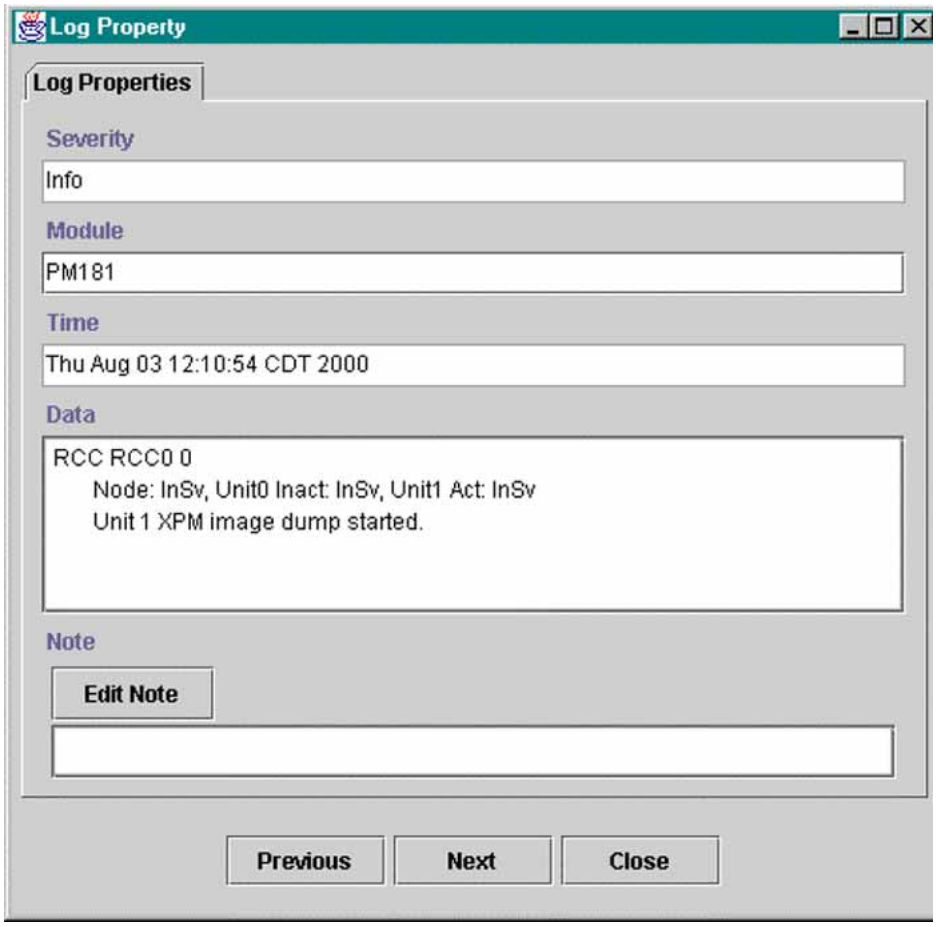


Table 17
Log Property options

Item	Description
Severity	Shows the log severity.
Module	Shows the log name and number.
Time	Shows the log timestamp from the Meridian SL-100.
Data	Provides text that describes the log.
Note Text, Edit Note button	If a note has been attached to the log, the system displays the note text in the Note Text field. The Edit Note button allows the user to edit notes to be attached.

Item	Description
Cut, Copy, Paste tools and Database button	These are displayed after the Edit Note button is pressed. The editing tools work with the Windows clipboard. The Database button is used to store the updated note text to the Optivity Telephony Manager for Meridian SL-100 server database.
Previous/Next/Close buttons	Navigates to previous or next events or closes the Log Property window.

Log events can be exported to files. The export function presents a standard Windows file save dialog for selecting the location, name, and type of file to save. File types supported are .txt, comma-separated values (.csv), and HTML. Figure 16 "Event Log Property window" (page 41) shows the Event Log Export windows available to the user. Table 18 "Event Log Export options" (page 41) describes the options.

Figure 16
Event Log Property window

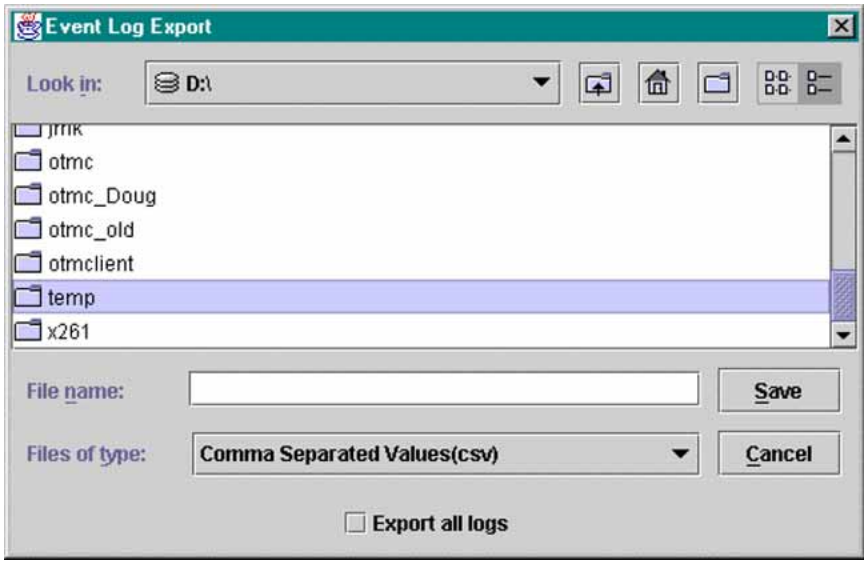


Table 18
Event Log Export options

Item	Description
All	A standard Windows file save dialog for exporting logs to a file. File types supported are text, comma separated values, and HTML.
Export All Logs check	Selecting this option saves all event logs in the current browser or query results.

The event log query function provides the ability to retrieve events from the Optivity Telephony Manager for Meridian SL-100 Server database. The Event Log Query dialog presents event log criteria to be set for the query. Criteria includes: severity levels; log name and number (Module); date/time ranges; log event text contents; and log event note contents (see Figure 17 "Event Log Query window" (page 42) and Table 19 "Event Log Query options" (page 42)).

Figure 17
Event Log Query window

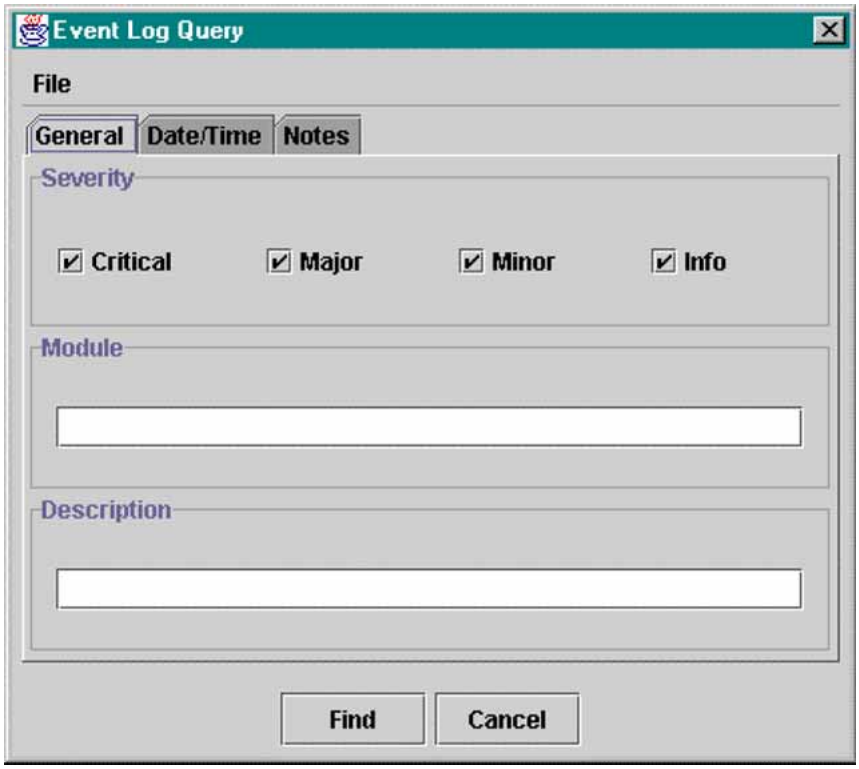


Table 19
Event Log Query options

Item	Description
General tab	Provides fields that define the log query criteria for severity, module (log name and number), and text description.
Date/Time tab	Provides fields to set event log date/time range query criteria.
Notes tab	Provides a field to enter event log note text matching criteria.
Find button	Pressing the Find button initiates the query.
Cancel button	Pressing the Cancel button cancels the query operation.

Switch equipment synchronization and inventory

The process of populating or updating the equipment properties in the Optivity Telephony Manager for Meridian SL-100 database is referred to as "synchronization." At startup following initial installation, a full synchronization is required. Ongoing synchronization of selected equipment types should be done when any equipment types have changed (for example, when a new peripheral is added). For efficiency, the client maintains a local cache of equipment inventory. A separate synchronization of the client inventory with the server database is required after a synchronization of the Optivity Telephony Manager for Meridian SL-100 server with the switch.

Synchronization is a two-step process. The first step is synchronizing the Optivity Telephony Manager for Meridian SL-100 server database with the switch. This can be scheduled and this one activity can synchronize everything, or it can synchronize everything but LENs and DNs, or it can synchronize only LENs and DNs. The second step is synchronizing the information in the database with each client. This can be scheduled or it can be done separately for each of the following six Managed Object types:

- Core nodes, peripheral nodes, and ASU nodes
- C-side links
- Trunks
- Carriers
- LENs
- DNs

The Optivity Telephony Manager for Meridian SL-100 server stores switch equipment as managed objects in the Optivity Telephony Manager for Meridian SL-100 database. The switch equipment properties are obtained from the switch using SNMP queries.

Figure 18 "Inventory Dialog window for server-to-switch synchronization" (page 44) displays a view of the Inventory dialog window for server-to-switch synchronization. Table 20 "Inventory Dialog window for server-to-switch synchronize options" (page 44) describes the related options available. Figure 19 "Inventory Dialog window for client-to-server synchronize" (page 45) shows the Inventory Dialog Window for client-to-server synchronization. Table 21 "Inventory Dialog window for client-to-server synchronize options" (page 45) describes the related options available to the user. The status bar provides information to the user about the progress of the synchronization.

Figure 18
Inventory Dialog window for server-to-switch synchronization

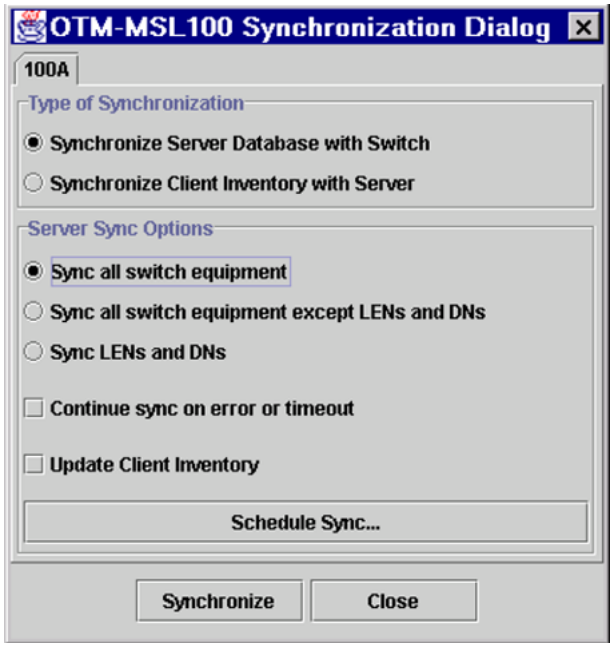


Table 20
Inventory Dialog window for server-to-switch synchronize options

Item	Description
Type of Synchronization choice	Sets the synchronization type to either Optivity Telephony Manager for Meridian SL-100 Server Database with Switch or to the individual Client Inventory with the Optivity Telephony Manager for Meridian SL-100 Server database.
Server Sync Options choices	Sets the options to synchronize all equipment, all but LENs and DNs, or only LENs and DNs.
Continue sync on error or timeout check box	When set, this causes the synchronization process to continue if errors or time-outs occur.
Update Client Inventory check box	When set, this automatically updates the client inventory when the Optivity Telephony Manager for Meridian SL-100 server database is synchronized with the switch.
Schedule Sync	Opens dialog to schedule synchronization operation.
Synchronize button	Initiates synchronize operation.
Close button	Closes the dialog.

Figure 19
Inventory Dialog window for client-to-server synchronize

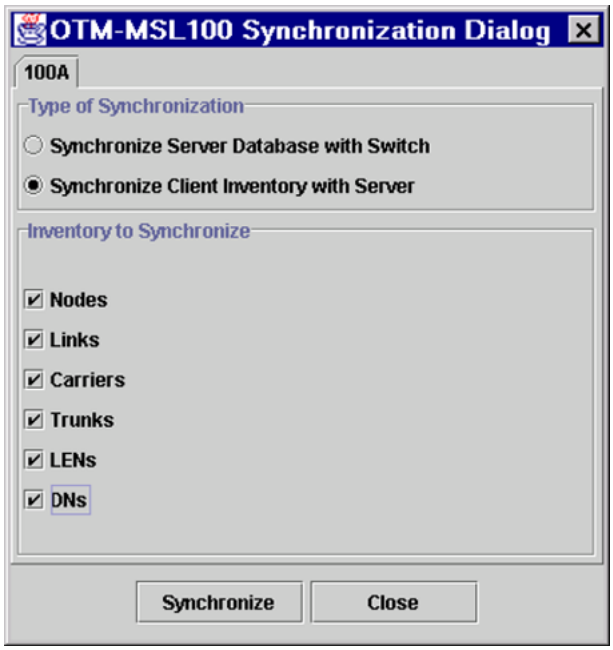


Table 21
Inventory Dialog window for client-to-server synchronize options

Item	Description
Type of Synchronization choice	Sets the synchronization type to either Optivity Telephony Manager for Meridian SL-100 Server Database with Switch or to the individual Client Inventory with the Optivity Telephony Manager for Meridian SL-100 Server database.
Inventory to Synchronize checklist	Determines items to select which equipment to synchronize with the Optivity Telephony Manager for Meridian SL-100 server.
Synchronize button	Initiates synchronization operation.
Close button	Closes dialog.

Switch inventory and status

The equipment inventory from the Optivity Telephony Manager for Meridian SL-100 server database can be viewed using the Inventory Tool. As illustrated in Figure 20 "Inventory Dialog listing" (page 46), this tool displays a dialog listing equipment organized by category with a navigation tree. The equipment is listed by name, in alphabetical order. The user can view equipment properties by selecting the equipment item and viewing the properties sheet associated with it. The properties display includes the current status of the selected equipment. Table 23 "Inventory Dialog Listing options" (page 47) and Table 22 "Inventory Dialog Listing options" (page 46) describe associated Inventory dialog options. Figure 21 "Node, Carrier,

and Trunk Property Sheets" (page 47) displays Node Trunk, and Carrier property sheets, while Figure 22 "Link, LEN, and DN Property Sheets" (page 48) shows Link, Len, and DN property sheets. Table 24 "Equipment Property Sheets options" (page 48) describes the Equipment Inventory property sheet.

Figure 20
Inventory Dialog listing

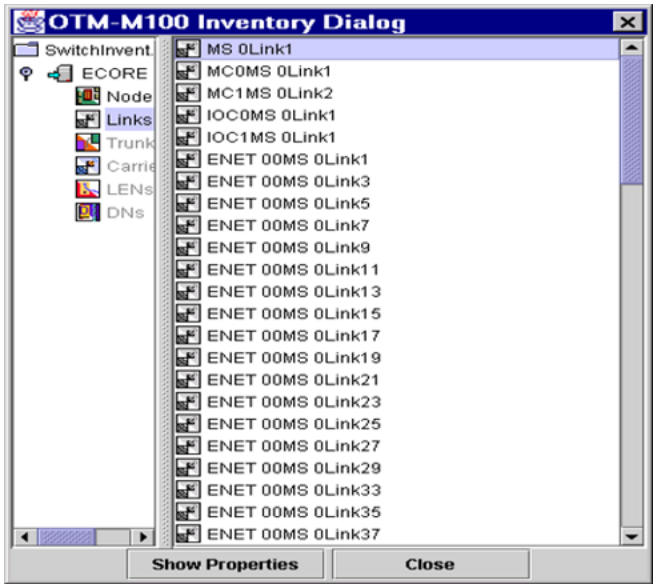


Table 22
Inventory Dialog Listing options

Item	Description
Navigation tree	The left side of the dialog is a tree structure that permits navigating through equipment for the switch. Equipment is grouped by type: Nodes; Links; Trunks; Carriers; LENs; and DNs.
Equipment list	Switch equipment is listed in alphabetical order. If the entire switch is selected in the navigation tree, the list includes all equipment types. If a specific type of equipment is selected in the navigation tree, the list includes only that equipment type.

Item	Description
Show Properties button	Opens a properties sheet on the selected equipment item.
Close button	Closes dialog.

Table 23
Inventory Dialog Listing options

Item	Description
Equipment icon	An icon representing the equipment type (Node, Link, Trunk, Carrier, LEN, DN).
Status bar	A color-coded status bar (that is, green for "InSv"). The status reflects the status at the time the property sheet was opened or the last time the "Refresh Status" button was pressed (see below).
Properties description	Provides information about the equipment including general information and equipment type details. The contents displayed depend on the type of equipment.
Close button	Closes the dialog.
Refresh Status button	Retrieves the status from the switch and updates the status bar.

Figure 21
Node, Carrier, and Trunk Property Sheets

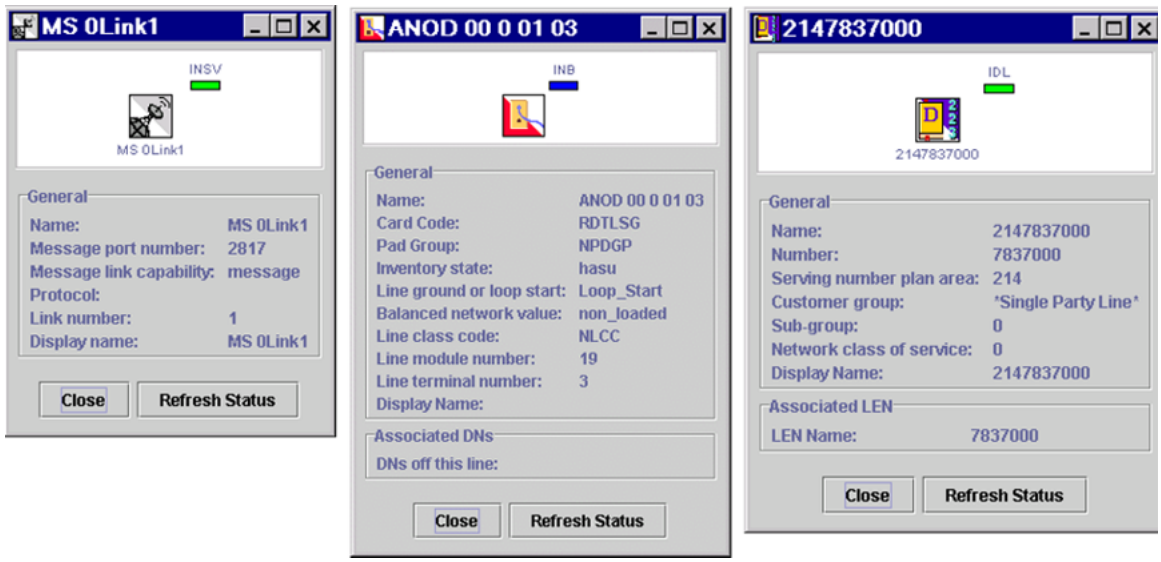


Figure 22
Link, LEN, and DN Property Sheets

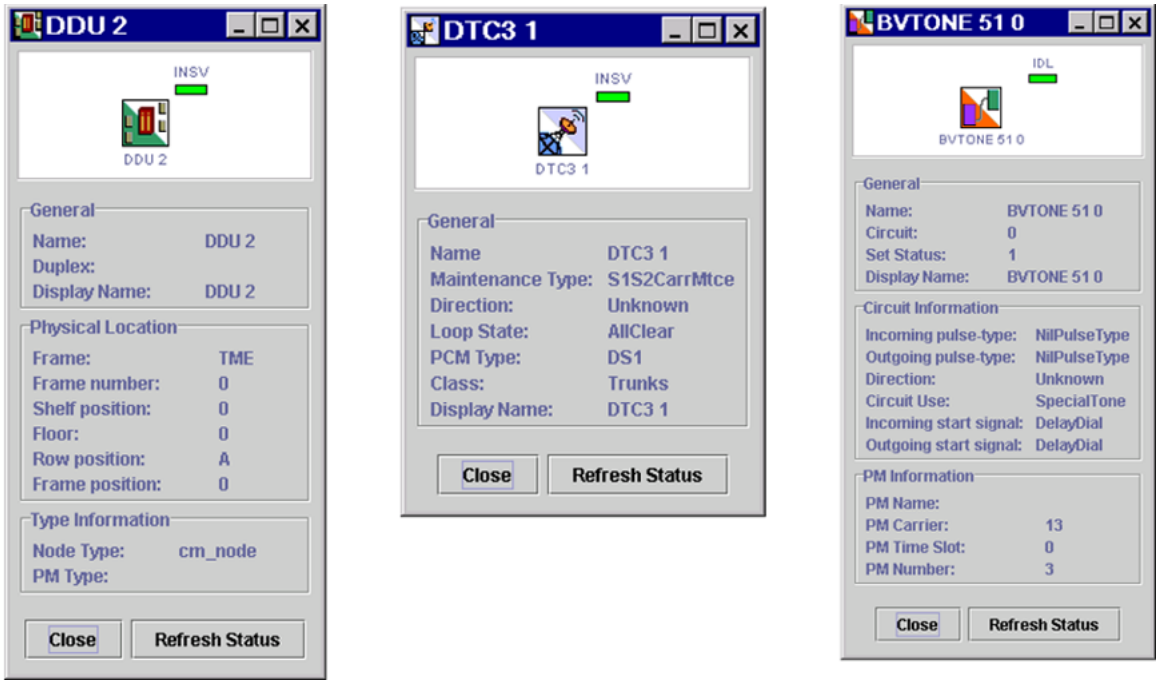


Table 24
Equipment Property Sheets options

Item	Description
Navigation tree	The left side of the dialog is a tree structure that permits navigating through equipment for the switch. Equipment is grouped by type: Nodes, Links, Trunks, Carriers, LENs, DNs.
Equipment list	Switch equipment is listed in alphabetical order. If the entire switch is selected in the navigation tree, the list includes all equipment types. If a type of equipment is selected in the navigation tree, the list includes only that equipment type.
Properties button	Opens a properties sheet on the selected equipment.

Watcher service

Switch events are based on switch log reports received over the network by the Optivity Telephony Manager for Meridian SL-100 server. The Watcher feature, a tool that integrates with other features provided by Optivity Telephony Manager for Meridian SL-100, provides the ability to sound an audible alarm or send an e-mail message when a log event occurs with any combination of the following specified criteria:

- Event type
- Event severity

- Phrase or keyword matches event description

In short, the Watcher tool provides a service to watch for switch events and then take a predesignated action. To use the feature, users select the Watcher tool from the Optivity Telephony Manager for Meridian SL-100 client Applications menu or the client Toolbar. Watched events are specified by the log report identification in the event. Actions that can be specified when a watched event is detected are as follows:

- Audible alarm on the client PC
- E-mail sent to a predesignated e-mail address

Individual users specify the events they want watched and the corresponding action to be taken. More than one user can watch for the same events. Users can delete or modify watched events on a per-user basis. Users will only see those watched events that they have added. Once a user logs off and ends the client session, events specified to be watched are still watched. However, when the requesting user is not logged on, only e-mail actions triggered by watched events are implemented. Users can also place limits on the number of times or frequency that an action is implemented for a series of watched events.

Figure 23 "Watcher Main window" (page 50) shows the Watcher window, which contains the menu and toolbar items available. A wizard guides the user through specifying a new watched event. Table 25 "Watcher Main Window menu and toolbar options" (page 50) and Table 26 "Watcher menu and toolbar options" (page 50) display the Event Watcher menus and toolbar options.

Figure 23
Watcher Main window

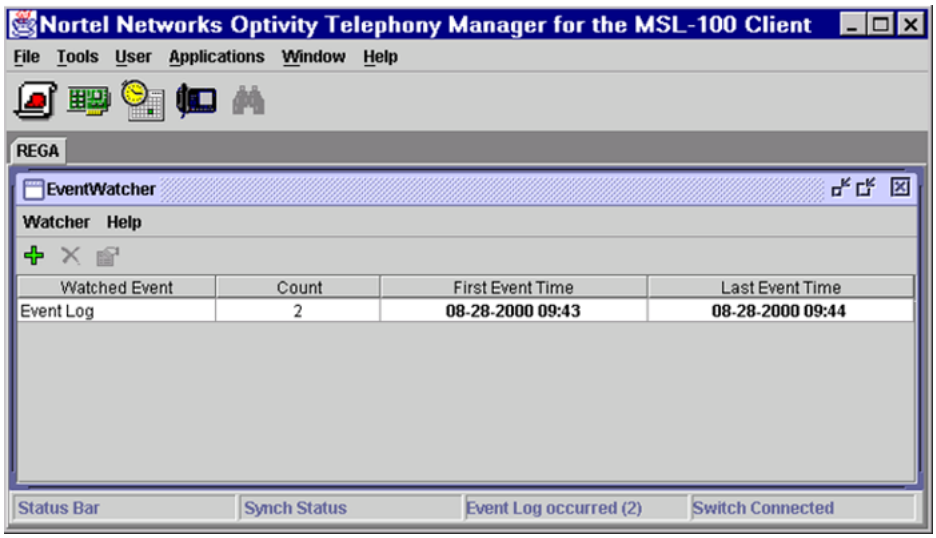


Table 25
Watcher Main Window menu and toolbar options

Item	Description
Watcher menu	Contains menu items to add and delete watched events and for displaying and editing watched event properties.
Watcher toolbar	Contains tools to add and delete watched events and for displaying and editing watched event properties.
Watched Events list	Displays all currently watched events with the following: • Watched event: name (editable) • Count: number of times the event has been detected • First Event Time: first occurrence of event • Last Event Time: most recent occurrence of event
Help	Opens Help.

Table 26
Watcher menu and toolbar options

Item	Description
Add	Initiates a wizard to specify an event to watch and the action to take when the event is detected.
Delete	Removes the watched event that is selected in the list.

Item	Description
Properties	Shows properties of watched event that is selected in the list.
Help	Opens Help.

When watched events properties are displayed, the user can edit the event watching criteria. The user can also edit the notification details, but not the type of notification. Counters and first/last time event detected are not reset when changes are made to the properties. Figure 24 "Watched Event Properties window" (page 51) shows the Watched Event Properties Sheet and Table 27 "Watched Event Properties options" (page 51) describes the menu and toolbar options. Figure 25 "Event Watcher Wizard windows" (page 52) shows several views of the Event Watcher Wizard windows.

Figure 24
Watched Event Properties window

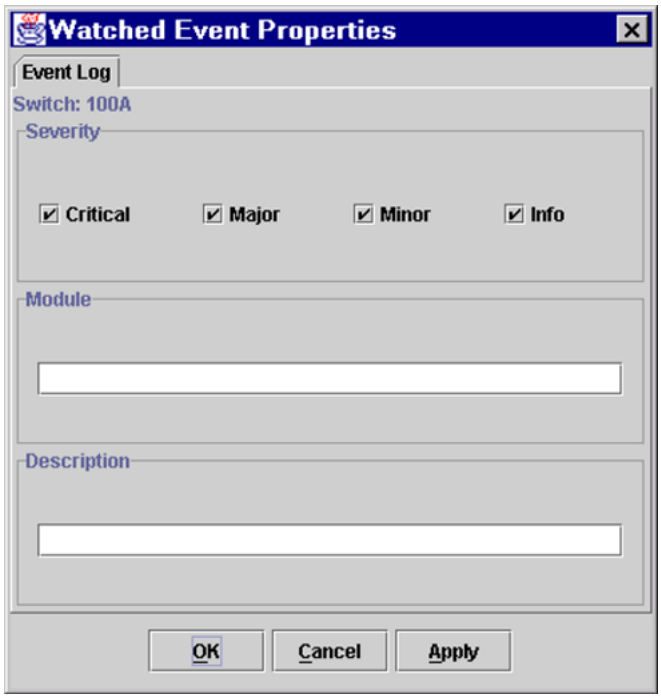
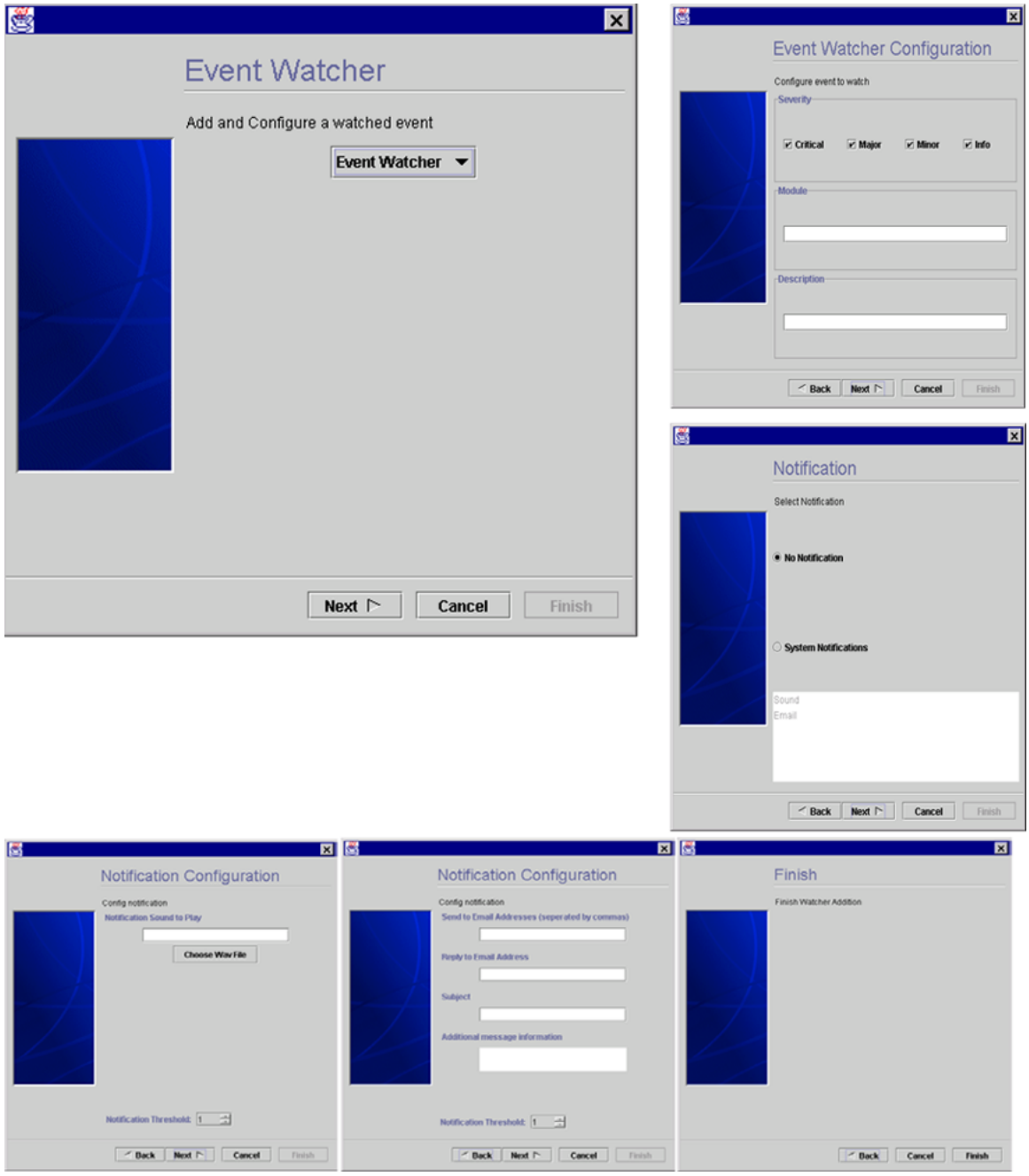


Table 27
Watched Event Properties options

Item	Description
Event Log tab	All criteria that is being watched in incoming events. When all criteria is met, the counter is updated and the first and/or last time values are reset. All fields are editable.
Apply button	Applies changes to properties.

Item	Description
OK button	Applies changes and closes the dialog.
Cancel button	Cancels changes and closes the dialog.

Figure 25
Event Watcher Wizard windows



The Watched Event Wizard operates in a standard wizard manner to walk the user through setting up a new watched event. **Next** and **Back** buttons allow for making changes before finishing. Table 28 "Event Wizard steps" (page 53) shows the Wizard Steps available.

Table 28
Event Wizard steps

Wizard steps	Description
Event Watcher Configuration	Specify the criteria to watch for incoming events. Checkboxes and text fields provide for selecting event severity, event log type, and event log text.
Notification	Select the type of notification: sound or e-mail.
Notification Configuration (e-mail)	Specify the e-mail parameters to use for the e-mail notification. Enter the sender address is as follows: • From address • Subject • Additional text (in addition to event log text) The form of the addresses must be <username/id>@<mail domain>. Additionally, a limit can be set on the number of times the e-mail is sent.
Notification Configuration (sound)	Specify the sound file to use for the audible notification. The only file type supported is .wav. The "Choose File" button allows the user to select the file from the Windows file system. Additionally, a limit can be set on the number of times the sound is generated.
Finish	Indicates the watched event addition is complete.

Scheduler service

The scheduler service is a basic scheduling function used by other services. By itself, it is not visible to users. Services or tools that require scheduling make use of the core scheduling service. These services can require a user to enter scheduling information within their own user interface. The scheduling service accepts date-time stamps and a service function to be implemented at the time specified.

The scheduler service is a basic scheduling function used by other services. The following three activities can be scheduled:

- Event log archiving
- M3900 set firmware downloads
- Switch database synchronization

Separate facilities are provided for scheduling each of these activities and defining the specific actions to perform. The main scheduler window allows centralized viewing of all scheduled activities and allows optional updating of their scheduled execution times, as shown in Figure 26 "Scheduler Main window" (page 54). Table 29 "Scheduler Main Window Menu and Toolbar options" (page 54) describes the Scheduler Main window menu and toolbar options.

Figure 26
Scheduler Main window

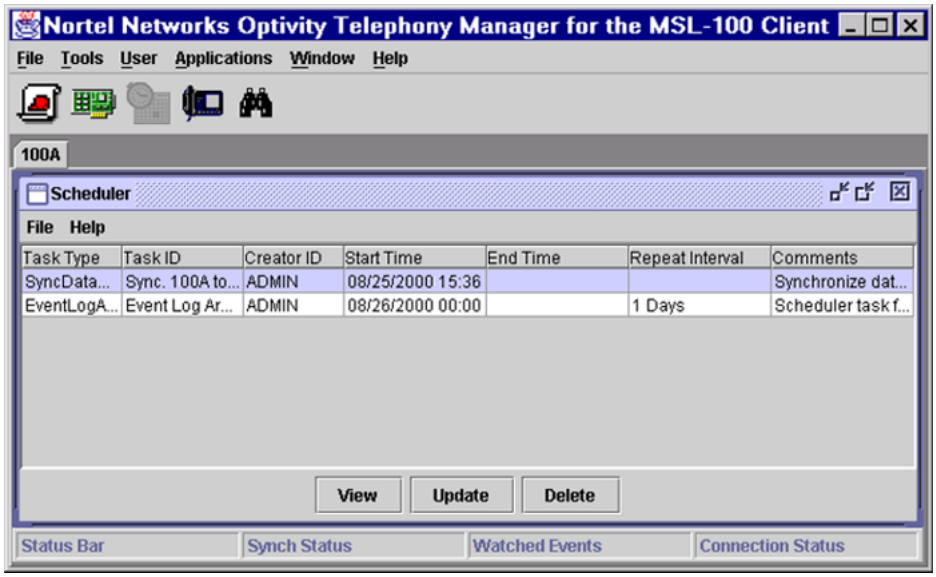


Table 29
Scheduler Main Window Menu and Toolbar options

Item	Description
File menu	Opens menu item to exit the screen.
Help menu	Opens Help.

Item	Description
Scheduled Events list	Displays all currently scheduled events as follows: • Task Type: identifies the type of scheduled activity. For Example, Event Log Archiving. • Task ID: identifies an individual task. For example, "IPE101 M3905 v4.6 Download." • Creator ID: identifies the user who created the scheduled task. • Start Time: initial execution time of the task. • End Time: an optional time at which a scheduled activity is to be stopped, if it has not completed. This field is meaningless in the case of the Event Log archiving task, which is always allowed to run to completion. • Repeat Interval: if specified, the interval at which the task is to be repeated. For example, 24 hours. • Comments: Miscellaneous comments describing the task.
View button	Displays the currently selected task in a read-only Scheduled Task Editor dialog.
Update button	Displays the currently selected task in the Scheduled Task Editor dialog allowing update of selected fields.
Delete button	Removes the currently selected task from the list of currently scheduled tasks and cancels the scheduled task.

When "Scheduled task" is selected for viewing, the Scheduler Task Editor dialog is launched displaying the selected task in read only mode. Figure 27 "Scheduled Task Editor - Read Only Mode" (page 56) displays the Scheduled Task Editor Read Only window. Table 30 "Scheduled Task Editor - Read Only Mode items" (page 56) describes the additional information available.

Figure 27
Scheduled Task Editor - Read Only Mode

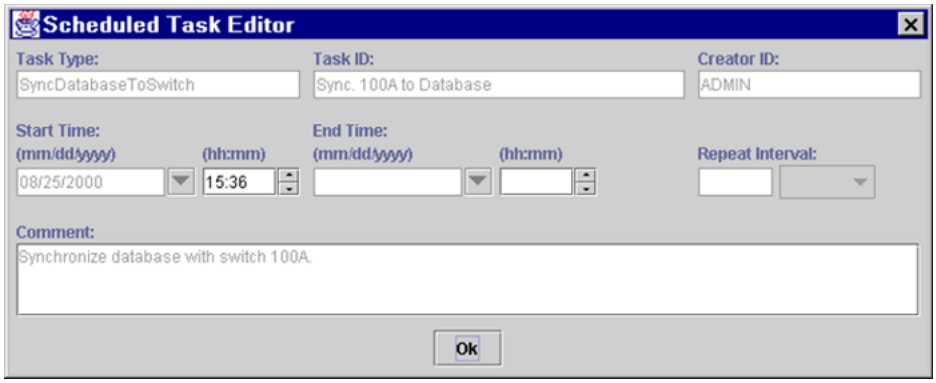


Table 30
Scheduled Task Editor - Read Only Mode items

Item	Description
Task Type	Identifies the type of scheduled activity. For Example, Event Log archiving.
Task ID	Identifies an individual task. For example, "IPE101 M3905 v4.6 Download."
Creator ID	Identifies the user who created the scheduled task.
Start Time	Initial execution time of the task.
End Time	An optional time at which a scheduled activity is to be stopped, if it has not completed. This is not applicable to Event Log archiving tasks, which are always allowed to run to completion.
Repeat Interval	If specified, the interval at which the task is to be repeated. For example, 24 hours.
OK button	Dismisses the Scheduled Task Editor dialog.

When "Scheduled Task" is selected for update, the Scheduled Task Editor dialog is launched displaying the selected task for edit. This is shown in Figure 28 "Scheduled Task Editor - Edit Mode" (page 57). Table 31 "Scheduled Task Editor - Edit Mode options" (page 57) provides a view of related menu and toolbar options available.

Figure 28
Scheduled Task Editor - Edit Mode

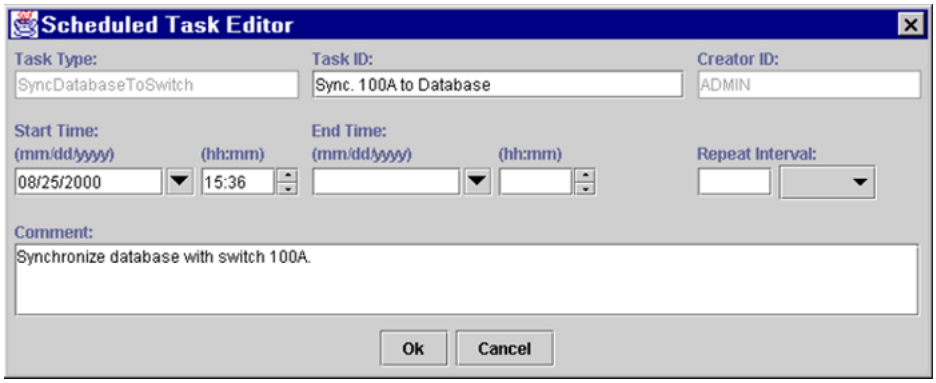


Table 31
Scheduled Task Editor - Edit Mode options

Item	Description
Task Type	Identifies the type of scheduled activity. For Example, Event Log archiving.
Task ID	Identifies an individual task. For example, "IPE101 M3905 v4.6 Download."
Creator ID	Identifies the user who created the scheduled task.
Start Time	Initial execution time of the task.
End Time	An optional time at which a scheduled activity is to be stopped, if it has not completed. This is not applicable to Event Log archiving tasks, which are always allowed to run to completion.
Repeat Interval	If specified, the interval at which the task is to be repeated. The repeat interval can be specified as a number of hours, days, or weeks.
OK button	Saves changes and dismisses the Scheduled Task Editor dialog.
Cancel button	Dismisses the Scheduled Task Editor dialog discarding any changes.

The dialogs in Figure 29 "Scheduled Task Editor - Date Selection dialogs" (page 58) are used to select start, and end date values for a scheduled task. They are displayed when the down arrow buttons, next to the Start Time and End Time date fields, are pressed. Table 32 "Scheduled Task Editor - Date Selection dialogs options" (page 58) describes the related menu and toolbar options.

Figure 29
Scheduled Task Editor - Date Selection dialogs

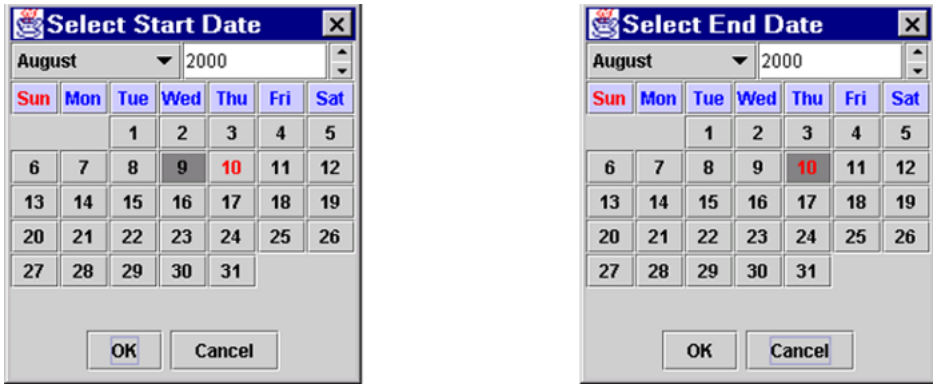


Table 32
Scheduled Task Editor - Date Selection dialogs options

Item	Description
Calendar (GUI items)	Selects the month, year, and day.
OK button	Accepts the current selection and dismisses the dialog.
Cancel button	Dismisses the dialog without changing the corresponding date value.

Optivity Telephony Manager for Meridian SL-100 quick start

This chapter provides a brief overview of the first steps a customer must perform to start using Optivity Telephony Manager for Meridian SL-100. More detailed information can be found in the help documentation included on the Optivity Telephony Manager CD-ROM in the docs folder.

This chapter contains the following procedures:

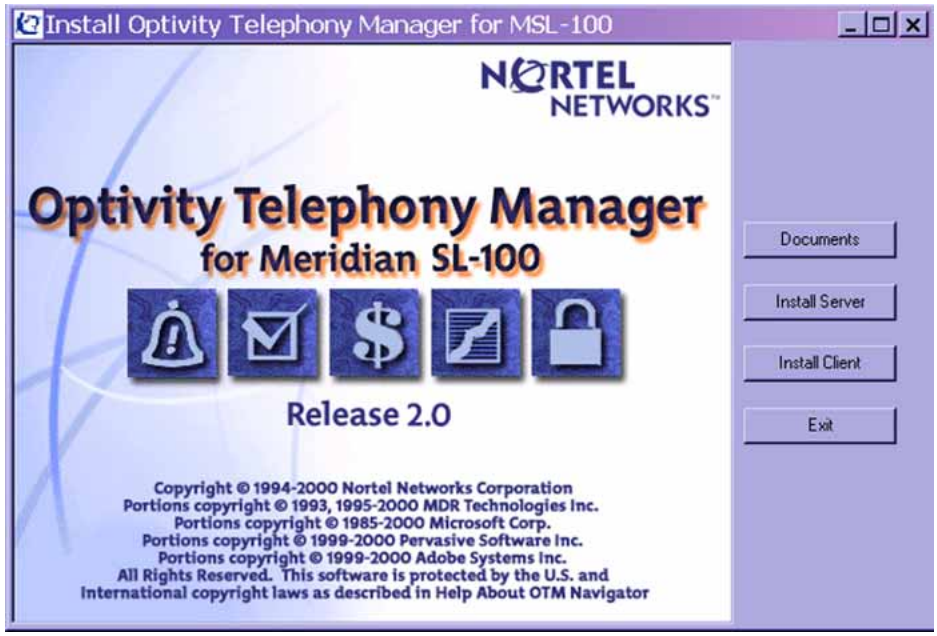
The Install menu

The Install menu is the first window that appears once you launch the Optivity Telephony Manager CD-ROM. Follow the steps in "Access the Install menu" (page 59) to select your configuration option.

Access the Install menu

Step	Action
1	Insert the Optivity Telephony Manager CD-ROM in your PC's CD-ROM drive and run the OTM_Install.exe from the CD. *The window in* Figure 30 "Install Optivity Telephony Manager for MSL-100 window" (page 60) *opens.*

Figure 30
Install Optivity Telephony Manager for MSL-100 window



2 Select the option you want by clicking on one of the buttons on the right side of the window. Table 33 "Meridian SL-100 Optivity Telephony Manager options" (page 60) provides a description of the available options.

Table 33
Meridian SL-100 Optivity Telephony Manager options

Option	Description
Documents	Opens explorer window to the docs directory on the CD. Double click the item to view one of the following: • License agreement • Optivity Telephony Manager Help files • Optivity Telephony Manager Demo • Product Specification • Quick Start Guide • Read Me file • Release Notes

Option	Description
Server Install	Installs the Optivity Telephony Manager Server. Server installation requires the following: • Hardware requirements — 500 MHz Pentium II/III or equivalent processor — 200 MB RAM (256 MB recommended) — 1 GB hard drive (2 GB recommended) — Color monitor, mouse, and network interface card — CD-ROM — Sound card (optional) — Super Video Graphics Array (SVGA) • Software requirements — Windows NT 4.0 Workstation or Server with Service Pack 5 installed (Windows 2000 will work) — Java JRE, version 1.2.2 or higher — TCP/IP protocol — Network card drivers
Client Install	Installs the Optivity Telephony Manager Client. Client installation requires the following: • Hardware requirements — Intel Pentium II/III, or equivalent, processor, 300 MHz or faster CPU — 200 MB RAM (256 recommended) — 1 GB hard drive (100 MB minimum free space) — Color monitor, mouse, and network interface card — CD-ROM — Sound card (optional)

Option	Description
	— SVGA • Software requirements — Windows NT Workstation 4.0, SP 5 or higher (Windows 95, Windows 98, or Windows 2000 will work) — Java JRE, version 1.2.2 or higher — TCP/IP protocol — Network card drivers
Exit	Closes the window and exits the application.

3 Based on the option selected, proceed to the appropriate procedure in this document.

—End—

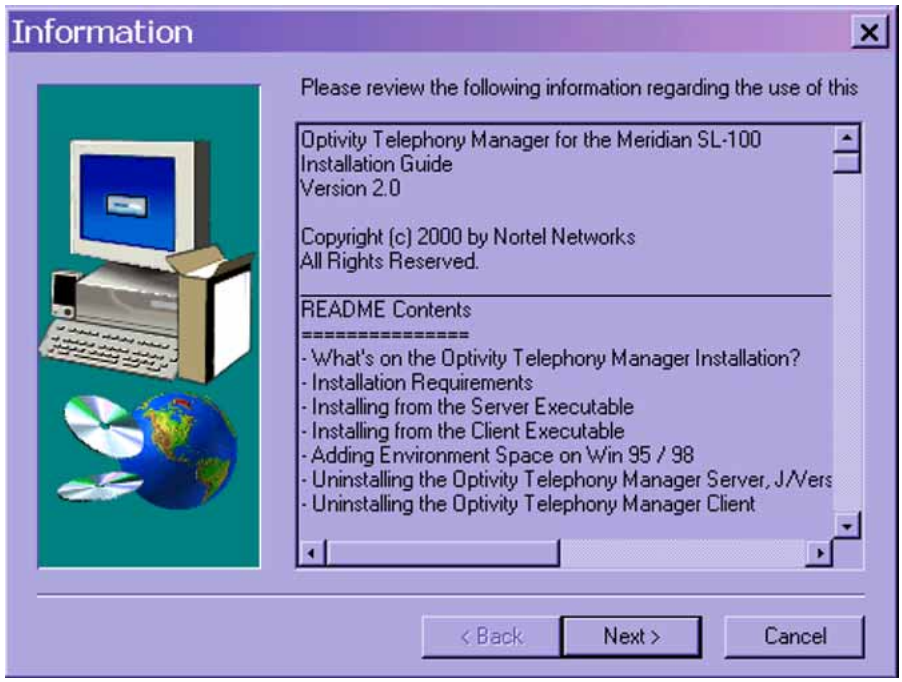
Server installation

Follow the steps in "Install the Optivity Telephony Manager Server" (page 62) to install the server.

Install the Optivity Telephony Manager Server

Step	Action
1	From the Install Optivity Telephony Manager for MSL-100 window, click on the **Install Server** button. *The window in* Figure 31 "Welcome window" (page 63) *opens.*

Figure 31
Welcome window



2 Click on the **Next** button.

The window in Figure 32 "License window" (page 63) *opens.*

Figure 32
License window

3 Accept the license agreement by clicking on the **Yes** button.

The window in Figure 33 "Information screen" (page 64) *opens.*

Figure 33
Information screen

4 The Information Screen contains the readme.txt file information. Review the information and click on the **Next** button.

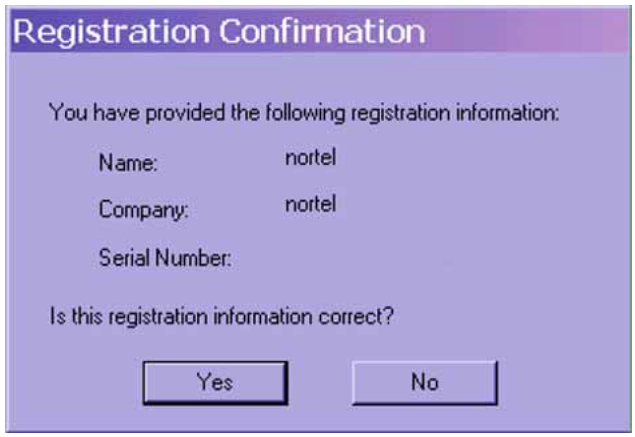
The window in Figure 34 "User Information window" (page 65) *opens.*

Figure 34
User Information window

5 Enter user information including the serial number from the white sticker found on the backside of the application CD case. Click on the **Next** button.

If the serial number entered is correct, the window in Figure 35 "Registration Confirmation" (page 65) *opens, otherwise the system prompts you to re-enter the serial number.*

Figure 35
Registration Confirmation



6 Confirm that you correctly entered the serial number and click on the **Yes** button.

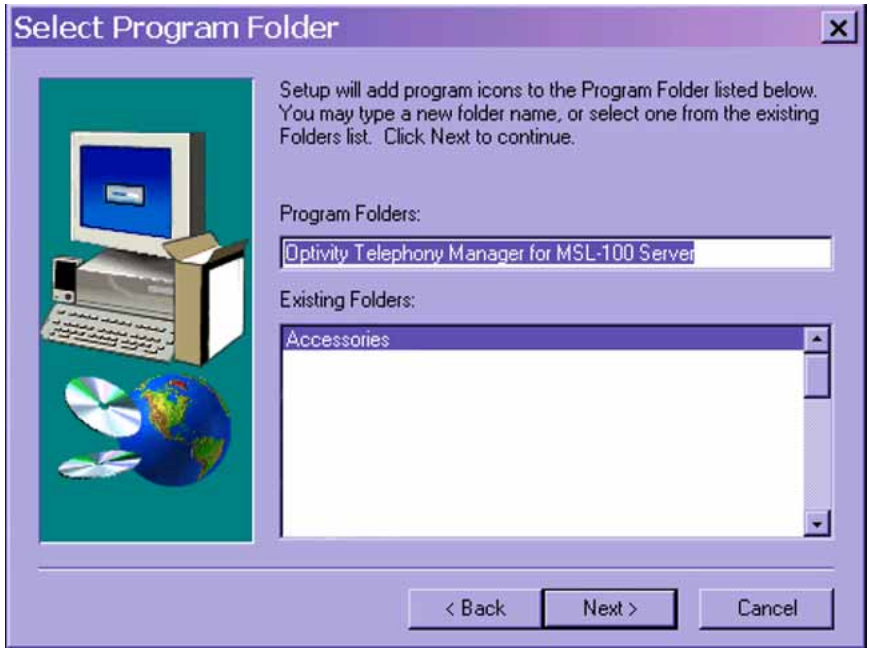
The window in Figure 36 "Choose Destination Location window" (page 66) *opens.*

Figure 36
Choose Destination Location window

7 Click on the **Browse** button to select the destination folder where you want Optivity Telephony Manager to be installed. When you have selected the desired folder, click on the **Next** button.

The window in Figure 37 "Select Program Folder window" (page 67) *opens.*

Figure 37
Select Program Folder window



8 Select what you want the program folder to be named and click on the **Next** button.

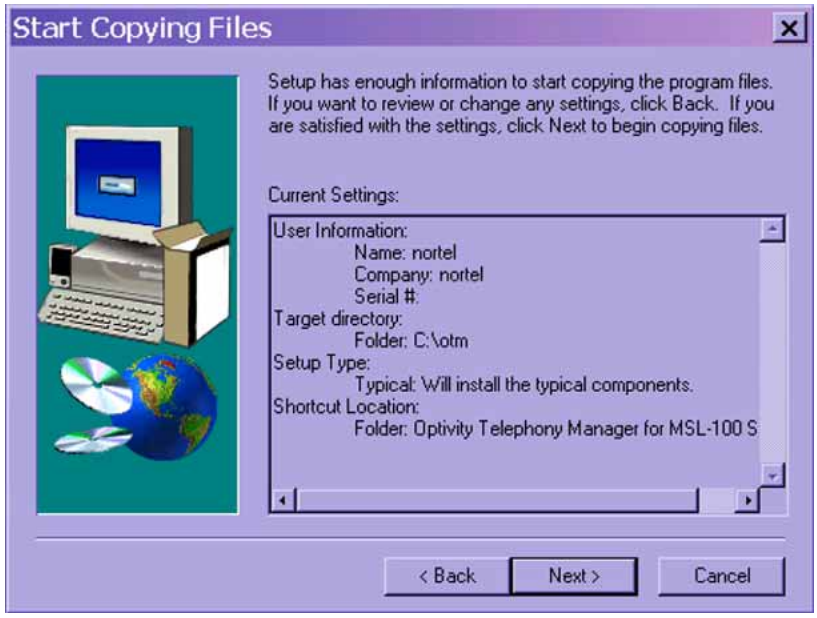
The window in Figure 38 "Setup Type window" (page 67) *opens.*

Figure 38
Setup Type window

9 Click on a button to select the setup option. In most cases, you will select Typical.

The window in Figure 39 "Start Copying Files window" (page 68) *opens.*

Figure 39
Start Copying Files window



10 The Start Copying Files window displays a summary of the selections made during the installation. Click on the **Next** button.

The system begins copying the files to your computer. When the system completes copying the files, the window in Figure 40 "Setup Complete window" (page 69) *opens.*

Figure 40
Setup Complete window

11 You must restart your computer, before the server will function properly. Click on the **Finish** button to complete the installation.

—End—

Installation complete indications

Table 34 "Server installation checklist" (page 69) lists items to check for to be sure that the installation competed successfully.

Table 34
Server installation checklist

Item	Description
Server icon	Optivity Telephony Manager for Meridian SL-100 Server Icon appears in Startup menu

Item	Description
No startup errors	The server starts with no errors in the server display window.
Windows Control Panel - Services Dialog	The versantd service appears on the list of services and has been started. If not check the following: • In the <HomeDrive>\\WINNT\\system32\\drivers\\ etc\\services file there should be a line at the bottom of the file that reads: **oscssd 5019/tcp # VERSANT connect service** • Environment variables exist and information is correct: — VERSANT_CLASSPATH= C:\\otm\\versant\\6_0_1\\NT\\lib\\dbadmin.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\rt.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\var.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\vxml.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\xalan.jar;C:\\otm\\versant\\6_0_1\\NT\\lib;\xerces.jar;C:\\otm\\versant\\6_0_1;\\NT\\lib\\jgl3.0.0.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\jvi6.0.2-jdk1.2.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\jta-spec1_0_1.jar;C:\\otm\\versant\\6_0_1\\NT\\lib\\oromatcher1.1.jar; — VERSANT_LIB= C:\\otm\\versant\\6_0_1\\NT\\lib — VERSANT_ROOT= C:\\otm\\versant — VERSANT_PATH= C:\\otm\\versant\\6_0_1\\NT\\bin — Path variable contains the VERSANT_LIB and VERSANT_BIN settings. — Classpath variable contains the VERSANT_CLASSPATH settings. • After repairing any of these items, reboot the machine and check for the versantd service again.

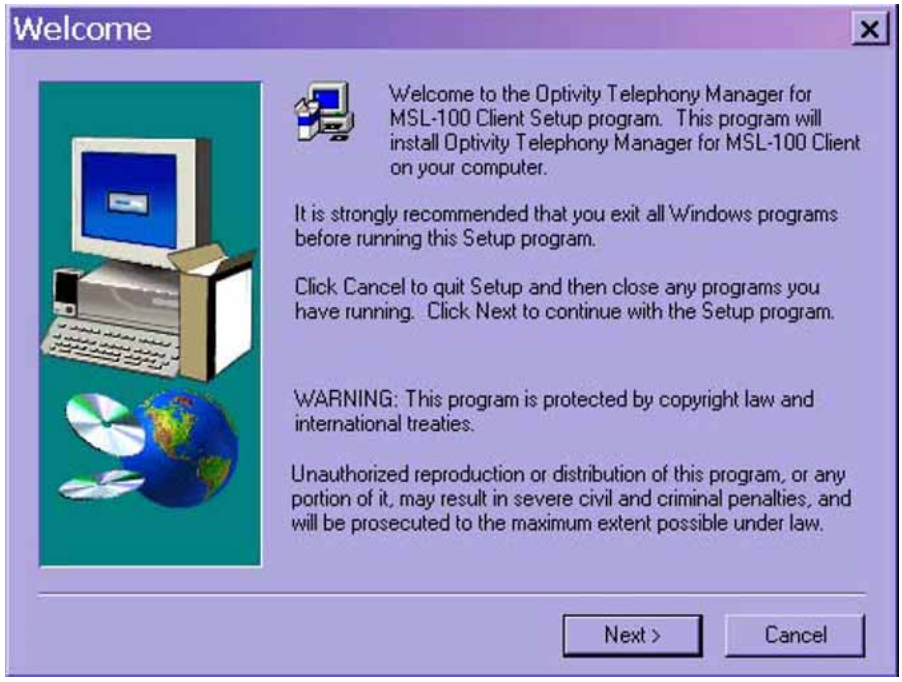
Client installation

Follow the steps in "Install the Optivity Telephony Manager Client" (page 70) to install the client.

Install the Optivity Telephony Manager Client

Step	Action
1	From the Install Optivity Telephony Manager for MSL-100 window, click on the **Install Client** button. *The window in* Figure 41 "Welcome window" (page 71) *opens.*

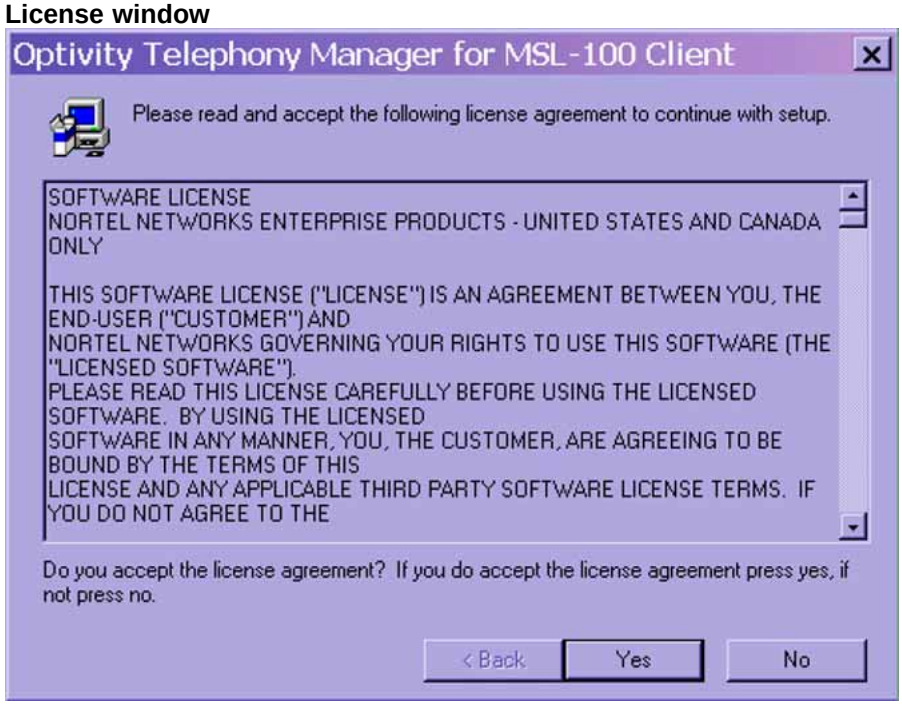
Figure 41
Welcome window



2 Click on the **Next** button.

The window in Figure 42 "License window" (page 71) *opens.*

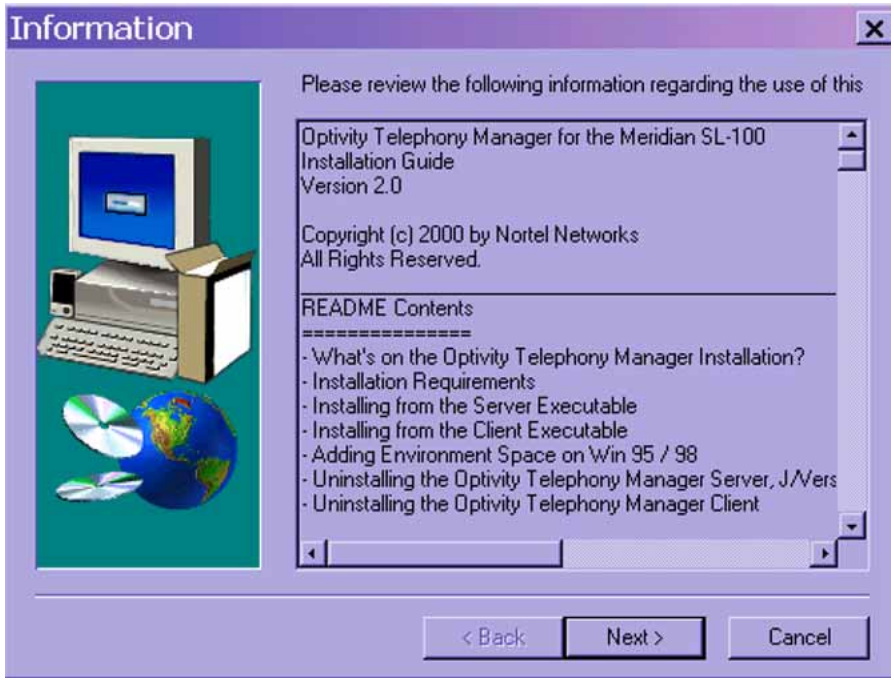
Figure 42
License window



3 Accept the license agreement by clicking on the **Yes** button.

The window in Figure 43 "Information screen" (page 72) *opens.*

Figure 43
Information screen



4 The Information Screen contains the readme.txt file information. Review the information and click on the **Next** button.

The window in Figure 44 "User Information window" (page 73) *opens.*

Figure 44
User Information window

5 Enter user information including the serial number from the white sticker found on the backside of the application CD case. Click on the **Next** button.

If the serial number entered is correct, the window in Figure 45 "Registration Confirmation" (page 73) *opens, otherwise the system prompts you to re-enter the serial number.*

Figure 45
Registration Confirmation

6 Confirm that you correctly entered the serial number and click on the **Yes** button.

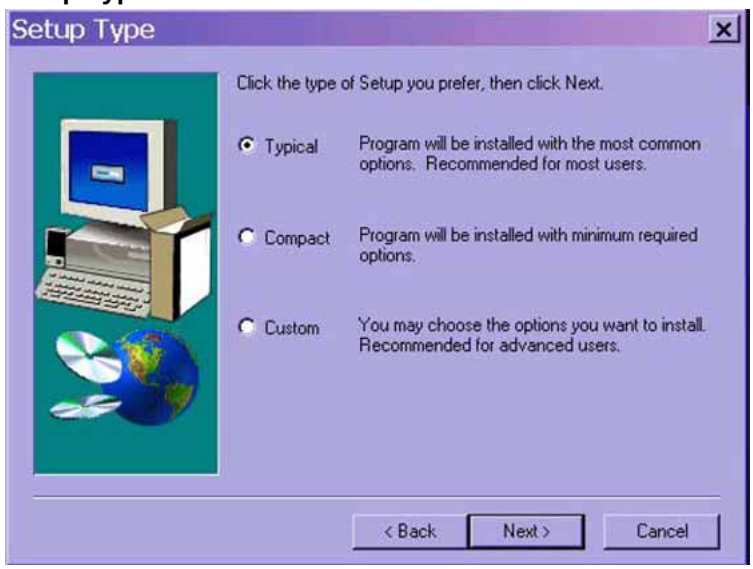
The window in Figure 46 "Select Program Folder window" (page 74) *opens.*

Figure 46
Select Program Folder window

7 Select what you want the program folder to be named and click on the **Next** button.

The window in Figure 47 "Setup Type window" (page 75) *opens.*

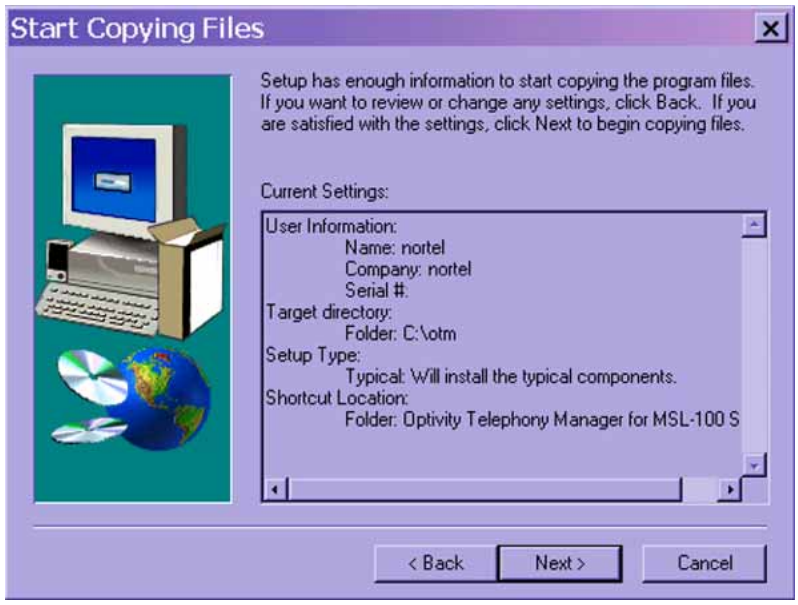
Figure 47
Setup Type window



8 Click on a button to select the setup option. In most cases, you will select Typical.

The window in Figure 48 "Start Copying Files window" (page 75) *opens.*

Figure 48
Start Copying Files window



9 This window displays a summary of the selections made during the installation. Click on the **Next** button.

The system begins copying the files to your computer. When the system completes copying the files, the window in Figure 49 "Setup Complete window" (page 76) *opens.*

Figure 49
Setup Complete window

10 You must restart your computer, before the client will function properly. Click on the **Finish** button to complete the installation.

—End—

Installation complete indications

The following are things to check for to be sure the installation completed successfully:

- Optivity Telephony Manager for MSL-100 Client Icon appears in Startup menu.
- The client starts with no errors.
- You are able to login as ADMIN with password ADMIN and connect to the Optivity Telephony Manager for Meridian SL-100 server.

Note: Administrators must never forget their passwords, as there is no way to retrieve them. A complete reinstallation would be required to allow administrator access.

Adding a Switch

The Optivity Telephony Manager for Meridian SL-100 provides management features for the Meridian SL-100 switches residing on the same management LAN. The Optivity Telephony Manager recognizes switches by the switch name and IP address. All switch names and IP addresses are site-specific. The switch names are user-defined and do not have to correspond to other names to be identified, such as a Domain Name System (DNS) name on the LAN. Information about the switches is maintained in the Optivity Telephony Manager Server database.

Add new Meridian SL-100 switch to Optivity Telephony Manager

Step	Action

1 From the Optivity Telephony Manager Client window, select the Tools menu, and then click on **Switch Administration**. The Switch Admin Dialog displays.

2 Click **Add**. The Add Switch window displays.

3 In the Switch Name field, type a user-defined switch name to identify the switch.

4 In the Switch IP Address field, type the IP address of the switch Ethernet Interface Unit (EIU). See Step 5 for more information.

Note: Once a switch name and IP address are added, it is recommended they not be changed. The switch entry can be deleted so the switch name and IP address can be changed. However, pertinent information will be deleted. For example, all event logs and the switch inventory will be deleted.

5 Use this step to find the switch IP address. The IP Address is in the CMIPADDR field in the Meridian SL-100 switch IPNETWRK table.

a. At a switch prompt type table IPNETWRK.

b. Type **`list`**.

The following is an example:

```
>table IPNETWRK
TABLE: IPNETWRK
>list
TOP
KEYREF     CMIPADDR SUBNET                    OPTION
PARMAREA
-------------------------------------------------------------------------
0 10 19 130 129     17 (          EIU  1) (     EIU 2)$
(      SCRNFLAG N)$
```

The IP in this case is 10.19.130.129.

6 Complete the Read Community String and Write Community String fields. See Step 7 for more information.

a. **Read Community String**

Type the Read (Get) Community String. Community Strings are required to receive SNMP traps from the switch.

b. **Write Community String**

Type the Write (Set) Community String.

7 Use this step to find the Read and Write Community Strings. Community Strings are obtained from the SNMP STATUS command in the MAP SNMPUTIL as follows:

a. At a switch prompt type SNMPUTIL.

b. It will prompt you for a password. Knowing this password is not necessary to use the SNMPSTATUS command so type in some garbage characters and press **Enter**.

c. It will notify you that you can only use the SNMPSTATUS command.

d. Type SNMPSTATUS.

e. The community strings are displayed.

8 Click **Add** to save the switch and close the Add Switch window. The new switch appears in the Optivity Telephony Manager Switches window list.

—End—

Network configurations

The following are the network requirements for configuring Optivity Telephony Manager for Meridian SL-100:

1. The server and client and switch must be on the same management LAN segment. To test this, try pinging the server machine from the client machine. Try pinging the switch. Type ping X.X.X.X where X.X.X.X is the server's IP address.
2. If there are firewalls between the client and server, they should not filter out Simple Network Management Protocol (SNMP) traffic and multicast should be enabled. This is also true for any routers that exist between the client and server machines.

3. To test that the server is working properly, install the client on the same machine and connect to the server with the IP address 127.0.0.1. If the local client can connect and a remote client cannot connect, there is probably a router or firewall between the two machines that is causing the communication error.

Cleaning up after an incomplete uninstall

To be sure that Optivity Telephony Manager for Meridian SL-100 has been uninstalled completely, follow the steps in "Verify a successful uninstall" (page 79).

Verify a successful uninstall

Step	Action
1	Check that the Versantd service has been removed from the Windows Services Dialog under Control Panel. If it has not been removed stop the service.
2	Delete the directory where the server or client was installed. By default this is C:\\otm or c:\\otmc, respectively.
3	Delete the osc folder on the home drive. This is a hidden folder.
4	Remove references to the application in the registry. Search for Optivity Telephony Manager for Meridian SL-100 and versant.
5	Remove the line in the <HomeDrive>\\WINNT\\system32\\drivers\\etc\\services file at the bottom of the file that reads: `oscssd 5019/tcp # VERSANT connect service`
6	Remove any path information in the environment variable Path that refers to the Optivity Telephony Manager application. This will be evident by the directory where it was installed.
7	Remove any path information in the environment variable CLASSPATH that refers to the Optivity Telephony Manager application. This will be evident by the directory where it was installed.
8	Remove environment variables that refer to VERSANT.
9	Reboot the machine after making these changes.

—End—

Terminology

ASU
Application Specific Unit

CD
Compact Disk

CPU
Central Processing Unit

DBMS
Database Management System

DMS
Digital Multiplex System

DN
Directory Number

DNS
Domain Name System

EIPE
Enhanced Intelligent Peripheral Equipment. This term means the same thing as "new EXPEC", E-IPE, Enhanced IPE, and (E)XPEC.

EIU
Ethernet Interface Unit

EJB
Enterprise Java Beans

FIFO
First in First out

FLIS
Fiber Link Interface Shelf

FTP
File Transfer Protocol

GB
Gigabyte

GMAP
Graphical Maintenance Administration Position

GUI
Graphical User Interface

IP
Internet Protocol

IPE
Intelligent Peripheral Equipment

JDK
Java Development Kit

JMS
Java Messaging Service

JRE
Java Runtime Environment

JVM
Java Virtual Machine

LAN
Local Area Network

LEN
Line Equipment Number

LIS
Link Interface Shelf

LPP
Link Peripheral Processor

M3900
Meridian 3900 series telephone sets (also refers to NMDT)

MANB
Manual busy

MAP
Maintenance and Administration Position

MAPCI
Maintenance Administration Position Command-line Interface

MB
Megabyte

MHz
Megahertz

MIB
Management Information Base

MSL
Meridian Stored Logic

NMDT
New Meridian Digital Terminal (M3900 set)

NMS
Network Management System

NTP
Nortel Networks Technical Publication

OAMP
Operation, Administration, Maintenance, and Provisioning

OODBMS
Object Oriented Database Management System

OTM
Optivity Telephony Manager

RAM
Random Access Memory

RTS
Return to Service

SLM
System Load Module

SMTP
Simple Mail Transfer Protocol

SNMP
Simple Network Management Protocol

SP5
Service Pack 5

SVGA
Super Video Graphics Array

TCP/IP
Transmission Control Protocol/Internet Protocol

UDP
User Datagram Protocol

XPM
Extended Intelligent Peripheral Module

Communication Server 2100

Getting Started with Optivity Telephony Manager User Guide

Publication: 555-4001-316
Document status: Standard
Document version: 02.01
Document date: 20 October 2006

To provide feedback or report a problem in this document, go to www.nortel.com/documentfeedback .

The information in this document is sourced in Canada, the United States of America, and the United Kingdom.