AUTHORIZED DOCUMENTATION

Installation Guide

Novell®
ZENworks® Endpoint Security Management

3.5

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www.novell.com

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Novell, Inc.
404 Wyman Street, Suite 500
Waltham, MA 02451
U.S.A.
www.novell.com

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Contents

About This Guide

This *Novell® ZENworks® Endpoint Security Management Installation Guide* provides complete installation instructions for the ZENworks Endpoint Security Management components and assists administrators in getting those components up and running.

The information in this guide is organized as follows:

Audience

This guide is written for the ZENworks Endpoint Security Management administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to the Novell Documentation Feedback site (http://www.novell.com/documentation/feedback.html) and enter your comments there.

Additional Documentation

ZENworks Endpoint Security Management is supported by other documentation (in both PDF and HTML formats) that you can use to learn about and implement the product. For additional documentation, see the ZENworks Endpoint Security Management 3.5 documentation Web site (http://www.novell.com/documentation/zesm35).

ZENworks Endpoint Security Management Overview

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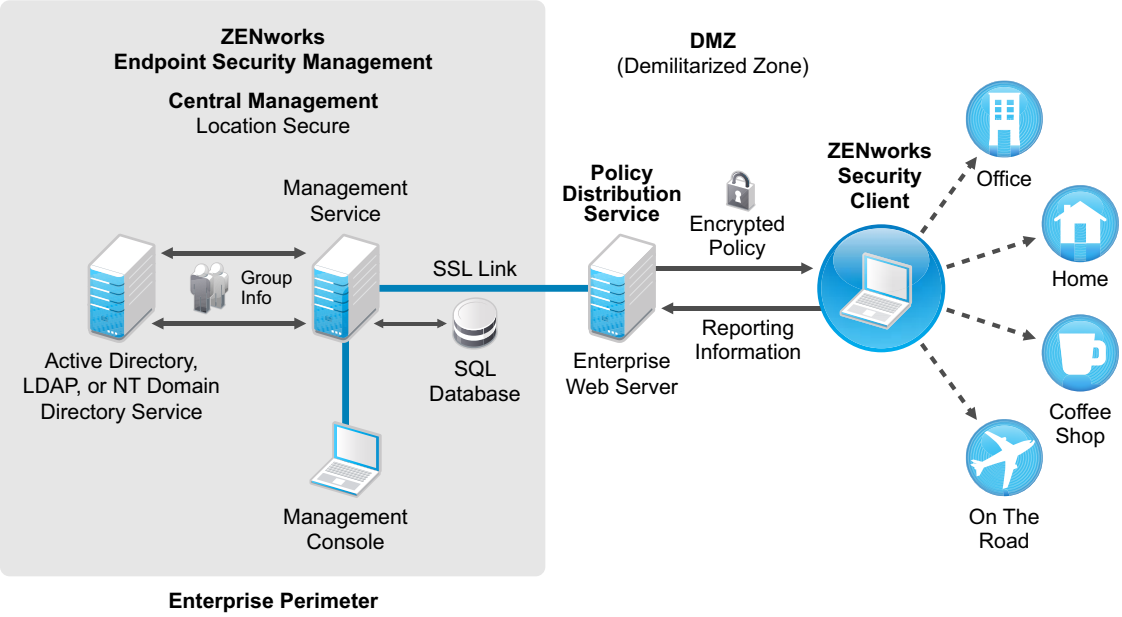
Novell® ZENworks® Endpoint Security Management consists of four high-level functional components: the Policy Distribution Service, the Management Service, the Management Console, and the Endpoint Security Client. The figure below shows these components in the architecture:

Figure 1-1 *ZENworks Endpoint Security Management Architecture*



The Endpoint Security Client is responsible for enforcement of the distributed security policies on the endpoint system. When the Endpoint Security Client is installed on all enterprise PCs, these endpoints can now travel outside the corporate perimeter and maintain their security; endpoints inside the perimeter receive additional security checks within the perimeter firewall.

The following components are installed on servers that are secured inside the corporate perimeter:

- **Policy Distribution Service:** Responsible for the distribution of security policies to the Endpoint Security Client and retrieval of reporting data from the Endpoint Security Client. The Policy Distribution Service can be deployed in the DMZ, outside the enterprise firewall, to ensure regular policy updates for mobile endpoints.
- **Management Service:** Responsible for user policy assignment and component authentication, reporting data retrieval, creation and dissemination of ZENworks Endpoint Security Management reports, and security policy creation and storage.
- **Management Console:** The visible user interface, which runs directly on the server hosting the Management Service or on a workstation residing inside the corporate firewall with connection to the Management Service server. The Management Console is used to both configure the Management Service and to create and manage user and group security policies. Policies are created, copied, edited, disseminated, and deleted using the Management Console.

1.1 System Requirements

Table 1-1 *Server Requirements*

Item	Requirement
Operating System	Microsoft* Windows* 2003 Server (32-bit)
Processor	Determined by operating system
Disk Space	500 MB if the Microsoft SQL database is not installed locally 5 GB if the Microsoft SQL database is local; a SCSI drive is recommended
Software	One of the following relational database management systems (RDBMS): SQL Server Standard, SQL Server Enterprise, Microsoft SQL Server 2000 SP4, SQL 2005; server authentication must be set to mixed mode to allow both SQL Server and Windows Authentication mode authentication Microsoft Internet Information Services (configured for SSL) Directory Services: eDirectory™ or Active Directory* .NET framework 3.5

Table 1-2 *Standalone Management Console Requirements*

Item	Requirement
Software	One of the following relational database management systems (RDBMS): SQL Server Standard, SQL Server Enterprise, Microsoft SQL Server 2000 SP4, SQL 2005, SQL Express, SQL Server 2008; server authentication must be set to mixed mode to allow both SQL Server and Windows Authentication mode authentication

Table 1-3 *Client Requirements*

Item	Requirement
Operating System for Endpoint Security Client 3.5	Windows XP SP1 Windows XP SP2 Windows 2000 SP4 The operating system must have Windows Installer 3.1 installed and all operating system updates applied
Operating System for Endpoint Security Client 4.0	Windows Vista SP1 (32-bit)
Processor	Determined by operating system
Disk Space	5 MB required, 5 additional MB recommended for reporting data

1.2 About the ZENworks Endpoint Security Management Manuals

The ZENworks Endpoint Security Management manuals provide three levels of guidance for the users of the product.

- *Installation Guide:* This guide provides complete installation instructions for the ZENworks Endpoint Security Management components and assists administrators in getting those components up and running. This is the guide that you are currently reading.
- *ZENworks Endpoint Security Management Administration Guide*: This guide is written for the administrators who are required to manage the services, create security policies for the enterprise, generate and analyze reporting data, and provide troubleshooting for users. Instructions for completing these tasks are provided in this manual.
- *ZENworks Endpoint Security Client 3.5 User Guide*: This guide is written to instruct the user on the operation of the Endpoint Security Client. This guide can be sent to all employees in the enterprise to help them understand how to use the Endpoint Security Client.

Installing ZENworks Endpoint Security Management

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The following sections contain additional information about installing Novell® ZENworks® Endpoint Security Management:

2.1 Pre-installation Information

The ZENworks Endpoint Security Management installation software should be physically protected to prevent any tampering or unauthorized use. Likewise, administrators should review the guidelines for pre-installation and installation to ensure that the ZENworks Endpoint Security Management system can function without interruption, or be made vulnerable by inadequate hardware protection.

The administrator installing this software must be the primary administrator for the servers and the domain. If using enterprise SSL certificates, you must also use the same username to create the SSL Root Security certificate.

2.2 Installation Packages

When installing from the DVD, a master installer program launches that utilizes a simple user interface that guides the ZENworks Endpoint Security Management administrator through the installation process. Load the installation DVD on each machine to access the master installer program to install the desired components.

2.2.1 About the Master Installer Program

At launch, the master installer program displays two menu options: *Products* and *Documentation*.

The *Products* link opens the installation menu. The menu items on this screen launch the designated installer for each component. In the case of the Endpoint Security Client 3.5 or Endpoint Security Client 4.0, an additional option is available to launch the installation in Administrator Mode, which helps the ZENworks Endpoint Security Management administrator create an MSI package for easy distribution (see Chapter 8.2, “MSI Installation,” on page 57).

For information on the complete operation of the ZENworks Endpoint Security Management components, see the *ZENworks Endpoint Security Management Administration Guide*, available through the *Documentation* link.

2.3 Installation Options

ZENworks Endpoint Security Management back-end components can be installed as either Single-Server or Multi-Server installations. Single-Server installations are ideal for small deployments that do not require regular policy updates. Multi-Server installations are ideal for large deployments that require regular policy updates. Consult with Novell Professional Services to determine which installation type is right for you.

The Endpoint Security Client can operate (when needed) without connectivity to the Policy Distribution Service. Likewise, a Stand-Alone Management Console can be optionally installed for evaluation purposes. The installation for this Unmanaged mode of operation is described in Chapter 10, "ZENworks Endpoint Security Management Unmanaged Installation," on page 71.

2.4 Installation Order

ZENworks Endpoint Security Management should be installed in the following order:

1. Single-Server Installation or Multi-Server Installation
   - Policy Distribution Service
   - Management Service
2. Management Console
3. Endpoint Security Client 3.5 or Endpoint Security Client 4.0

2.5 Before Installing ZENworks Endpoint Security Management

There are a few questions the ZENworks Endpoint Security Management administrator needs to consider prior to beginning installation:

How will your users receive their ZENworks Endpoint Security Management security policies?

The options for policy distribution center around whether users should be able to receive a policy update anywhere, including outside the central network, or if they should receive them only when they are in (or connected via VPN) a secured network. For organizations planning to frequently update their ZENworks Endpoint Security Management security policies, a Multi-Server installation is recommended that places the Policy Distribution Service on a Web server outside the DMZ.

What type of server deployments are available to you?

If your organization only has a few servers available, then a Single-Server installation deployment may be necessary. If server availability isn't an issue, then the size of your client deployment and the number of users operating outside the firewall should be taken into consideration.

What is your available SQL Server deployment?

ZENworks Endpoint Security Management creates three SQL databases at installation. If your deployment is small, you can install the SQL database server on the same server as the Management Service. For larger deployments, a separate SQL database server should be employed to receive the data from the Policy Distribution and Management Services.

The following RDBMS types are allowed:

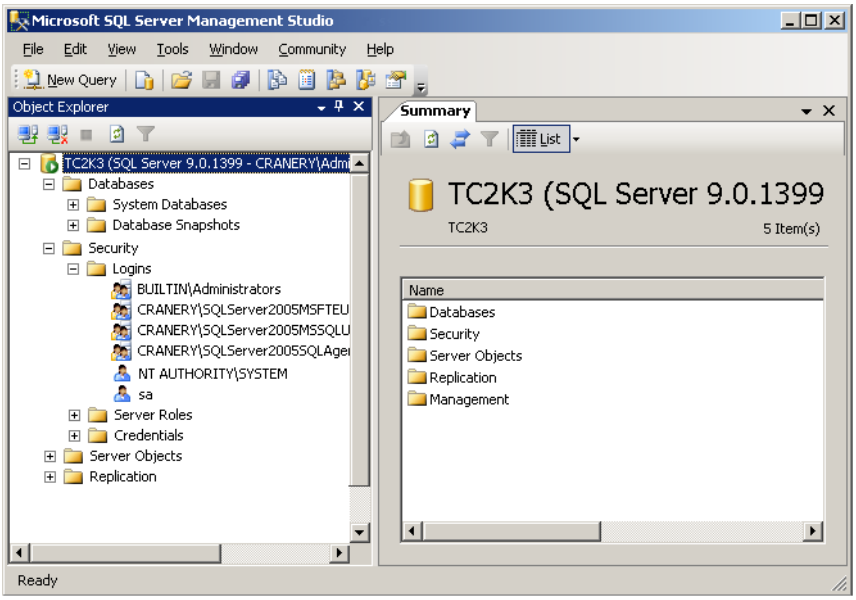
- SQL Server 2005 and 2008 Standard
- SQL Server 2005 and 2008 Enterprise
- Microsoft SQL Server 2000 SP4

If you are using Microsoft SQL Server 2005 or Microsoft SQL Server 2008, you need to configure your SQL server to support ZENworks Endpoint Security Management. The screenshots in the following procedure are for 2005, but the configuration steps are the same for 2008.

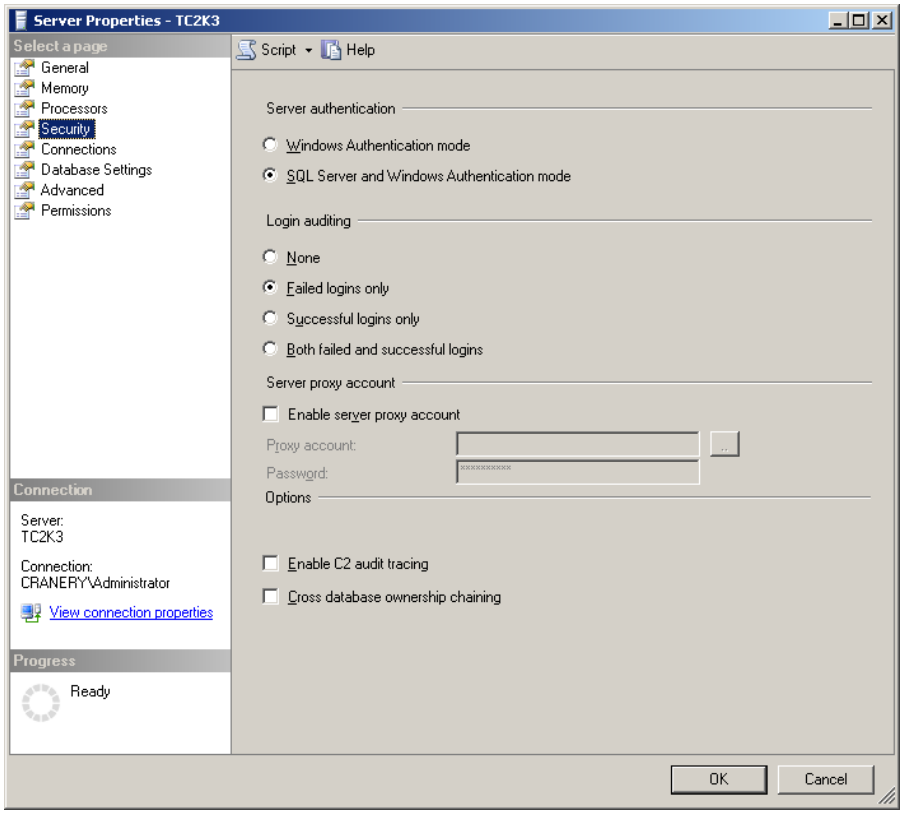
1. Make sure you have Microsoft SQL Server Management Studio.

   Management Studio is included with the Standard and Enterprise editions. If you are using the Express edition (for an evaluation installation), you can download Management Studio Express from the Microsoft Download Center (http://www.microsoft.com/Downloads/details.aspx?FamilyID=c243a5ae-4bd1-4e3d-94b8-5a0f62bf7796&displaylang=en).

2. Launch Management Studio (*Start* menu > *All Programs* > *Microsoft SQL Server 2005 (or 2008)* > *SQL Server Management Studio*).



3. Right-click your SQL server (TC2K3 in the above screen shot), then click *Properties*.

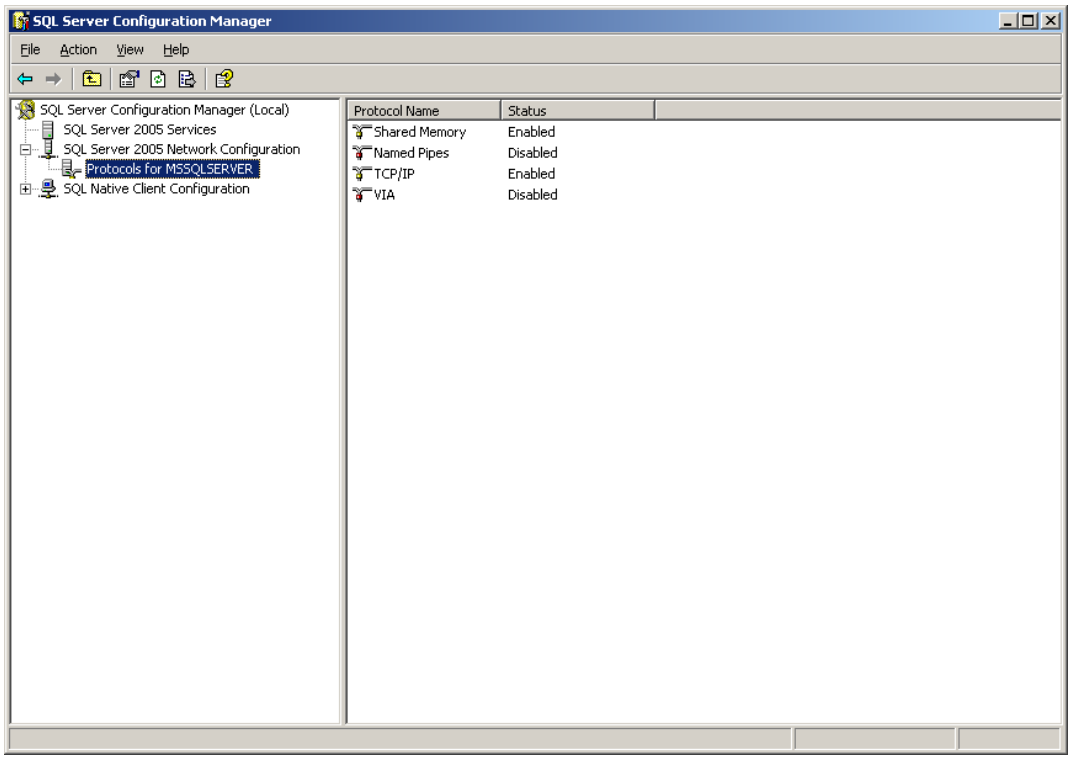


4 Select *Security*, then make sure that Server Authentication is set to *SQL Server and Windows Authentication mode*.

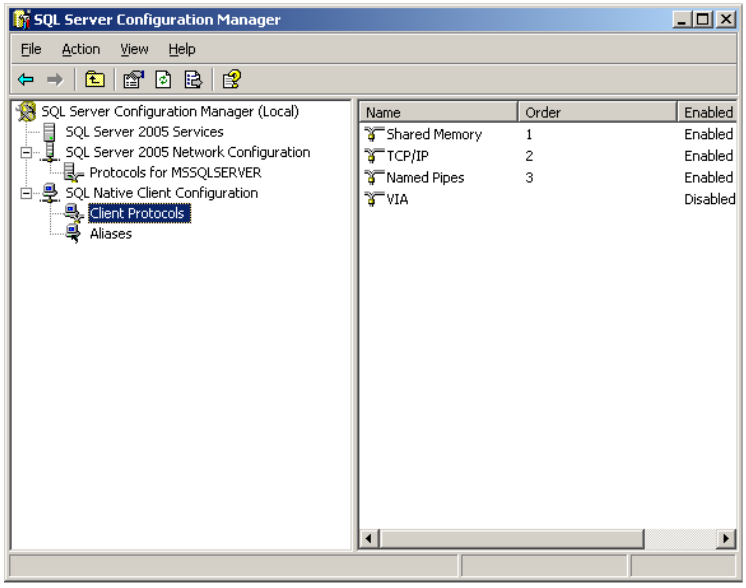
5 Click *OK*, then exit Management Studio.

6 Launch SQL Server Configuration Manager (*Start* menu > *All Programs* > *Microsoft SQL Server 2005 (or 2008)* > *Configuration Tools* > *SQL Server Configuration Manager*).

7 Expand the *SQL Server Network Configuration* section, select *Protocols for MSSQLSERVER* (where *MSSQLSERVER* is your server), then make sure that *TCP/IP* is enabled as shown below.



8 Expand the SQL Native Client Configuration section, select Client Protocols, then make sure that TCP/IP is enabled as shown below.



9 Exit SQL Server Configuration Manager.

Will you use existing certificates to establish SSL communication, or will you use Novell Self-Signed Certificates?

For disaster recovery and failover designs, you should use enterprise, or otherwise-issued, Certificate Authority (VeriSign, GeoTrust, Thawte, and so forth) SSL certificates for full deployments of ZENworks Endpoint Security Management. When using your own certificates, the Web service certificate and root CA should be created on the machine designated as the Policy Distribution Service, then distributed to the appropriate machines. To create an Enterprise Certificate Authority, see the step-by-step instructions for securely setting up a certificate authority, available at on the Microsoft Web site.

For evaluations or small deployments (fewer than 100 users), you can use ZENworks Endpoint Security Management self-signed certificates. Novell SSL Certificates are installed onto the servers when running the typical installation.

How will you deploy your Endpoint Security Clients?

The Endpoint Security Client software can be deployed either individually onto each endpoint or through an MSI push. Instructions on creating an MSI package can be found in Chapter 8.2, “MSI Installation,” on page 57.

Do you want policies to be machine-based or user-based?

Policies can be distributed to a single machine, where every user who logs on receives the same policy, or policies can be set for individual users or groups.

Each installation has several pre-requisites. It is recommended that each check list of prerequisites be complete before running the installation for any component. Please review the lists on the following pages:

- Chapter 3, “Performing a Single-Server Installation,” on page 19
- Chapter 5, “Performing the Policy Distribution Service Installation,” on page 25
- Chapter 6, “Performing the Management Service Installation,” on page 33
- Chapter 7, “Performing the Management Console Installation,” on page 45
- Chapter 8, “Endpoint Security Client 3.5 Installation,” on page 55

Performing a Single-Server Installation

3

ZENworks® Endpoint Security Management Single-Server Installation (SSI) allows both the Policy Distribution Service and the Management Service to co-exist on the same server, which is not possible without using this installation option. The server must be deployed inside the firewall for security purposes, requiring users to receive policy updates only when they are inside the corporate infrastructure or connected via a VPN.

Deployment of the Single-Server Installation on a Primary Domain Controller (PDC) is not supported for both security and functionality reasons.

NOTE: It is recommended that the SSI Server be configured (hardened) so as to deactivate all applications, services, accounts, and other options not necessary to the intended functionality of the server. The steps involved in doing so depend upon the specifics of the local environment, and so cannot be described in advance. Administrators are advised to consult the appropriate section of the Microsoft Technet security webpage (http://www.microsoft.com/technet/security/default.mspx). Additional access control recommendations are provided in the *ZENworks Endpoint Security Management Administration Guide*.

To protect access to only trusted machines, the virtual directory and IIS can be set up to have ACLs. Reference the articles below:

- Granting and Denying Access to Computers (http://www.microsoft.com/technet/prodtechnol/windows2000serv/default.mspx)
- Restrict Site Access by IP Address or Domain Name (http://support.microsoft.com/default.aspx?scid=kb%3BEN-US%3BQ324066)
- IIS FAQ: 2000 IP address and domain name restrictions (http://www.iisfaq.com/default.aspx?View=A136&P=109)
- Working With IIS Packet Filtering (http://www.15seconds.com/issue/011227.htm)

For security purposes, it is highly recommended that the following default folders be removed from any IIS installation:

- `IISHelp`
- `IISAdmin`
- `Scripts`
- `Printers`

We also recommend using the IIS Lockdown Tool 2.1 available at microsoft.com (http://www.microsoft.com/technet/security/tools/locktool.mspx).

Version 2.1 is driven by supplied templates for the major IIS-dependent Microsoft products. Select the template that most closely matches the role of this server. If in doubt, the Dynamic Web server template is recommended.

Ensure that the following prerequisites are in place prior to beginning the installation:

- ❑ Ensure access to a supported directory service (eDirectory™ or Active Directory).
- ❑ If you are deploying using an eDirectory service, create an account password that never changes to use for Management Console authentication (see Section 7.2.1, "Adding eDirectory Services," on page 49).
- ❑ For Endpoint Security Client to Single Server server name resolution, validate that the target computers (where the Endpoint Security Client is installed) can ping the SSI server name. If unsuccessful, you must resolve this before continuing with the installation. (Change the SSI server name to FQDN/NETBIOS, change AD to use FQDN/NETBIOS, change DNS configurations, modifying the local host file on the target computers to include the correct MS information, and so forth).
- ❑ Enable or install Microsoft Internet Information Services (IIS) and configure it to accept Secure Socket Layer (SSL) Certificates.

  IMPORTANT: Do not enable the *Require secure channel (SSL)* check box on the Secure Communictions page (in the Microsoft Computer Management utility, expand *Services and Applications* > expand *Internet Information Services (ISS) Manager* > expand *Web Sites* > right-click *Default Web Site* > click *Properties* > click the *Directory Security* tab > click the *Edit* button in the Secure communications group box). Enabling this option breaks the communication between the ZENworks Endpoint Security Management server and the ZENworks Endpoint Security client on the endpoint.

- ❑ If you are using your own SSL certificates, ensure that the Web service certificate and root CA are loaded on the machine and that server name validated in the previous steps (whether NETBIOS or FQDN) matches the *Issued to* value for the certificate configured in IIS.
- ❑ If you are using your own certificates or have already installed the Novell Self Signed Certificate, you can validate SSL as well by trying the following URL from a machine that has the Endpoint Security Client installed: `https://SSI_SERVER_NAME/AuthenticationServer/UserService.asmx` (where *SSI_SERVER_NAME* is the server name). This should return valid data (an html page) and not certificate warnings. Any certificate warnings must be resolved before installation, unless you opt to use Novell Self Signed Certificates instead.
- ❑ Ensure access to a supported RDBMS (Microsoft SQL Server 2000 SP4, SQL Server Standard, SQL Server Enterprise). Set the database to Mixed mode.

3.1 Installation Steps

Select *Single Server Installation* from the master installer menu. This installation combines the installations for the Policy Distribution Service and the Management Service. For more information, see Chapter 5, "Performing the Policy Distribution Service Installation," on page 25 and Chapter 6, "Performing the Management Service Installation," on page 33.

Like their individual installations, the *Typical* setting installs the services' defaults and the Novell self-signing SSL certificates. *Custom Installation* permits the administrator to determine the directory paths and permits the use of an enterprise-owned certificate authority.

3.2 Starting the Service

The combined Distribution and Management Service launches immediately following installation, with no reboot of the server required. The Management Console is used to manage both the Distribution and Management Services using the Configuration feature. For more information, see *ZENworks Endpoint Security Management Administration Guide*.

After this installation is complete, the Management Console can be installed on this server. If you want to install the Management Console on a separate machine, copy the ZENworks Endpoint Security Management Setup Files folder to the designated Management Console machine to complete the installation.

Continue with Chapter 5, “Performing the Policy Distribution Service Installation,” on page 25.

Performing a Multi-Server Installation

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Multi-Server installation is recommended for large deployments or when the Policy Distribution Service should be placed outside the corporate firewall to ensure that users receive regular policy updates when they are outside the perimeter. Multi-Server installation must be done on at least two separate servers. If you attempt to install the separate Policy Distribution Service and the Management Service on the same server, the installation fails. For more information, see Chapter 3, “Performing a Single-Server Installation,” on page 19 for a single-server installation.

Multi-Server installation should begin with the Policy Distribution Service installation on a secured server either outside or inside the corporate firewall. For more information, see Chapter 5, “Performing the Policy Distribution Service Installation,” on page 25.

After the Policy Distribution Service is installed, the Management Service installation should follow. For more information, see Chapter 6, “Performing the Management Service Installation,” on page 33.

It is recommended the Management Console also be installed on this server. For more information, see Chapter 7, “Performing the Management Console Installation,” on page 45.

Continue with Chapter 5, “Performing the Policy Distribution Service Installation,” on page 25.

Performing the Policy Distribution Service Installation

5

The server hosting the ZENworks® Endpoint Security Management Policy Distribution Service should always be reachable by your users, whether within the network or out in the DMZ. Ensure that the required software is installed on the server prior to installation (see "System Requirements" on page 10). After the server is selected, note the server name, both the NETBIOS and Fully Qualified Domain Name (FQDN).

Deployment of the Policy Distribution Service on a Primary Domain Controller (PDC) is not supported for both security and functionality reasons.

NOTE: It is recommended that the SSI Server be configured (hardened) so as to deactivate all applications, services, accounts, and other options not necessary to the intended functionality of the server. The steps involved in doing so depend upon the specifics of the local environment, and so cannot be described in advance. Administrators are advised to consult the appropriate section of the Microsoft Technet security webpage (http://www.microsoft.com/technet/security/default.mspx). Additional access control recommendations are provided in the *ZENworks Endpoint Security Management Administration Guide*.

To protect access to only trusted machines, the virtual directory and IIS can be set up to have ACLs. Reference the articles below:

- Granting and Denying Access to Computers (http://www.microsoft.com/technet/prodtechnol/windows2000serv/default.mspx)
- Restrict Site Access by IP Address or Domain Name (http://support.microsoft.com/default.aspx?scid=kb%3BEN-US%3BQ324066)
- IIS FAQ: 2000 IP address and domain name restrictions (http://www.iisfaq.com/default.aspx?View=A136&P=109)
- Working With IIS Packet Filtering (http://www.15seconds.com/issue/011227.htm)

For security purposes, it is highly recommended that the following default folders be removed from any IIS installation:

- `IISHelp`
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- `Printers`

We also recommend using the IIS Lockdown Tool 2.1 available at microsoft.com (http://www.microsoft.com/technet/security/tools/locktool.mspx).

Version 2.1 is driven by supplied templates for the major IIS-dependent Microsoft products. Select the template that most closely matches the role of this server. If in doubt, the Dynamic Web server template is recommended.

Please check off the following prerequisites prior to beginning the installation:

- Ensure Management Service (MS) to Policy Distribution Service (DS) server name resolution: make sure that the target computer where the MS is installed can ping the DS server name (NETBIOS if the DS is configured inside the network firewall or FQDN if installed outside in the DMZ).
- If successful, this is the server name to enter during installation. If unsuccessful, you must resolve this issue before continuing with the installation.
- Ensure Endpoint Security Client to DS server name resolution: validate that the endpoint clients (where the Endpoint Security Client is installed) can ping the same DS server name used above. If unsuccessful, you must resolve this issue before continuing with the installation.
- Enable or install Microsoft Internet Information Services (IIS), ensure that ASP.NET is enabled, and configure it to accept Secure Socket Layer (SSL) Certificates.

  IMPORTANT: Do not enable the *Require secure channel (SSL)* check box on the Secure Communictions page (in the Microsoft Computer Management utility, expand *Services and Applications* > expand *Internet Information Services (ISS) Manager* > expand *Web Sites* > right-click *Default Web Site* > click *Properties* > click the *Directory Security* tab > click the *Edit* button in the Secure communications group box). Enabling this option breaks the communication between the ZENworks Endpoint Security Management server and the ZENworks Endpoint Security client on the endpoint.

- If you are using your own SSL certificates, ensure that the Web service certificate is loaded on the machine and that server name validated in the previous steps (whether NETBIOS or FQDN) matches the *Issued to* value for the certificate configured in IIS.
- If you are using your own SSL certificates, validate the SSL from the MS server to the DS server: open a Web browser on the Management Service and enter the following URL: `https://DSNAME` (where *DSNAME* is the server name of the DS). This should return valid data and not certificate warnings (valid data may be "Page under Construction"). Any certificate warnings must be resolved before installation, unless you opt to use Novell Self Signed Certificates instead.
- Ensure access to a supported RDBMS (Microsoft SQL Server 2000 SP4, SQL Server Standard, SQL Server Enterprise, SQL Server 2005). Set the database to Mixed mode. This database should be either hosted on the Management Service server or on a shared server secured behind the enterprise firewall.

5.1 Installation Steps

Click *Policy Distribution Service Installation* from the Installation interface menu. The Policy Distribution Service installation begins.

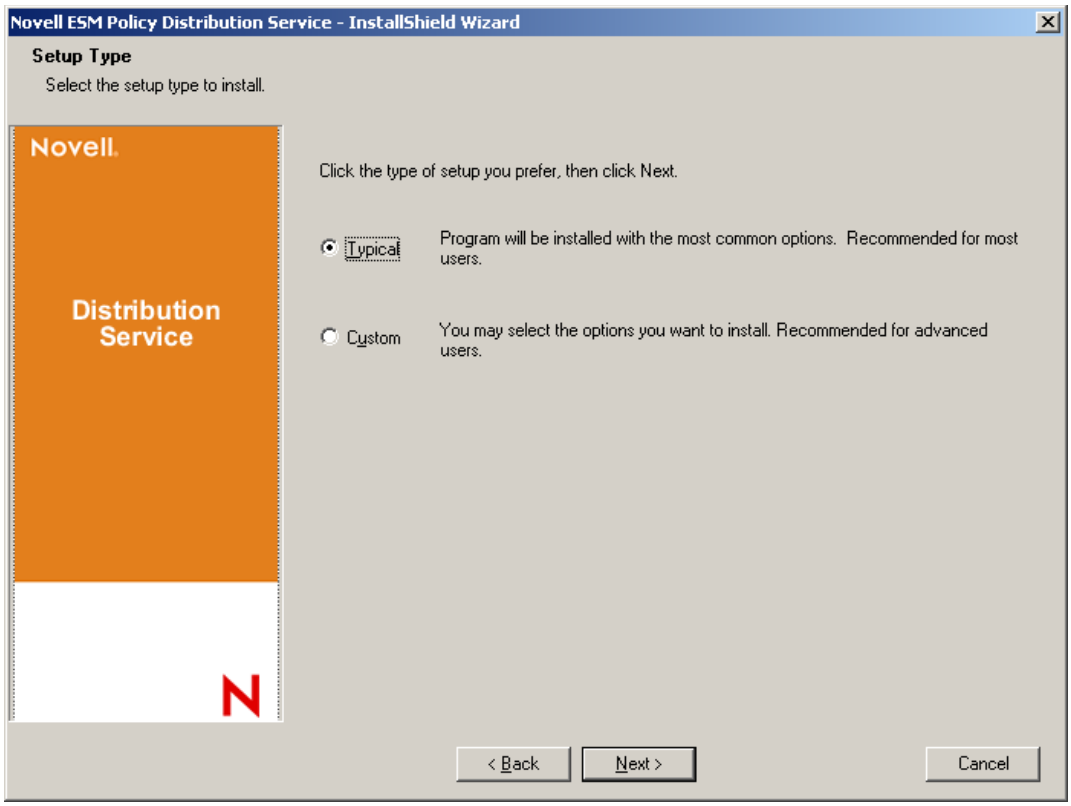
At launch, the installer verifies that all required software is present on the server. If any software is absent, it is installed automatically before the installation continues to the Welcome Screen (license agreements for the additional software might need to be accepted). If Microsoft Data Access Components (MDAC) 2.8 need to be installed, the server must reboot following that installation before ZENworks Endpoint Security Management installation can continue. If you are using Windows 2003 Server, ASP.NET 2.0 is configured to run by the installer.

After Policy Distribution Service installation begins, perform the following steps:

NOTE: The following steps outline what you, the administrator, need to do to complete the installation process. Internal processes displays throughout the installation, and are not documented here unless there is a specific action or information that you will need for installation to be successful.

1. Click *Next* on the Welcome screen to continue.
2. Accept the Licensing Agreement, then click *Next*.
3. Select either a *Typical* or *Custom* installation.

Figure 5-1 *Select Typical or Custom Installation*



Both installation paths are presented below:

- Section 5.1.1, “Typical Installation,” on page 27
- Section 5.1.2, “Custom Installation,” on page 29

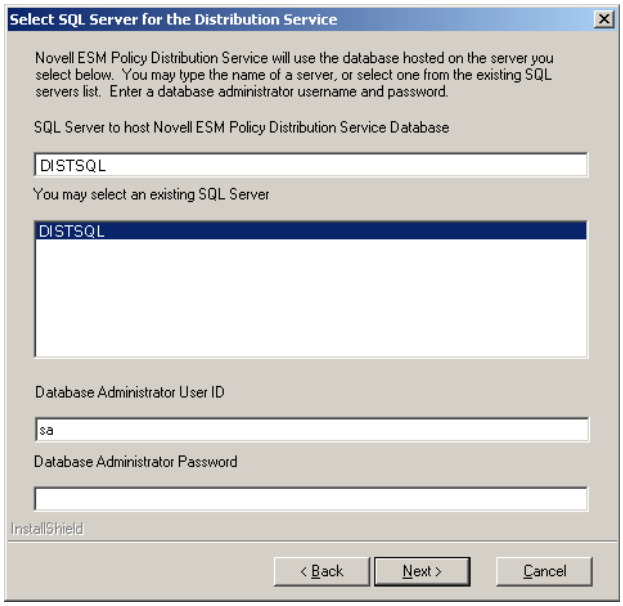
5.1.1 Typical Installation

A typical installation places the Policy Distribution Service software files in the default directory: `\Program Files\Novell\ESM Policy Distribution Service`. The SQL database name is assigned as STDSDB. The three SQL database files (data, index, and log) are placed in: `\Program Files\Microsoft SQL Server\mssql\Data`.

1. Novell SSL Certificates are created for the installation. If you want to use your own SSL certificates, use Custom Installation. These certificates must be distributed to all users.

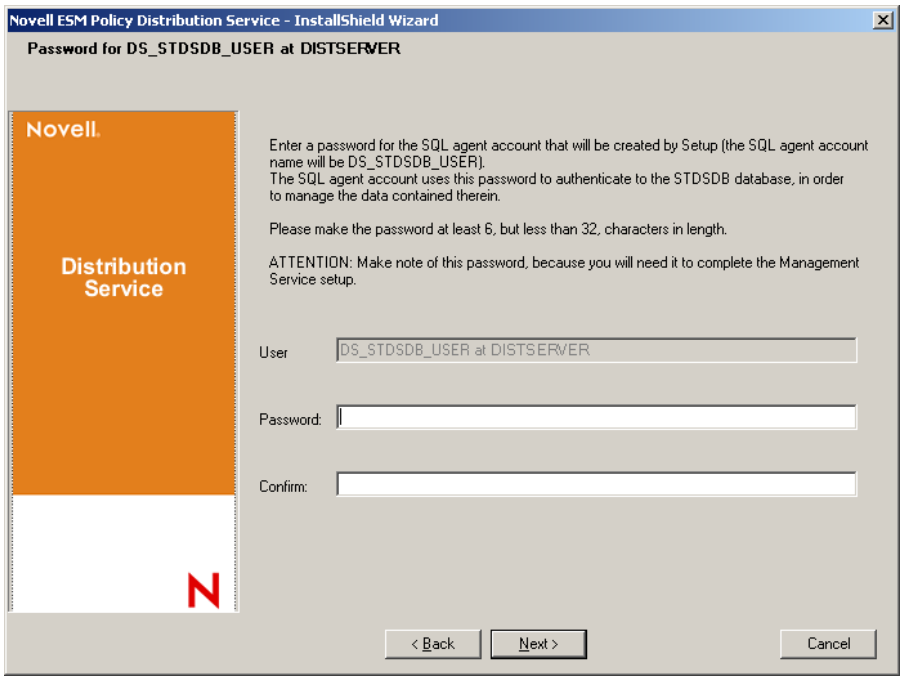
2 The installer detects the available SQL databases on the machine and network. Select a secured SQL database for the Policy Distribution Service and enter the database administrator's name and password (if the password is zero characters, the installer warns of the potential security issue). The username and password cannot be a domain user; it must be a SQL user with SysAdmin rights.

Figure 5-2 *Select SQL Server*



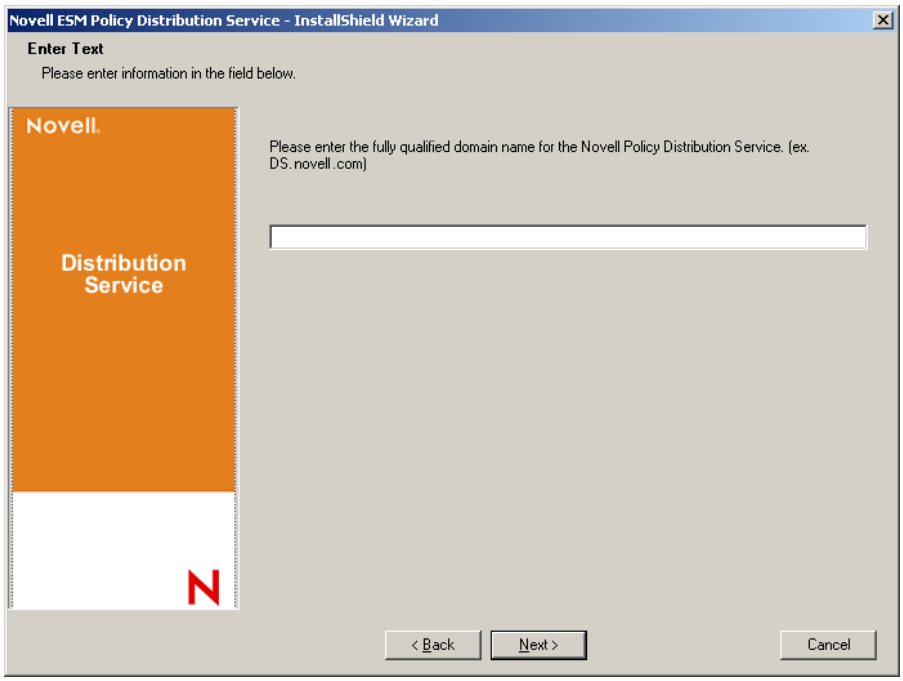
3 Specify the password for the Policy Distribution Service agent. This is the username and password the service uses to log in to its SQL database.

Figure 5-3 *Distribution Service SQL Password*



4 Specify the Policy Distribution Service domain name. This must be the fully qualified domain name if the server resides outside the corporate firewall. Otherwise, only the NETBIOS name for the server is required.

Figure 5-4 *Enter Policy Distribution Service Domain Name*



5 At the Copy Files screen, click *Next* to begin the installation.

6 An `ESM Setup Files` folder is generated in the installation directory. This contains a `Setup ID` file and the `ESM-DS.cer` file (Novell self-signing SSL certificate) required by the Management Service. Copy this file directly onto the machine designated as the host for the Management Service, either via a netshare or by saving the file to a disk or thumb drive and hand-loading it onto the server installation directory.

7 The Policy Distribution Service is now installed, click *Finish* to close the installation program to launch the performance monitor.

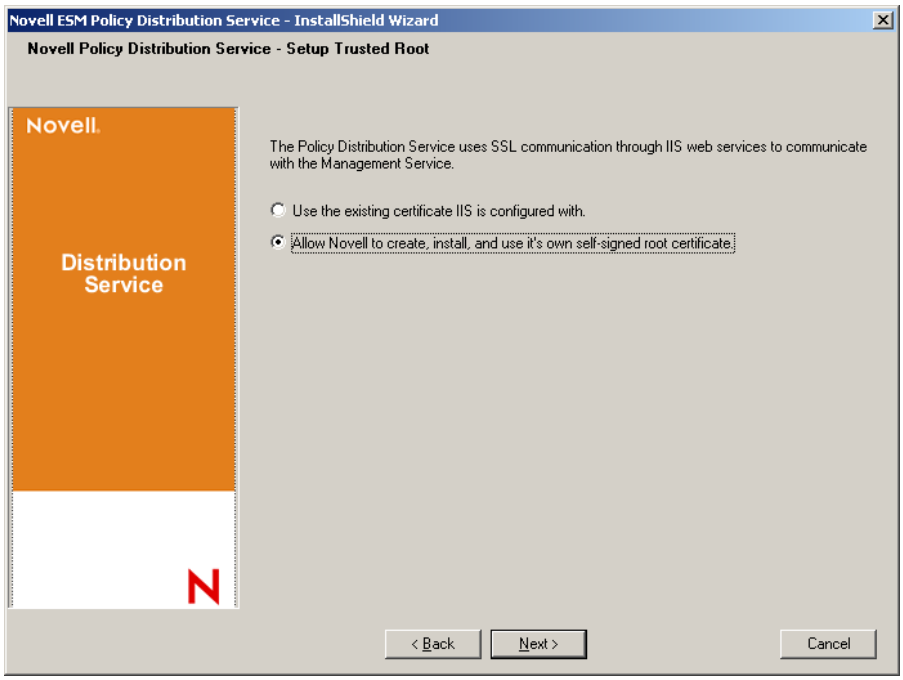
5.1.2 Custom Installation

A custom installation displays the defaults used in the typical installation and permits the administrator to specify, or browse to, a different directory to place the software files.

The administrator can select either to install a Novell self-signed SSL certificate or use one of their own.

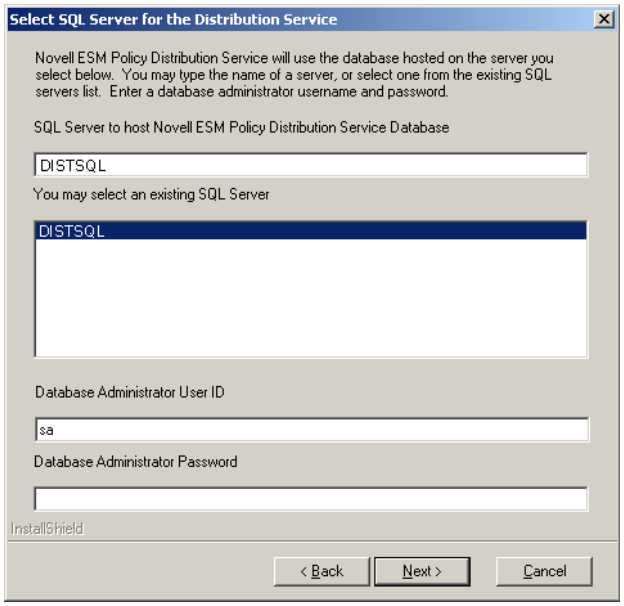
1 An SSL Certificate is required for secure communication between the Policy Distribution Service and the Management Service, and between the DS and all Novell Security Clients. If you already have a certificate authority, click *Use the existing certificate IIS is configured for*. If you need a certificate, click *Allow Novell to create, install, and use its own self-signed root certificate*. The installer creates the certificates and the signing authority. Regardless of the certificate type, these certificates must be distributed to all users.

Figure 5-5 *Setup Trusted Root*



2 The installer detects the available SQL databases on the machine and network. Select the secured SQL database for the Policy Distribution Service and enter the database administrator's name and password (if the password is zero characters, the installer warns of the potential security issue). The username and password cannot be a domain user; it must be a SQL user with SysAdmin rights.

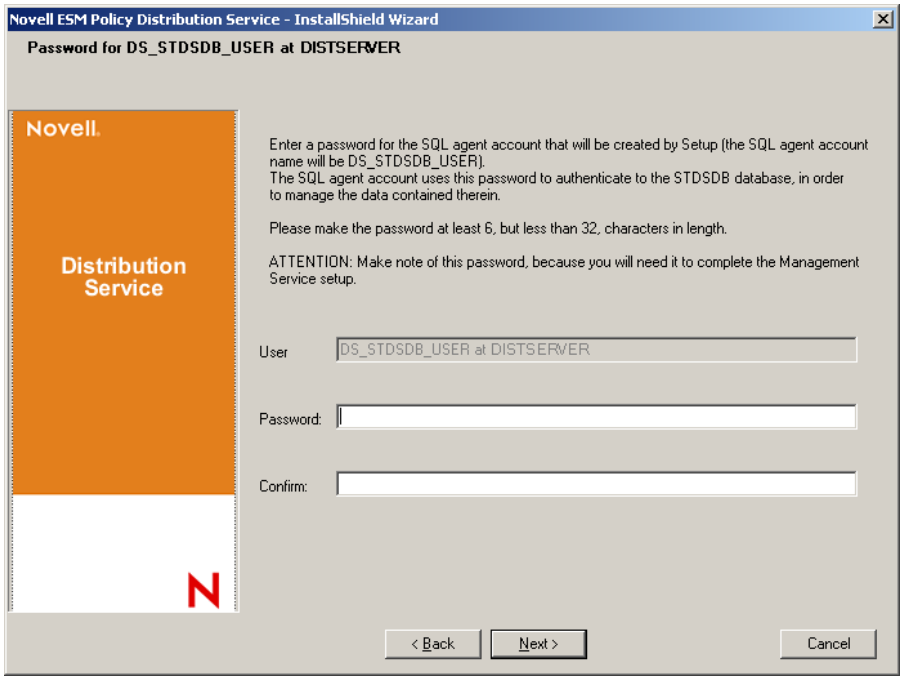
Figure 5-6 *Select SQL Server*



3 Set the database name (default is entered as STDSDB).

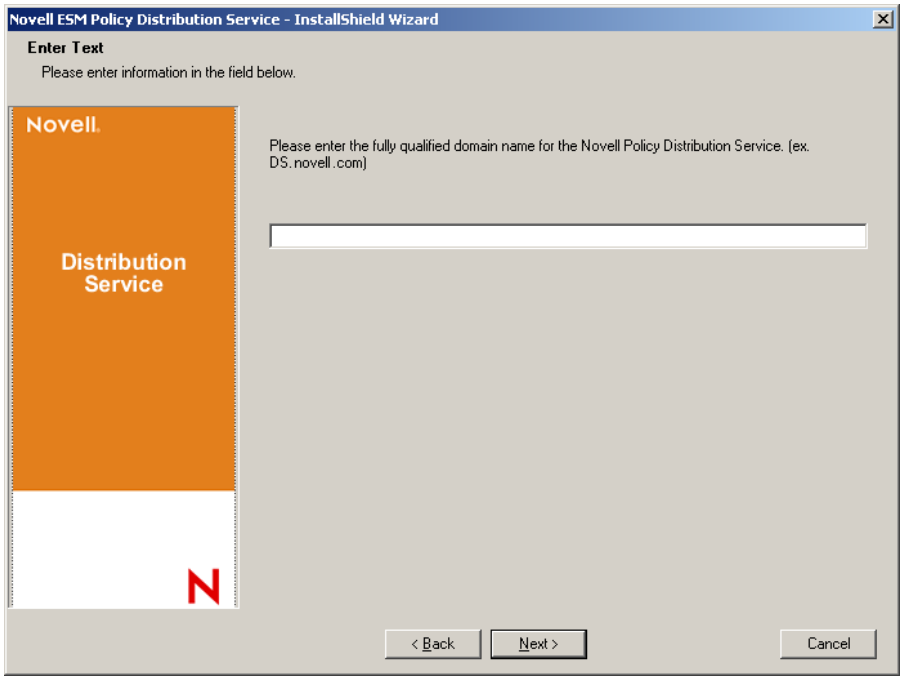
4 Specify the password for the Policy Distribution Service agent. This is the username and password the service uses to log in to its SQL database.

Figure 5-7 *Distribution Service SQL Password*



5 Specify the Policy Distribution Service domain name. This must be the fully qualified domain name if the server resides outside the corporate firewall. Otherwise, only the NETBIOS name for the server is required.

Figure 5-8 *Enter Policy Distribution Service Domain Name*

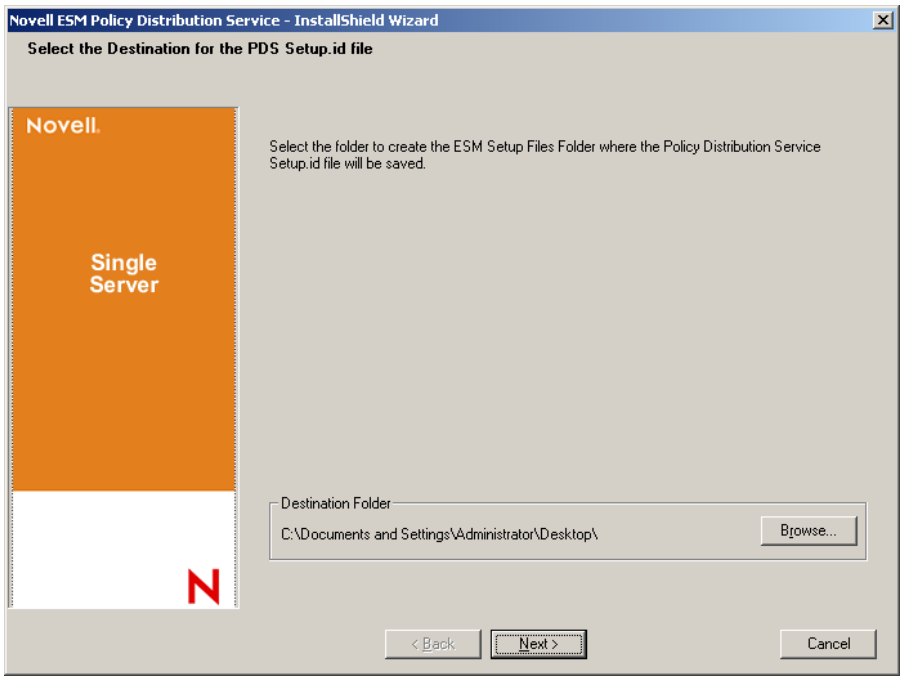


6 At the Copy Files screen, click *Next* to begin the installation.

7 Specify the file paths for the data, index, and log files.

8 An `ESM Setup Files` folder is generated in the installation directory. This contains a `Setup ID` file and the `ESM-DS.cer` file (Novell self-signing SSL certificate, if selected) required by the Management Service. Use Browse to designate where this file should be saved on the server (default = installation directory).

Figure 5-9 *Save Setup Files*



9 If you chose to use an enterprise SSL certificate, place a copy of this file into the `ESM Setup Files` folder.

10 Copy the entire `ESM Setup Files` directly onto the machine designated as the host for the Management Service, either via a netshare or by saving the file to a disk or thumb drive and hand-loading it into the server installation directory.

11 The Policy Distribution Service is now installed, click *Finish* to close the installation program to launch the performance monitor.

5.2 Starting the Service

The Policy Distribution Service launches immediately following installation, with no reboot of the server required. The Management Console is used to adjust upload times for the Distribution Service using the Configuration tool. For more information, see the *ZENworks Endpoint Security Management Administration Guide*.

Continue with Chapter 6, “Performing the Management Service Installation,” on page 33.

Performing the Management Service Installation

6

The Management Service should be installed on a secure server behind the firewall, and it cannot share the same server as the Policy Distribution Service (with the exception of a single server installation, see Chapter 3, "Performing a Single-Server Installation," on page 19). The Management Service should not be installed outside the network firewall, for security reasons. After the server is selected, note the server name, both the NETBIOS and Fully Qualified Domain Name (FQDN). Deployment of the Management Service on a Primary Domain Controller (PDC) is not supported for both security and functionality reasons.

NOTE: It is recommended that the SSI Server be configured (hardened) so as to deactivate all applications, services, accounts, and other options not necessary to the intended functionality of the server. The steps involved in doing so depend upon the specifics of the local environment, and so cannot be described in advance. Administrators are advised to consult the appropriate section of the Microsoft Technet security webpage (http://www.microsoft.com/technet/security/default.mspx). Additional access control recommendations are provided in the *ZENworks Endpoint Security Management Administration Guide*.

To protect access to only trusted machines, the virtual directory and IIS can be set up to have ACLs. Reference the articles below:

- Granting and Denying Access to Computers (http://www.microsoft.com/technet/prodtechnol/windows2000serv/default.mspx)
- Restrict Site Access by IP Address or Domain Name (http://support.microsoft.com/default.aspx?scid=kb%3BEN-US%3BQ324066)
- IIS FAQ: 2000 IP address and domain name restrictions (http://www.iisfaq.com/default.aspx?View=A136&P=109)
- Working With IIS Packet Filtering (http://www.15seconds.com/issue/011227.htm)

For security purposes, it is highly recommended that the following default folders be removed from any IIS installation:

- `IISHelp`
- `IISAdmin`
- `Scripts`
- `Printers`

We also recommend using the IIS Lockdown Tool 2.1 available at microsoft.com (http://www.microsoft.com/technet/security/tools/locktool.mspx).

Version 2.1 is driven by supplied templates for the major IIS-dependent Microsoft products. Select the template that most closely matches the role of this server. If in doubt, the Dynamic Web server template is recommended.

Ensure that the following prerequisites are in place prior to beginning the installation:

- ❑ Ensure access to a supported directory service (eDirectory or Active Directory).
- ❑ If you are deploying using an eDirectory™ service, create an account password that never changes to use for Management Console authentication (see Section 7.2.1, "Adding eDirectory Services," on page 49).
- ❑ Ensure Endpoint Security Client to MS server name resolution: validate that the target computers (where the Endpoint Security Client is installed) can ping the MS server name. If successful, this is the value entered in the installation. If unsuccessful, you must resolve this before continuing with the installation.
- ❑ Enable or install Microsoft Internet Information Services (IIS), ensure ASP.NET is enabled, and configure it to accept Secure Socket Layer (SSL) Certificates.

  IMPORTANT: Do not enable the *Require secure channel (SSL)* check box on the Secure Communictions page (in the Microsoft Computer Management utility, expand *Services and Applications* > expand *Internet Information Services (ISS) Manager* > expand *Web Sites* > right-click *Default Web Site* > click *Properties* > click the *Directory Security* tab > click the *Edit* button in the Secure communications group box). Enabling this option breaks the communication between the ZENworks Endpoint Security Management server and the ZENworks Endpoint Security client on the endpoint.

- ❑ If you are using your own SSL certificates, ensure that the root CA is loaded on the machine and that server name validated in the previous steps (whether NETBIOS or FQDN) matches the *Issued to* value for the certificate configured in IIS.
- ❑ If you are using your own certificates, or you have already installed the Novell Self Signed Certificate, you can validate SSL as well by trying the following URL from a machine that has the Endpoint Security Client installed: `https://MS_SERVER_NAME/AuthenticationServer/UserService.asmx` (where *MS_SERVER_NAME* is the server name). This should return valid data (an html page) and not certificate warnings. Any certificate warnings must be resolved before installation.
- ❑ Ensure access to a supported RDBMS (Microsoft SQL Server 2000 SP4, SQL Server Standard, SQL Server Enterprise, SQL 2005). Set database to Mixed mode.
- ❑ Copy the `ESM Setup Files` directory that contains the Policy Distribution Service Setup ID and Root SSL Certificate for the Policy Distribution Service into the installation directory of this server.

6.1 Installation Steps

Click *Management Service Installation* from the installation interface menu. The Management Service installation begins.

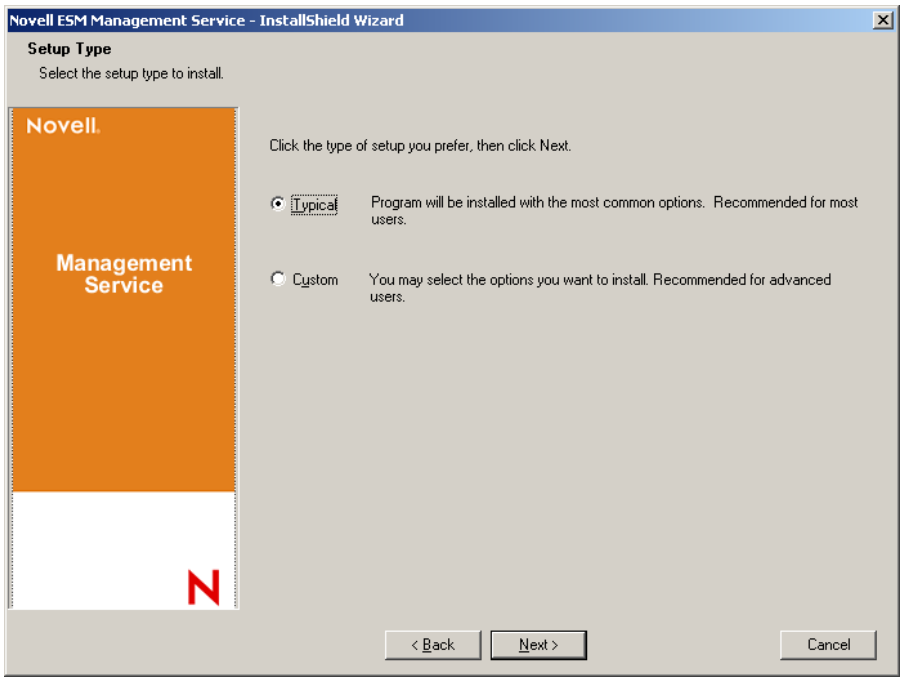
At launch, the installer verifies that all required software is present on the server. If any software is absent, it is installed automatically before the installation continues to the Welcome Screen (license agreements for the additional software might need to be accepted). If Microsoft Data Access Components (MDAC) 2.8 need to be installed, the server must reboot following that installation before ZENworks Endpoint Security Management installation can continue. If using Windows 2003 Server, ASP.NET 2.0 must be configured to run by the installer.

After Management Service installation begins, perform the following steps:

NOTE: The following steps outline what you, the administrator, need to do to complete the installation process. Internal processes display throughout the installation and are not documented here unless there is a specific action or information that you need for installation to be successful.

1. Click *Next* on the Welcome screen to continue.
2. Accept the Licensing Agreement, then click *Next*.
3. Select either a *Typical* or *Custom* installation.

Figure 6-1 *Select Typical or Custom*



Both installation paths are presented below:

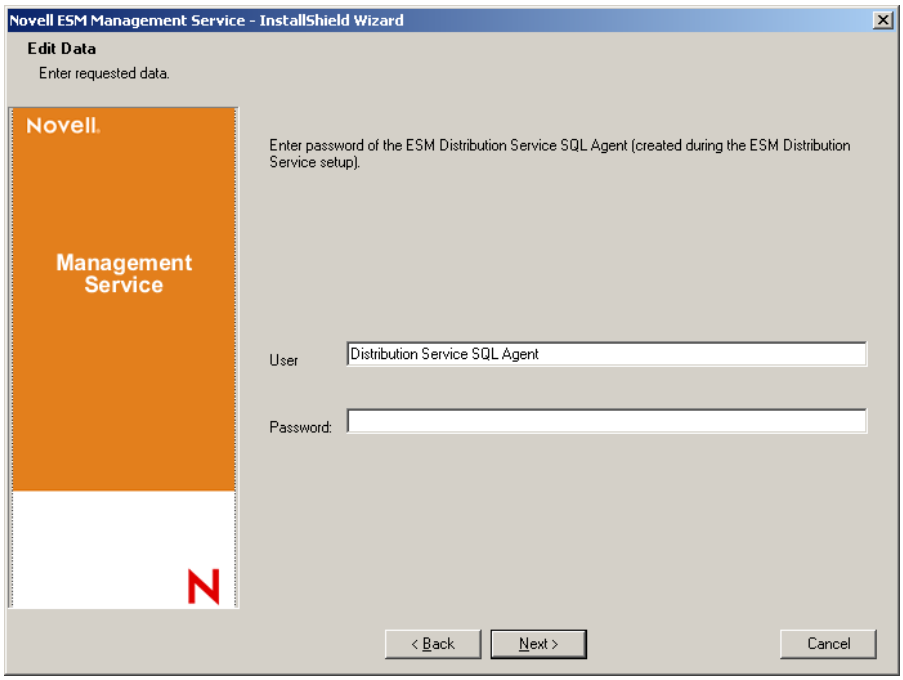
- Section 6.1.1, “Typical Installation,” on page 35
- Section 6.1.2, “Custom Installation,” on page 39

6.1.1 Typical Installation

A typical installation places the Management Service software files in the default directory: `\Program Files\Novell\ESM Management Service`. The SQL database name is assigned as STMSDB. The three SQL database files (data, index, and log) are placed in: `\Program Files\Microsoft SQL Server\mssql\Data`.

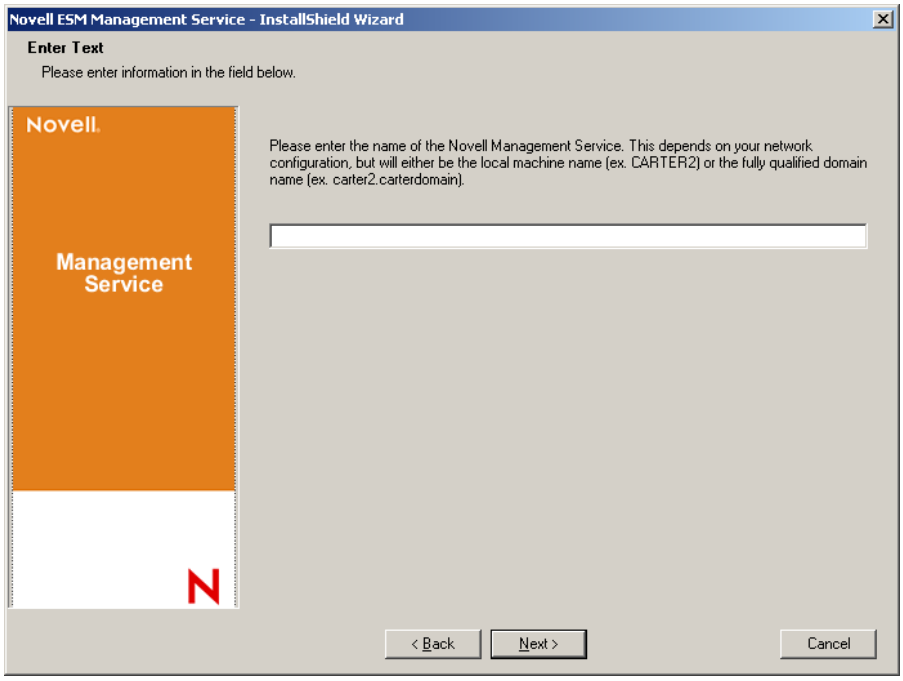
1. Specify the Policy Distribution Service's agent password that was created during the Policy Distribution installation.

Figure 6-2 *Enter SQL password*



2 Specify the name of the server to host the Management Service.

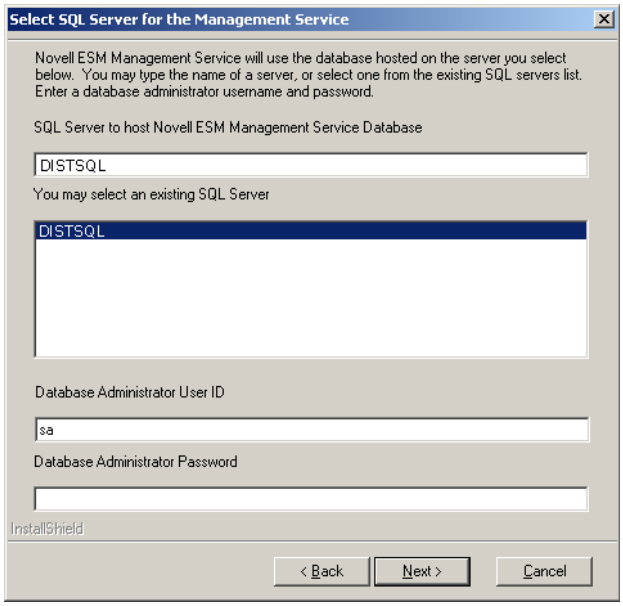
Figure 6-3 *Enter MS Server Name*



3 Novell SSL Certificates are created for the installation. If you want to use your own SSL certificates, perform a Custom Installation. These certificates must be distributed to all users.

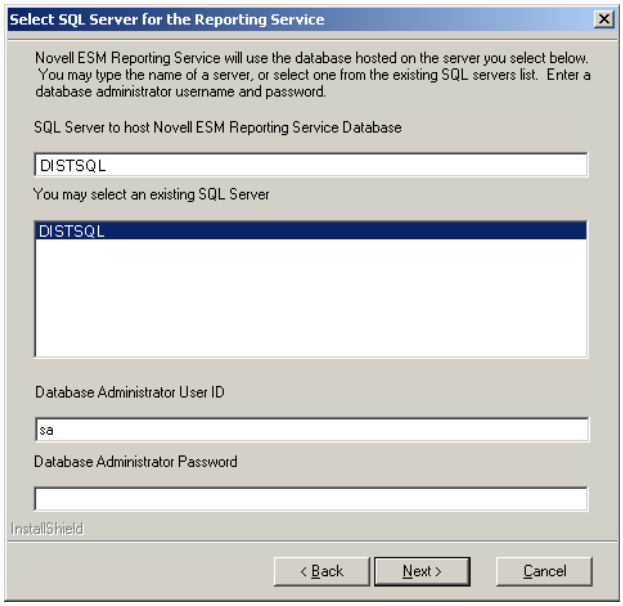
4 The installer detects the available SQL databases on the machine and network. Select the SQL database for the Management Service and specify the database administrator's username and password (if the password is zero characters, the installer warns of the potential security issue). The username and password cannot be a domain user; it must be a SQL user with SysAdmin rights.

Figure 6-4 *Select MS SQL Database*



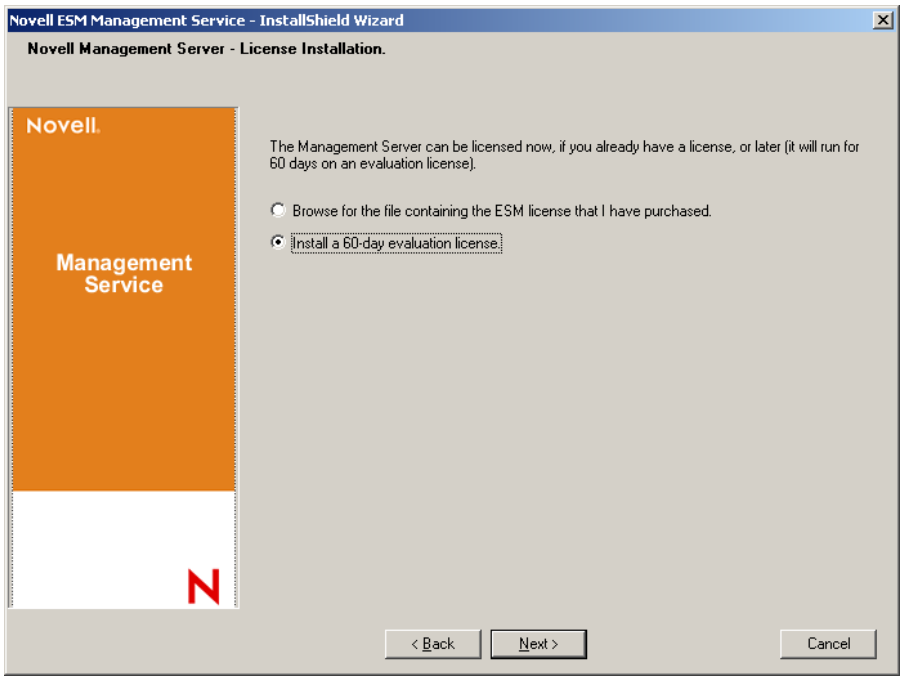
5 Select the SQL database for the Reporting Service and specify the database administrator's password for that database. If you plan to capture and store a large number of reports, it is recommended that the Reporting Service database be given its own SQL server.

Figure 6-5 *Select Reporting Service Database*



6 If ZENworks Endpoint Security Management has already been purchased, a separate license file is provided. Copy the license file to this server and browse for it (see the instructions page included with your License file for more details). If you have not yet purchased a ZENworks Endpoint Security Management license, select *60-Day Evaluation License* to continue.

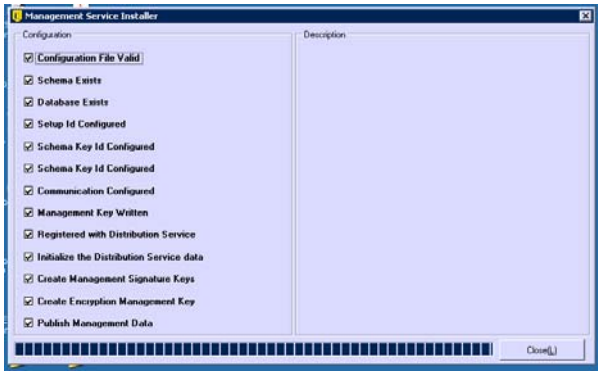
Figure 6-6 *Browse for Novell License File*



7 At the Copy Files screen, click *Next*, to begin the installation.

8 The Management Service runs a communication check to both SQL databases and the Policy Distribution Service. If communication cannot be verified, the installer notifies you of the issue. All boxes must be checked for installation to succeed.

Figure 6-7 *Communication Verification*



9 The Management Service is now installed, click *Close* to close the communication checks, then click *Finish* to close installation program.

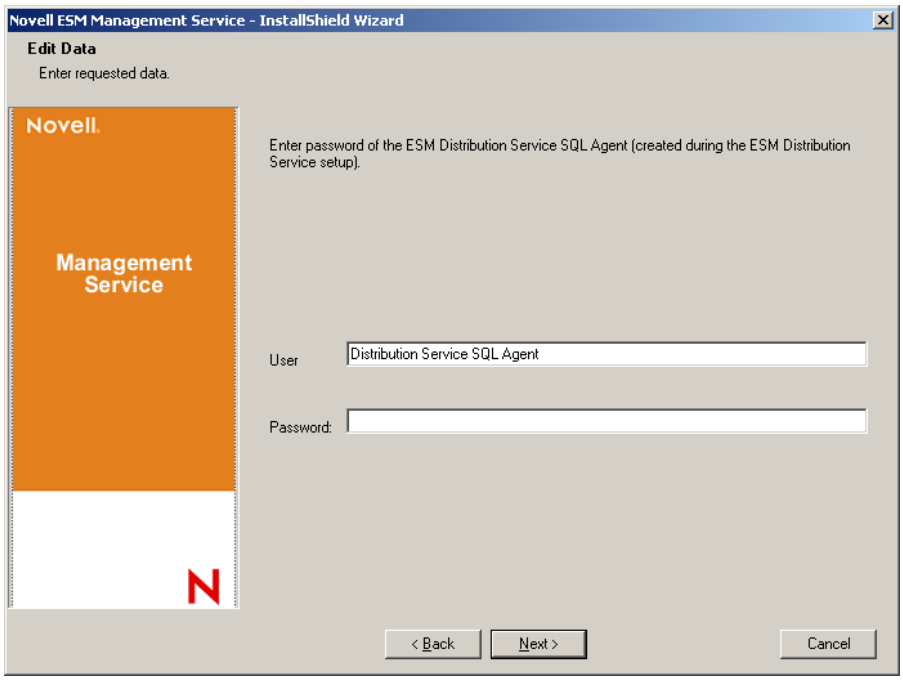
10 Continue with Section 6.2, “Starting the Service,” on page 43.

6.1.2 Custom Installation

A custom installation displays the defaults used in the typical installation and permits the administrator to enter, or browse to, a different location.

1 Specify the Policy Distribution Service's agent password, created during Policy Distribution installation.

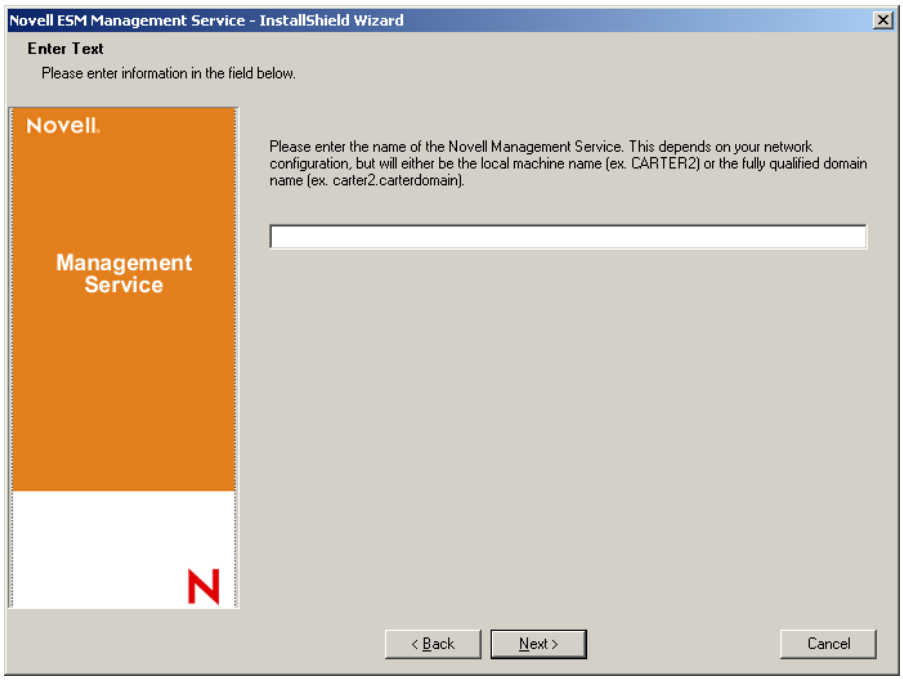
Figure 6-8 *Enter SQL password*



2 Select the SSL Certificate type used for the Policy Distribution Service installation. If you used your existing (enterprise) certificate authority, click *The Novell Distribution Service Used a certificate IIS was already configured with*. If the Distribution Service installer created a Novell certificate, click *The Novell Distribution Service installed a Novell self signed root certificate*.

3 Specify the name of the server to host the Management Service.

Figure 6-9 *Enter MS Server Name*

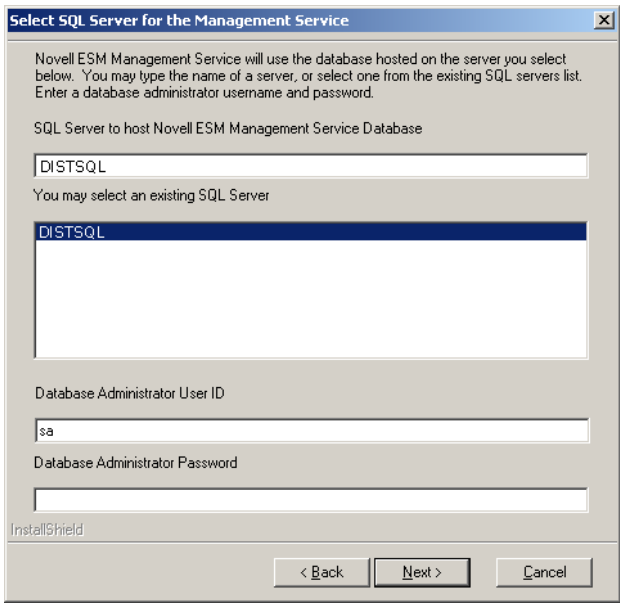


4 An SSL Certificate is required for secure communication between the Management Service and all Endpoint Security Clients. If you already have a certificate authority, click *Use the existing certificate IIS is configured for*.If you need a certificate, click *Allow Novell to create, install, and use its own self-signed root certificate*. The installer creates the certificates and the signing authority. Regardless of the certificate type, these certificates must be distributed to all users.

5 When selecting Novell certificates, select where the certificate can be saved for easy distribution (default is the installation directory).

6 The installer detects the available SQL databases on the machine and network. Select the SQL database for the Management Service and specify the database administrator's username and password (if the password is zero characters, the installer warns of the potential security issue). The username and password cannot be a domain user; it must be a SQL user with SysAdmin rights.

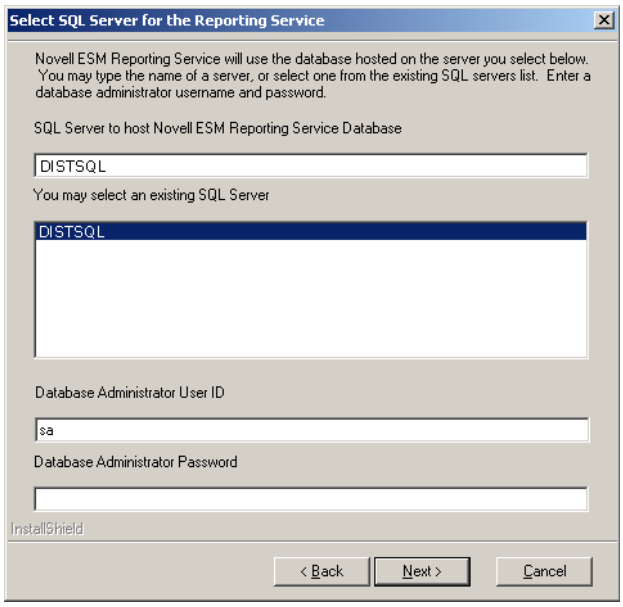
Figure 6-10 *Select MS SQL Database*



7 Set the database name (default is entered as STMSDB).

8 Select the SQL database for the Reporting Service and specify the database administrator's password for that database.

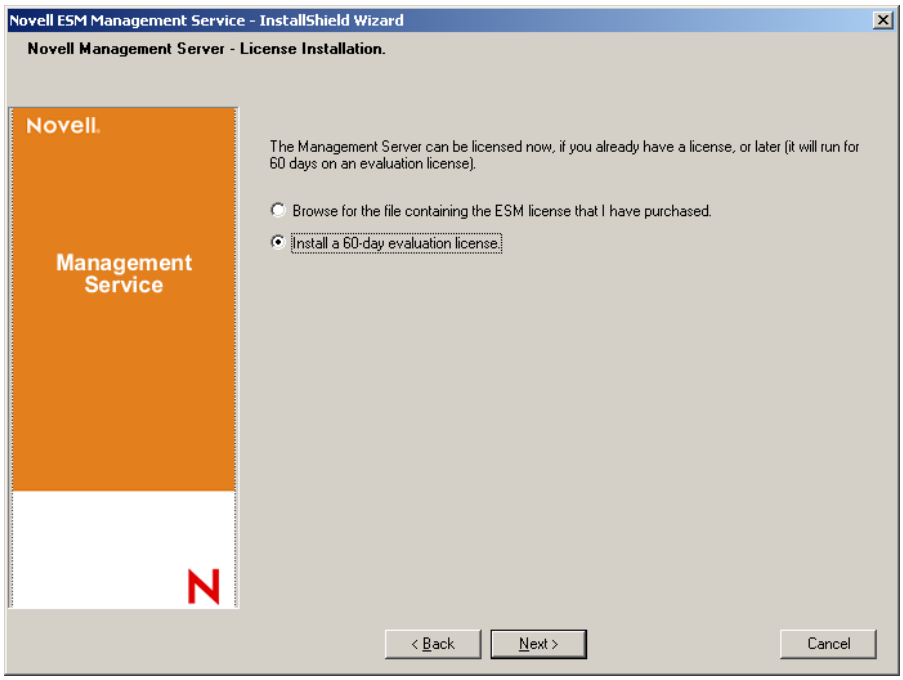
Figure 6-11 *Select Reporting Service Database*



9 Set the database name (default is entered as STRSDB)

10 If ZENworks Endpoint Security Management has already been purchased, a separate license file is provided. Copy the license file to this server and browse for it (see the instructions page included with your License file for more details). If you have not yet purchased a ZENworks Endpoint Security Management license, select *60-Day Evaluation License* to continue.

Figure 6-12 *Browse for Novell License File*



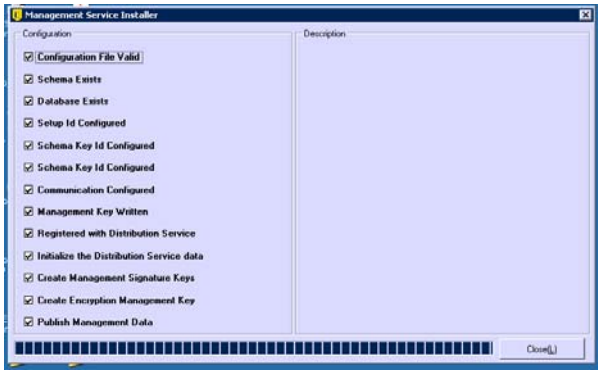
11 At the Copy Files screen, click *Next* to begin the installation.

12 Select the file paths for the Management Service database's data, index, and log files.

13 Select the file paths for the Reporting Service database's data, index, and log files.

14 The Management Service run sa communication check to both SQL databases and the Policy Distribution Service. If communication cannot be verified, the installer notifies you of the issue. All boxes must be checked for installation to succeed.

Figure 6-13 *Communication Verification*



15 The Management Service is now installed, click *Close* to close the communication checks, then click *Finish* to close installation program.

16 Continue with Section 6.2, "Starting the Service," on page 43.

6.2 Starting the Service

The Management Service launches immediately following installation, with no reboot of the server required. The Management Console is used to manage the data on the Management Service (see the *ZENworks Endpoint Security Management Administration Guide*).

Novell recommends installing the Management Console on this server. If you are installing the Management Console on a separate machine, copy the `ESM Setup Files` directory, either via a netshare or by saving the file to a disk or thumb drive, to the machine to host the Management Console.

Continue with Chapter 7, "Performing the Management Console Installation," on page 45.

Performing the Management Console Installation

7

The Management Console can be installed on the Management Service server or on a secure PC that has direct communication with the Management Service server. Multiple Management Console installations can be configured to communicate with a single Management Service; however, it is highly recommended that access to the Management Console be limited to select users.

For security reasons, we recommend that the Management Console be installed directly on the Management Service's server.

If you want to install the Management Console on a separate workstation, ensure that the following prerequisites are in place before beginning the installation:

- Ensure that the device on which you want to install the Management Console meets the following requirements:
  - Windows XP SP1, Windows XP SP2, or Windows 2000 SP4.
  - A 1.0 GHz processor is recommended with a minimum of 256 MB of RAM and 100 MB of disk space available.
- Copy the `ESM Setup Files` folder that contains the SSL Root Certificates for the Policy Distribution Service and the Management Service, along with the `STInstParam.id` file, onto the PC.
- If you are installing the Management Console on the Management Service server, verify that the version of Microsoft Internet Explorer is 5.5 or greater.

7.1 Installation Steps

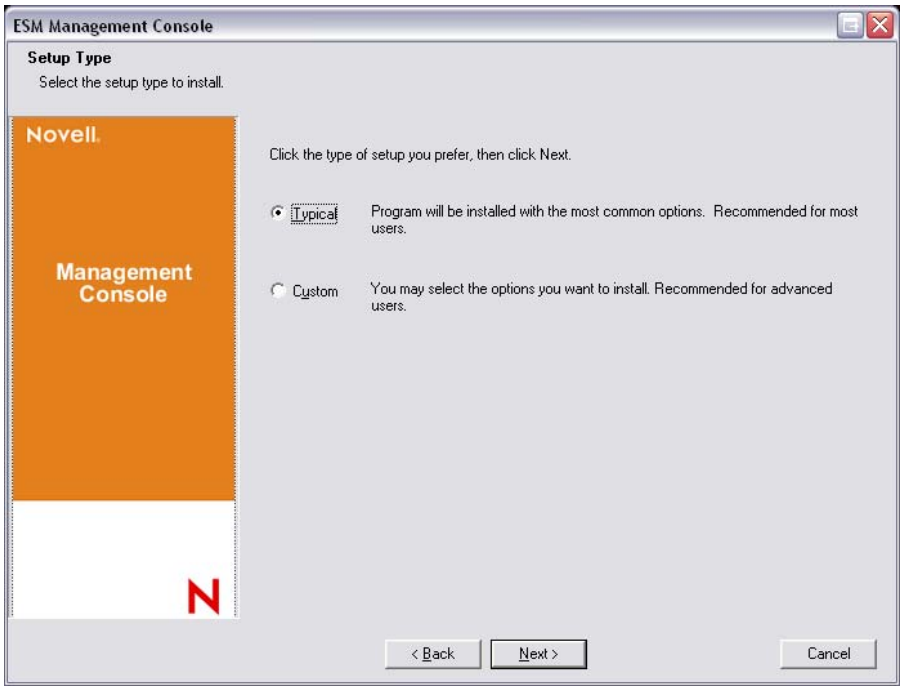
Click *Management Console Installation* from the installation interface menu.

At launch, the installer verifies that both the required .NET Framework 3.5 and WSE 2.0 SP2 are present on the machine. If one or both are absent, they will be installed automatically before the installation continues to the Welcome Screen (the license agreement for .NET 3.5 will need to be accepted).

To install the Management Consoles:

1. Click *Next* to continue.
2. Accept the Licensing Agreement, then click *Next*.
3. Select either a *Typical* or *Custom* installation.

Figure 7-1 *Select Typical or Custom*



Both installation paths are presented below:

- Section 7.1.1, “Typical Installation,” on page 46
- Section 7.1.2, “Custom Installation,” on page 46

7.1.1 Typical Installation

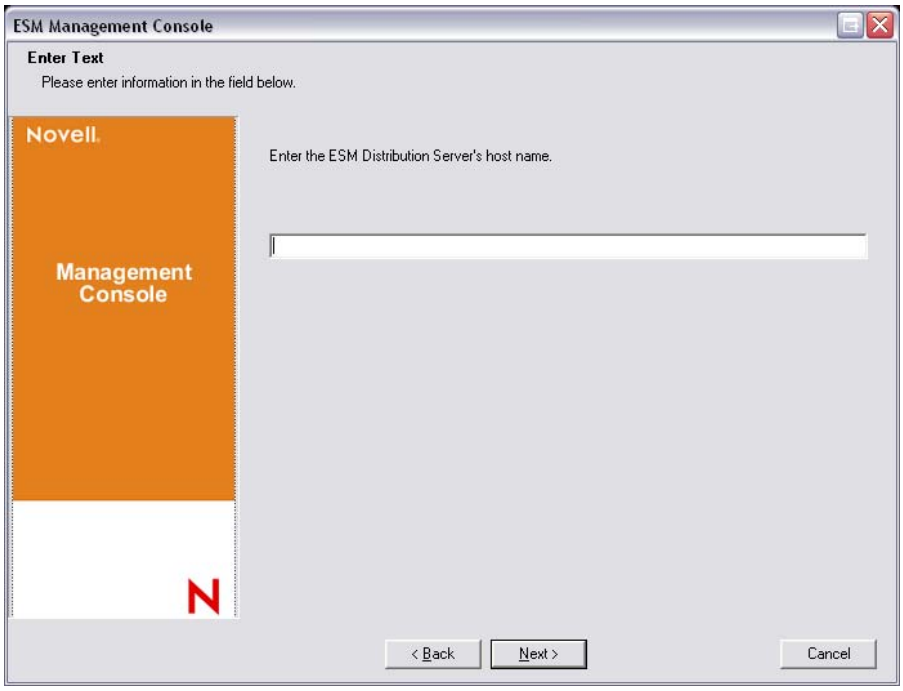
A typical installation uses all the default server and SSL information contained in the `STInstParam.id` file and uses the default directory: `\Program Files\Novell\ESM Management Console`. No additional selections need to be made for Management Console installation, providing the `ESM Setup Files` directory is on the machine.

7.1.2 Custom Installation

A custom installation displays the `STInstParam.id` defaults used in the typical installation and permits the administrator to change that information.

1 Specify the Policy Distribution Service's hostname (this must be the fully-qualified domain name if the Distribution server is deployed outside the enterprise firewall).

Figure 7-2 *Enter Distribution Service Host Name*

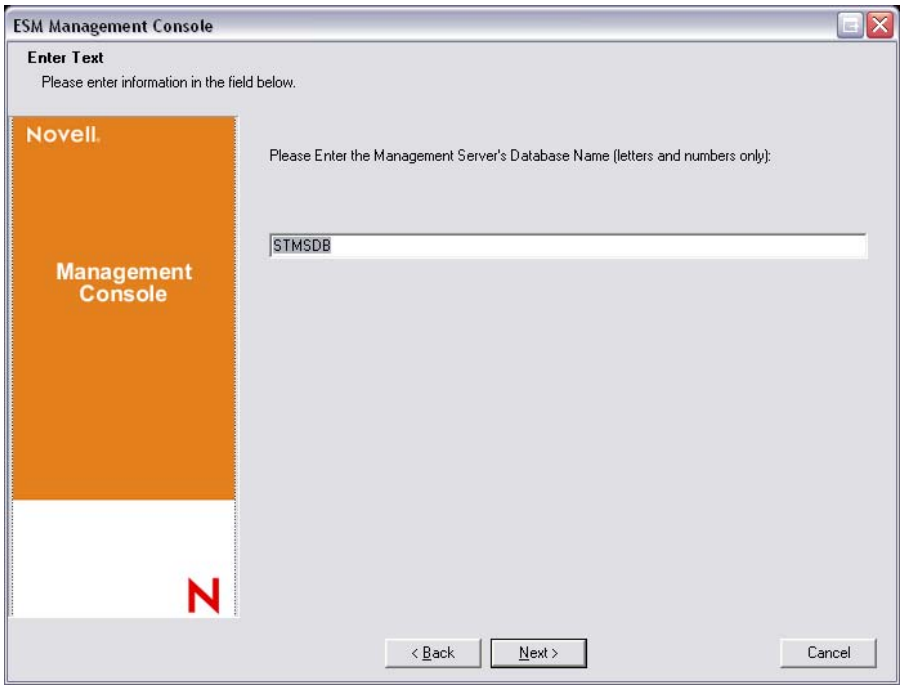


2 Specify the Management Service hostname.

3 Specify the Management Service SQL database hostname.

4 Specify the Management Service SQL database name.

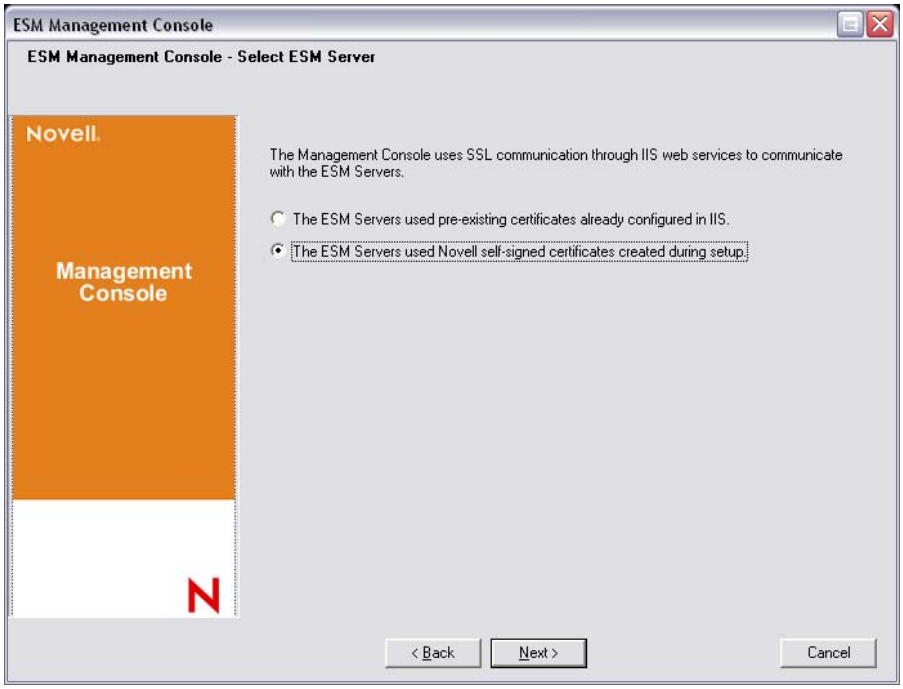
Figure 7-3 *Enter MS SQL database name*



5 Specify the SQL SA username and password identified during Management Service installation.

6 Select the type of SSL Certificate installed on the Policy Distribution Service and the Management Service.

Figure 7-4 *Select Server Certificates*



7 Select the directory where the Management Console is installed. The default location is `\Program Files\Novell\ESM Management Console`.

After you install ZENworks Endpoint Security Management, you must create and configure a directory service before you can start managing devices in your system.

The New Directory Service Configuration Wizard lets you create a directory service configuration that defines the scope of your Endpoint Security Client installations. The new configuration uses your existing directory service to define the logical boundary for your user-based and computer-based client installations.

The wizard guides you through the process of selecting the directory service and the contexts where current and future client accounts reside.

The wizard also lets you synchronize the directory entries included in the new configuration. This synchronization is performed in the background so you can immediately begin using your new configuration.

After installing ZENworks Endpoint Security Management, the New Directory Service Configuration Wizard automatically displays. For more information about creating and configuring the directory service, see "Configuring the Directory Service" in the *ZENworks Endpoint Security Management Administration Guide*.

7.2 Starting the Console

To launch the Management Console login window, click *Start* > *All Programs* > *Novell* > *ESM Management Console* > *Management Console*.

Log in to the Management Console by entering the administrator name and password. Before you can enter the username and password, you must be connected to the directory service's domain (see Section 7.2.1, "Adding eDirectory Services," on page 49). The username must be a user on the Management Service domain.

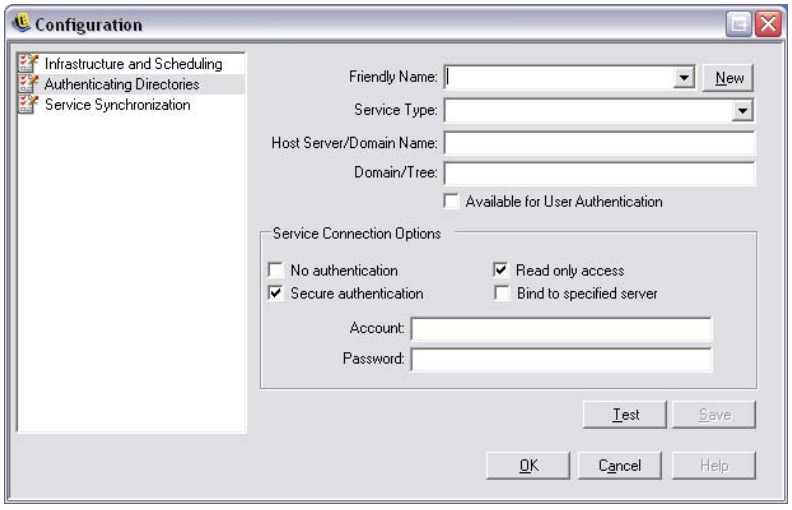
Figure 7-5 *Login to ZENworks Endpoint Security Management Management Console*

7.2.1 Adding eDirectory Services

The following steps provide information for using Novell eDirectory as the directory service. For information about using Microsoft Active Directory, see "Configuring the Directory Service" in the *ZENworks Endpoint Security Management Administration Guide*.

1 Click the *Options* button on the login screen to display the Configuration window.

Figure 7-6 *Authenticating Directories*



2 Enter a friendly name for the Directory Service and select eDirectory from the *Service Type* drop-down list.

3 In the *Host/DN* field, specify the IP address of the eDirectory server and specify the tree name under the *Domain* tree.

4 Check *Available for User Authentication* to display the domain in the login drop-down menu.

5 Uncheck *Secure Authentication* in the *Service Connection* options.

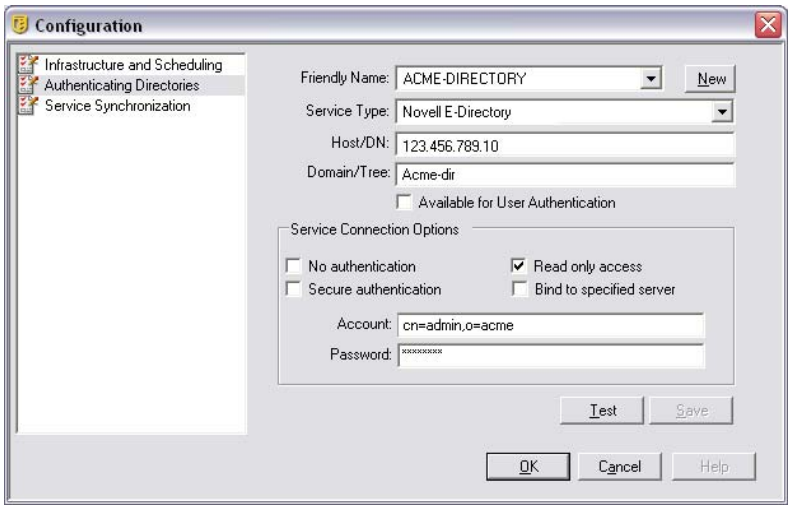
6 Specify the Account name using LDAP format. For example, in "cn=admin,o=acmeserver" cn is the user and o is the object where the user account is stored.

7 Specify the password for the account.

NOTE: The password should be set to not expire and this account should never be disabled.

8 Click *Test* to verify communication to the directory service. If communication cannot be established, the user is notified of the error. Any inaccurate information is corrected, where possible. by the interface during the test.

Figure 7-7 *Completed Directory Screen*



9 Click *Save* to add this directory service to the database, then click *New* to add another directory service to the database.

10 Click *OK* or *Cancel* to exit the Configuration window and return to the login screen.

7.2.2 Configuring the Management Console's Permissions Settings

Permissions is found on the *Tools* menu of the Management Console and is accessible only by the primary administrator for the Management Service and any other users who have been granted permissions access by that administrator. This control is not available when running the Stand-Alone Management Console. See Chapter 10, "ZENworks Endpoint Security Management Unmanaged Installation," on page 71 for more details.

The permissions settings define which user or group of users are permitted access to the Management Console, Publish Policies, and Change Permission Settings.

During the Management Server installation, an administrator or Resource Account name is entered into the configuration form. After a successful test has been performed and the user information is saved, the permissions are automatically granted to this user.

After the Management Console is installed, all user groups within the domain are granted full permissions. The resource user should remove permissions from all but the groups and users who should have access. The resource user can set additional permissions for the designated users. The permissions granted have the following results:

- **Management Console Access:** The user can view policies and components, and edit existing policies. Users granted only this privilege are not permitted to add or delete polices and the publish and permissions options are unavailable.
- **Publish Policy:** The user can publish policies only to assigned users and groups.
- **Change Permission:** The user can access and change permissions settings for other users that have already been defined, or grant permissions to new users.
- **Create Policies:** The user can create new policies in the Management Console.
- **Delete Policies:** The user can delete any policy in the Management Console.

NOTE: For security purposes, only the resource user or very few administrators should be granted the Change Permission and Delete Policies permissions.

The following sections contain more information:

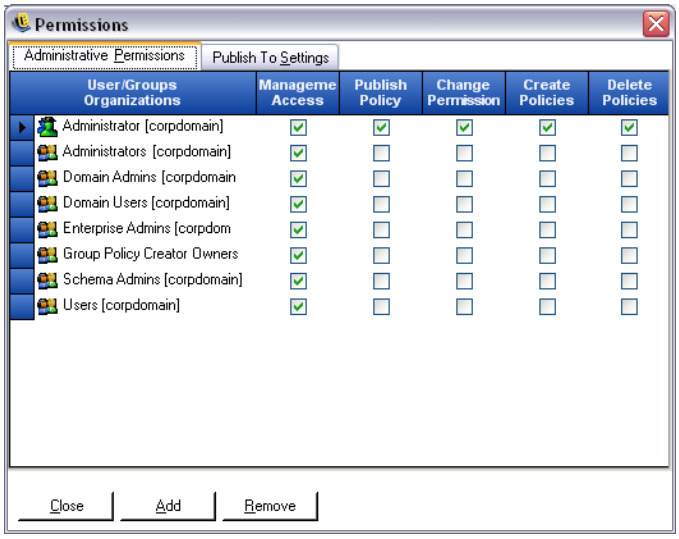
- "Configuring Administrative Permissions" on page 51
- "Configuring Publish To Settings" on page 52

Configuring Administrative Permissions

1 Click *Tools* > *Permissions*.

The groups associated with this domain are displayed.

Figure 7-8 *Management Console Permissions Settings Window*



NOTE: All groups are granted full permissions in the Management Console by default. Administrators should immediately uncheck any and all policy tasks from unauthorized groups. Access to the console can be removed by unchecking that permission.

---

2 (Optional) To load users and new groups to this list:

2a Click the *Add* button on the bottom of the screen to display the Organization table.

Figure 7-9 *Permission Settings Organization Table*

2b Select the appropriate users and groups from the list. Use the Ctrl or Shift keys to select multiple users.

2c When all users and groups have been selected, click *OK* button to add the users and groups to the grid on the Permissions form.

3 Assign permissions to the available users and groups.

To remove a selected user or group, select the name, then click *Remove*.

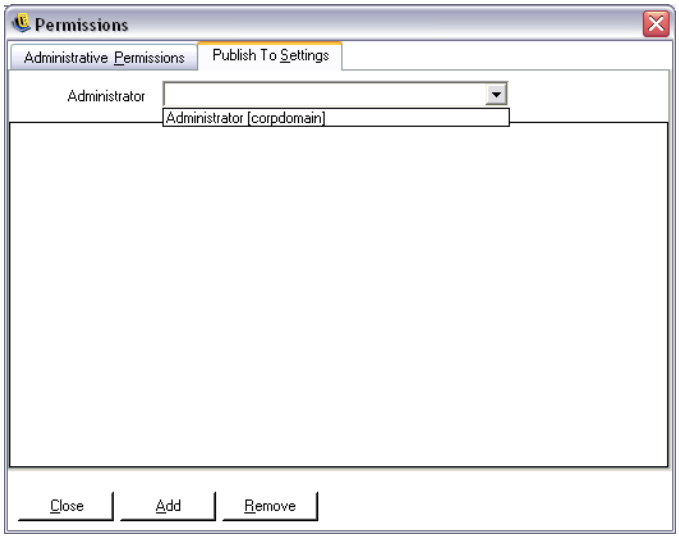
Configuring Publish To Settings

Users and groups who have *Publish Policy* checked must be assigned users or groups to publish to. To set the Publish To Settings:

1 Click the *Publish To Settings* tab.

2 From the drop-down list, select the users and groups granted the Publish permission.

Figure 7-10 *Publish To Settings*



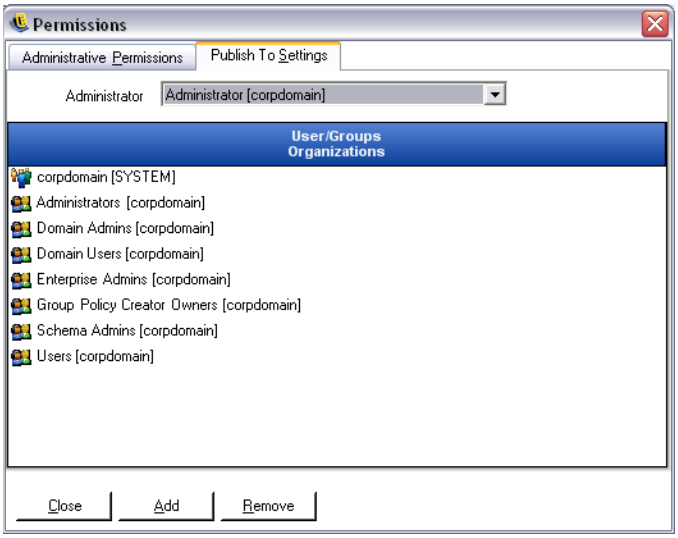
3 To assign users and groups to this user or group:

3a Click the *Add* button on the bottom of the screen to display the Organization table.

3b Select the appropriate users and groups from the list. Use the Ctrl and Shift keys to select multiple users.

3c When all users/groups have been selected, click the *OK* button.

Figure 7-11 *Publish To List*



To remove a selected user or group, select the name in the list, then click *Remove*.

The permission sets are immediately implemented, so the administrator only needs to click *Close* and accept the changes to return to the editor.

When a new directory service is added, the Resource Account is granted full permissions settings, as described above.

7.2.3 Publishing a Policy

To Publish a security policy with the default settings:

1. Click *Create New Policy*.
2. Specify a name for the policy, then click *Create*.
3. Save the policy, then click the *Publish* tab.
4. Because Endpoint Security Client users must check in to display in the tree, select the top of the tree on the left, then double-click to populate the publishing field with all current groups and users.
5. Click *Publish* to send the policy to the Policy Distribution Service.

The policy generated in this manner has the following characteristics:

- A single location (Unknown) is created.
- CD/DVD ROM drives are allowed.
- Removable storage devices are allowed.
- All communications ports (including Wi-Fi) are permitted.
- The Firewall Setting, All Adaptive (all outbound traffic over networking ports is allowed; unsolicited inbound traffic over networking ports is disallowed) is included.

For information on creating a more robust security policy, please see the *ZENworks Endpoint Security Management Administration Guide*.

Endpoint Security Client 3.5 Installation

8

Use the Novell ZENworks Endpoint Security Client 3.5 for Windows XP (SP1 and SP2) and Windows 2000 SP4 clients. Click the appropriate *ZENworks Security Client* installer from the Installation Interface menu. The Endpoint Security Client installation begins. The following pages outline the installation process for both Basic and MSI installation.

- Basic Installation installs the Endpoint Security Client 3.5 only on the current machine.
- MSI Installation launches the installer in Administrative mode (`/a`) and creates an MSI Package of the software. This package can then be pushed down or otherwise made available at a specified network location with the required user inputs pre-configured. This allows individual users to install the software with the pre-defined server values.

8.1 Basic Endpoint Security Client 3.5 Installation

This procedure install the Endpoint Security Client 3.5 on the current machine only.

Verify that all security patches for Microsoft and anti-virus software are installed and up to date.

Install the Management Service SSL Root Certificates onto the local machine (`ESM-MS.cer`, or the enterprise certificate)

NOTE: We recommend that antivirus/spyware software that is interacting with valid registry functions be shut down during the installation of the Endpoint Security Client 3.5.

---

1. Click *Next* on the Welcome screen to continue.
2. Accept the Licensing Agreement, then click *Next*.
3. Enter an installation password. This prevents the user from uninstalling the Endpoint Security Client 3.5 through *Add/Remove programs* (recommended).

Figure 8-1 *Uninstall Password*

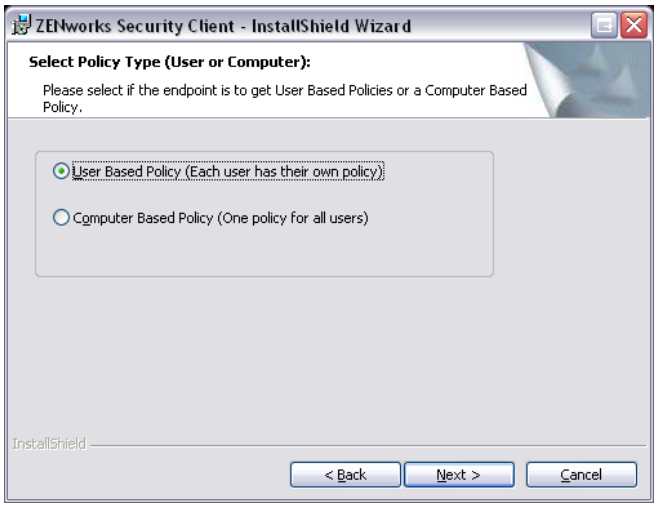
4 Select how policies will be received (from Distribution Service for managed clients or retrieved locally for an unmanaged configuration [see Chapter 10, "ZENworks Endpoint Security Management Unmanaged Installation," on page 71 for unmanaged details]).

Figure 8-2 *Management Settings*

5 Specify the Management Service information.

6 Select whether policies should be received for users or for the machine (machine-based policies).

Figure 8-3 *User or Machine-based policies*



7 Click *Install*.

After the software is installed, the user is prompted to restart the machine.

NOTE: You can optionally copy the certificate for the Management Service into a folder co-located with `setup.exe` prior to running the installation. This automatically installs the certificate onto the machine (for example, for all users). This process can also be done with the Novell license.`dat` file.

8.2 MSI Installation

This procedure creates a MSI Package for the Endpoint Security Client 3.5. This package is used by a system administrator to publish the installation to a group of users via an Active Directory policy, or through other software distribution methods.

To create the MSI package;:

If you are installing from the CD or ISO master installer and if you're not planning to run any command-line variables (see Section 8.2.1, "Command-line Variables," on page 60):

1 Insert the CD and wait for the master installer to launch.
2 Click *Product Installation*.
3 Click *Security Client*.
4 Click *Create ZSC MSI Package*.

If you are using just the `setup.exe` file for installation (the executable can be found on the CD under `D:\ESM32\ZSC`), begin with the following:

1 Right-click `setup.exe`.
2 Select *Create Shortcut*.
3 Right-click the shortcut, then click *Properties*.
4 At the end of the Target field, after the quotes, click the space bar once, then type `/a`.

For example: "`C:\Documents and Settings\euser\Desktop\CL-Release-3.2.455\setup.exe" /a`

Several command-line variables are available for MSI installation, see Section 8.2.1, "Command-line Variables," on page 60 for more details.

5 Click *OK*.

6 Double-click the shortcut to launch the MSI installer.

When installation begins:

1 Click *NEXT* on the Welcome screen to continue.

2 Accept the Licensing Agreement, then click *Next*.

3 Select whether an Uninstall Password is required (recommended) and enter the password.

4 Select how policies will be received (from Distribution Service for managed clients, retrieved locally for an unmanaged configuration). If managed is selected:

- Specify the Management Service information (FQDN or NETBIOS name depending upon how it was entered during Management Service installation).
- Select if policies will be user-based or machine-based policies.

5 (Optional) Specify an e-ail address in the provided field to notify you if installation fails.

6 Specify the network location where the MSI image is created, or browse to that location by clicking the *Change* button.

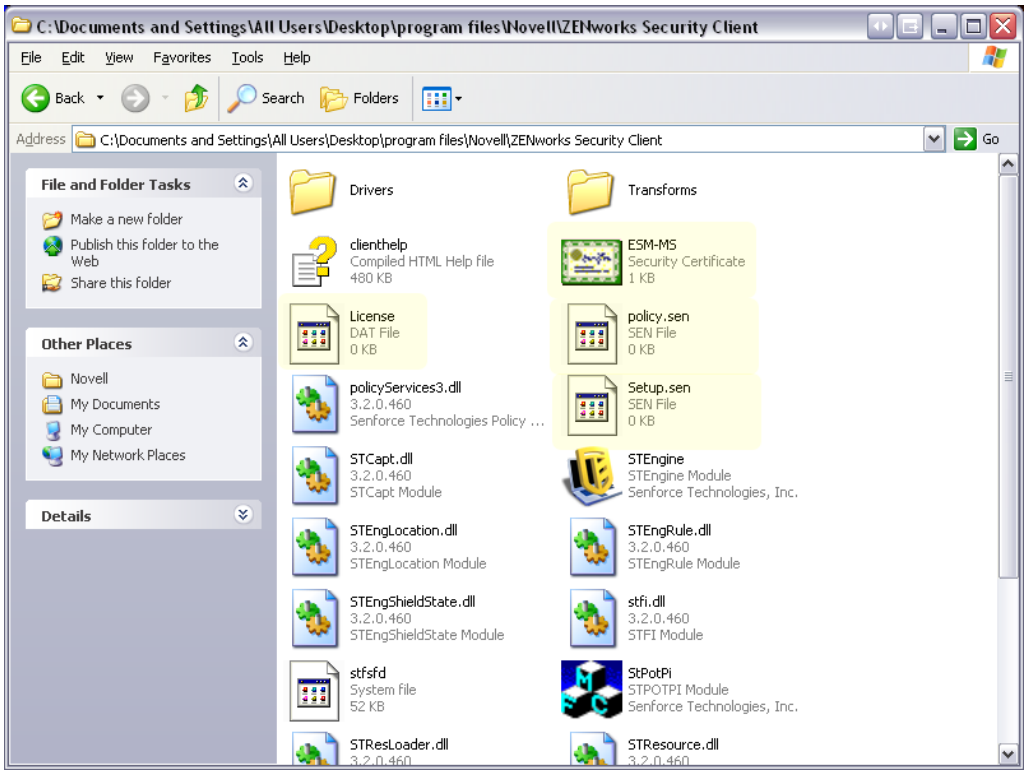
Figure 8-4 *Select Network Location for MSI Image*

7 Click *Install* to create the MSI image.

8 Browse to the created MSI image and open the "`\program files\Novell\ZENworks Security Client\`" folder

9 Copy the Management Service SSL certificate (`ESM-MS.cer`, or the enterprise certificate) and the Novell License Key into this folder, replacing the default 0 KB files currently in the folder. The ESM-MS SSL certificate is available in the `ZENworks Endpoint Security Management Setup Files` folder. The license key is e-mailed separately (if using the 30-day evaluation, no license key is necessary at this time).

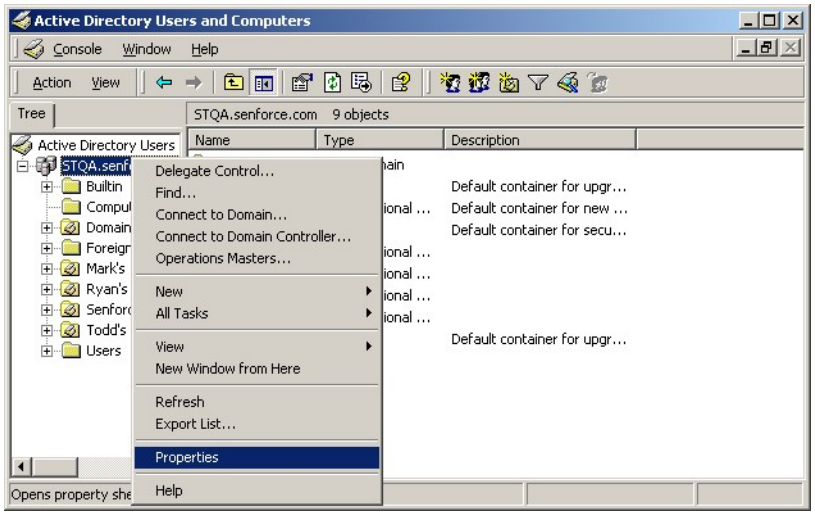
Figure 8-5 *Replace the Default Files in the MSI Package*



To set the MSI package to be pushed down to user groups like a Group Policy:

1 Open *Administrative Tools - Active Directory Users and Computers*, and open either *Root Domain* or *OU Properties*.

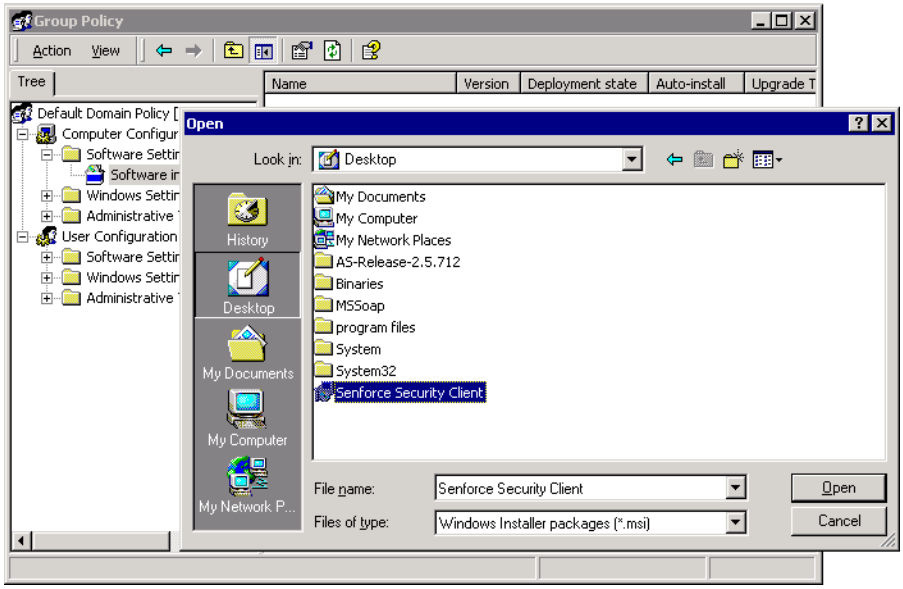
Figure 8-6 *Open Properties in either Root Domain or OU*



2 Click the *Group Policy* tab, then click *Edit*.

3 Add the MSI Package to Computer Configuration.

Figure 8-7 *Select the MSI package to add*



8.2.1 Command-line Variables

Command-line variable options are available for MSI installation. These variables must be set in the executable shortcut that is set to run in administrator mode. To use a variable, the following command-line must be entered in the MSI shortcut:

`"...\setup.exe" /a /V"variables"`. Enter any of the commands below between the quotation marks. Separate multiple variables with a single space.

Example: `setup.exe /a /V"STDRV=stateful STBGL=1"` creates an MSI package where the Endpoint Security Client 3.5 will boot in All Stateful with strict white-listing enforced.

NOTE: Booting in stateful can cause some interoperability issues (DHCP address delays, Novell network interop issues, and so forth).

The following command line variables are available:

Table 8-1 *Command Line Variables*

Command Line Variable	Description	Notes
STDRV=stateful	NDIS driver all stateful at boot time.	Changes the default state of the NDIS driver from All Open to All Stateful permitting all network traffic at boot time, until the Endpoint Security Client 3.5 has determined its location.
/qn	Quiet install.	Use to suppress the typical MSI Installation process. Endpoint Security Client 3.5 will activate at next user reboot.

Command Line Variable	Description	Notes
STRBR=ReallySuppress	No reboot after install completes.	Security enforcement and client self defense are not fully functional until after the first reboot.
STBGL=1	Strict white list enforcement on application control.	A policy MUST be created that identifies the application on the white list, and distributed with this policy.
STUPGRADE=1	Upgrade the Endpoint Security Client 3.5.	Use when upgrading the Endpoint Security Client 3.5.
STUNINSTALL=1	Uninstall the Endpoint Security Client 3.5.	Use when uninstalling the Endpoint Security Client 3.5. For detailed uninstall instructions, see "Uninstalling the Endpoint Security Client 3.5" in the *ZENworks Endpoint Security Management Administration Guide*.
STUIP=password	Uninstall with password	Use when an uninstall password is active.
STNMS="MS Name"	Change the Management Service name.	Changes the Management Service name for the Endpoint Security Client 3.5.
POLICYTYPE=1	Change Endpoint Security Client 3.5 to machine-based policies.	Use to change MSI-installed Endpoint Security Clients to accept machine-based, rather than user-based policies.
POLICYTYPE=2	Change Endpoint Security Client 3.5 to user-based policies.	Use to change MSI-installed Endpoint Security Clients to accept user-based, rather than machine-based policies.
STVA="Adapter name"	Add Virtual Adapter.	Use to activate policy control over a virtual adapter
/L*v c:\log.txt	Turn on logging.	Use to activate logging at installation. If not, this will have to be done through the Endpoint Security Client Diagnostics tools (see Administrator's Manual).

8.2.2 Distributing a Policy with the MSI Package

The default policy included at MSI installation can be replaced with an enterprise-configured policy. To push down a specific policy with the MSI image:

1. Create a policy to be distributed to all users through the Management Console (see the *ZENworks Endpoint Security Management Administration Guide* for details on Policy Creation).
2. Export the policy, then it as `policy.sen`.

NOTE: All policies distributed in this manner (unmanaged) must be named `policy.sen` in order for the Endpoint Security Client 3.5 to accept them. Policies not named `policy.sen` are not implemented by the Endpoint Security Client 3.5.

3. Open the folder the policy was exported into and copy the `policy.sen` and `setup.sen` files.
4. Browse to the created MSI image and open the `"\program files\Novell\ZENworks Security Client\"` folder.
5. Paste the `policy.sen` and `setup.sen` files into the folder. This will replace the default `policy.sen` and `setup.sen` files.

8.2.3 User Installation of the Endpoint Security Client 3.5 from MSI

When the user re-authenticates to the domain (through a reboot of the machine), the MSI installation package runs prior to logging in. After the MSI installation completes, the machine reboots and the user is permitted to log in to the machine. The Endpoint Security Client 3.5 is installed and running on the machine.

8.3 Running the Endpoint Security Client 3.5

The Endpoint Security Client 3.5 runs automatically at system startup. For more information about the Endpoint Security Client 3.5, see the *ZENworks Endpoint Security Client 3.5 User Guide*.

The User Guide can be distributed to all users to help them better understand the operation of their new endpoint security software.

Endpoint Security Client 4.0 Installation

9

The Novell® ZENworks® Endpoint Security Client 4.0 is a client release to support Microsoft Windows Vista with Support Pack 1 running in 32-bit mode. The Endpoint Security Client 4.0 uses the ZENworks Endpoint Security Management 3.5 Server and Management Console. You can now manage Windows XP with the 3.5 client and Windows Vista with the 4.0 client.

The following pages outline the installation process for both Basic and MSI installation.

Basic Installation installs the Endpoint Security Client 4.0 only on the current machine.

MSI Installation launches the installer in Administrative mode (`/a`) and creates an MSI package of the software. This package can then be pushed down or otherwise made available at a specified network location with the required user inputs preconfigured. This allows individual users to install the software with predefined server values.

9.1 Basic Endpoint Security Client 4.0 Installation

This procedure installs the ZENworks Endpoint Security Client 4.0 on the current machine only.

Before You Begin:

- Verify that all security patches for Microsoft and anti-virus software are installed and up to date. The Endpoint Security Client 4.0 software can be installed on Windows Vista running Support Pack 1.
- Novell recommends that antivirus/spyware software that is interacting with valid registry functions be shut down during the installation of the Endpoint Security Client 4.0.
- The Managed Endpoint Security Client requires SSL communication to the ZENworks Endpoint Security Management Service component. If you selected “self signed certificates” during the Management Service or the Single Server installation, the endpoint running the Security Client must have the certificate installed in the proper context (preferably in the local computer context).

  To do this automatically, place the `ESM-MS.cer` file in the folder along with the Endpoint Security Client installer’s `Setup.exe` file. Optionally, you can copy the entire `ESM Setup Files` folder from the Management Service installation (or Single Server installation) into the folder with the Endpoint Security Client installer `Setup.exe` (ensure that the `ESM-MS.cert` is in the `ESM Setup Files` folder and the folder is named `ESM Setup Files`). This automatically installs the certificate onto the machine (for example, for all users). This process can also be done with the Novell license.`dat` file.

Select the appropriate *ZENworks Security Client* installer directory from the Installation Interface menu.

1. Double-click `Setup.exe` to begin the installation process.
2. Choose the language you want for this installation, then click *OK*.

   Language choices include:

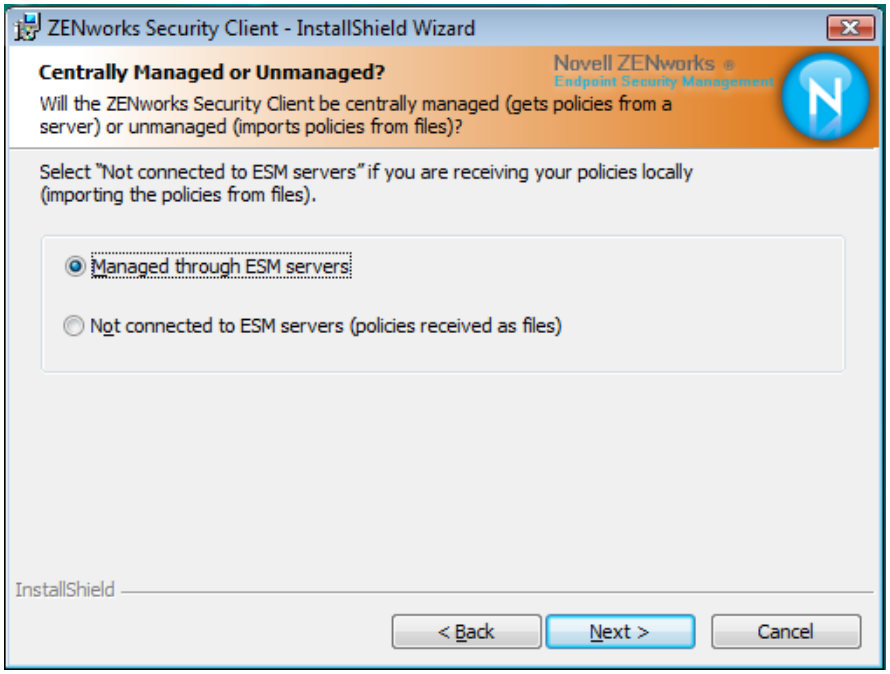
   - Chinese Simplified
   - Chinese Traditional
   - English (the default)
   - French
   - German
   - Italian
   - Japanese
   - Portuguese
   - Spanish Traditional
3. Endpoint Security Client 4.0 requires that you have Microsoft Web Services Enhancements (WSE) 2.0 with Service Pack 3 and Microsoft Visual C++ 2008 installed on your computer prior to installing the client. If the installation process does not detect these components, you see this screen. Click *Install* to install these requirements.
4. If you haven't already done so, turn off anti-virus and anti-spyware software before pressing *Next* at the Welcome screen.
5. Accept the Licensing Agreement, then click *Next*.

6. Select *Require an uninstall password*. This prevents the user from uninstalling the Endpoint Security Client 4.0 (recommended).

7 Add an uninstall password and confirm the password, then click *Next*.

8 Select a policy type (either a User Based Policy, where each user has an individual policy, or a Computer Based Policy, where one policy is used for all users). Click *Next*.

NOTE: Select User Based Policy if your network uses eDirectory as its Directory Service. eDirectory does not support computer based policies.



9 Select how policies are to be received (managed through ESM servers for managed clients or retrieved locally for an unmanaged (standalone) configuration. Click *Next*.

For details about an unmanaged installation, see Chapter 10, "ZENworks Endpoint Security Management Unmanaged Installation," on page 71.

10 (Optional) If you selected *Manage through ESM servers* in Step 9, type the name of the server supporting the Management service.

The server name you enter must match the "Issued To" name that is provided in the trusted root certificate used on the server where you installed the ZENworks Endpoint Management Service or Single Server. This will either be the NETBIOS name or the Fully Qualified Domain Name (FQDN) of the server running the ZENworks Endpoint Management Service component. Once entered, click *Next*.

11 Click *Install* to begin the installation.

12 After the software is installed, restart the machine when you are prompted to do so.

For a list of features that are not available for the 4.0 Client for Vista, see Section 9.4, "Features Not Supported In the Endpoint Security Client 4.0," on page 70.

9.2 MSI Installation

This procedure creates an MSI package for the Endpoint Security Client 4.0. This package is used by a system administrator to publish the installation to a group of users via an Active Directory policy, or through other software distribution methods.

9.2.1 Using the Master Installer

If you are installing from the CD or ISO master installer and if you're not planning to run any command line variables:

1 Insert the CD and wait for the master installer to launch.

2 Click *Product Installation*.

3 Click *Security Client*.

4 Click *Create ZSC MSI Package*.

5 Continue with Section 9.2.3, "Completing the Installation," on page 67.

9.2.2 Using the Setup.exe File

If you are using just the `setup.exe` file for installation:

1 Right-click `setup.exe`.

The executable can be found on the CD under `D:\ESM32\ZSC`.

2 Select *Create Shortcut*.

3 Right-click the shortcut, then click *Properties*.

4 At the end of the *Target* field, after the quotes, press the Spacebar once to insert a space, then type `/a`.

For example: "`C:\Documents and Settings\euser\Desktop\CL-Release-3.2.455\setup.exe" /a`

Several command line variables are available for MSI installation. See Section 8.2.1, "Command-line Variables," on page 60 for more details.

5 Click *OK*.

6 Double-click the shortcut to launch the MSI installer.

7 Continue with Section 9.2.3, "Completing the Installation," on page 67.

9.2.3 Completing the Installation

Complete either Using the Master Installer or Using the Setup.exe File, then use this procedure to finish installing the client.

1 Click *NEXT* on the Welcome screen to continue.

2 Select *Require an uninstall password* (recommended) and enter the password. Click *Next*.

NOTE: If you uninstall the Endpoint Security Client through an MSI package, you must specify the uninstall password through the MSI properties (see Table 9-1 on page 68).

---

3 Select a policy type (either a User Based Policy, where each user has an individual policy, or a Computer Based Policy, where one policy is used for all users). Click *Next*.

NOTE: Select User Based Policy if your network uses eDirectory as its Directory Service. eDirectory does not support computer based policies.

---

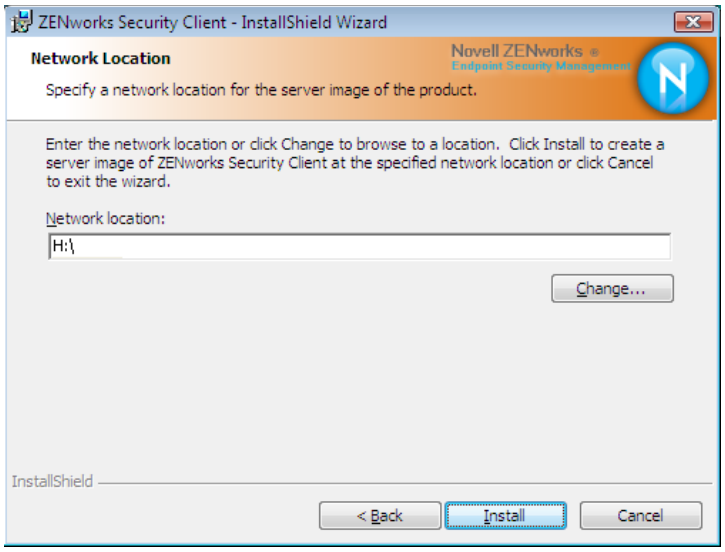
4 Select how policies are to be received (managed through ESM servers for managed clients or retrieved locally for an unmanaged (standalone) configuration.

5 (Optional) If you selected *Manage through ESM servers* in Step 4:

- The server name you enter must match the "Issued To" name that is provided in the trusted root certificate used on the server where you installed the ZENworks Endpoint Management Service or Single Server. This will either be the NETBIOS name or the Fully Qualified Domain Name (FQDN) of the server running the ZENworks Endpoint Management Service component.

6 (Optional) Specify an e-mail address in the provided field to notify you if the installation fails.

7 Specify the network location where you want to create the MSI image, or browse to and select that location by clicking the *Change* button.



8 Click *Install* to create the MSI image. Click *Finish* to close the setup program.

9 Browse to the location where you created the MSI image and open the `\Program Files\Novell ZENworks\Endpoint Security Client\` folder.

10 Copy the Management Service SSL certificate (`ESM-MS.cer`, or the enterprise certificate) and the Novell license key into this folder, replacing the default 0 KB files currently in the folder.

The ESM-MS SSL certificate is available in the `ZENworks Endpoint Security Management Setup Files` folder. The license key is e-mailed separately. If you are using the 60-day evaluation, no license key is necessary at this time.

9.2.4 Command Line Variables

Command Line variable options are available for an MSI installation. These variables must be set in the executable shortcut that is set to run in administrator mode. To use a variable, the following command line must be entered in the MSI shortcut:

`"...\setup.exe" /a /V"variables"`. Enter any of the commands below between the quotation marks. Separate multiple variables with a single space.

The following command line variables are available:

Table 9-1 *Command Line Variables*

Command Line Variable	Description	Notes
/qn	Quiet install.	Suppresses the typical MSI Installation process. The Endpoint Security Client will activate at the next user reboot.
SESMSG=1	Shows a message to the end user that files in “Safe Harbors” cannot automatically have encryption removed if an Encryption Policy is deployed.	The default value is 0 (don’t display messages) in order to make the uninstall “silent.”

Command Line Variable	Description	Notes
STRBR=ReallySuppress	No reboot after the install completes.	Security enforcement and client self defense are not fully functional until after the first reboot.
STUPGRADE=1	Upgrade the Endpoint Security Client 4.0.	Upgrades the Endpoint Security Client 4.0.
STUNINSTALL=1	Uninstall the Endpoint Security Client 4.0.	Uninstalls the Endpoint Security Client 4.0. For detailed uninstall instructions, see "Uninstalling the Endpoint Security Client 3.5" in the *ZENworks Endpoint Security Management Administration Guide*.
STUIP=password	Uninstall with password	Use this variable when an uninstall password is active.
STNMS="MS Name"	Change the Management Service name.	Changes the Management Service name for the Endpoint Security Client 4.0.
POLICYTYPE=1	Change Endpoint Security Client 4.0 to machine-based policies.	Changes MSI-installed Endpoint Security Clients to accept machine-based policies instead of user-based policies.
POLICYTYPE=2	Change Endpoint Security Client 4.0 to user-based policies.	Changes MSI-installed ZENworks Security 4.0 Clients for Vista to accept user-based policies instead of machine-based policies.
STVA="Adapter name"	Add a virtual adapter.	Activates policy control over a virtual adapter
/L*v c:\log.txt	Turn on logging.	Activates logging at installation. If you do not use this variable, logging must be done through the Endpoint Security Client Diagnostics tools.

9.2.5 Distributing a Policy with the MSI Package

The default policy included at MSI installation can be replaced with an enterprise-configured policy. To push down a specific policy with the MSI image:

1. Create a policy to be distributed to all users through the Management Console (see the *ZENworks Endpoint Security Management Administration Guide* for details on Policy Creation).
2. Export the policy, then rename it to be `policy.sen`.

   All policies distributed in this manner (unmanaged) must be named `policy.sen` in order for the Endpoint Security Client 4.0 to accept them. Policies not named `policy.sen` are not implemented by the Endpoint Security Client 4.0.
3. Open the folder the policy was exported into and copy the `policy.sen` and `setup.sen` files.

4 Browse to the created MSI image and open the `\Program Files\Novell ZENworks\Endpoint Security Client\` folder.

5 Paste the `policy.sen` and `setup.sen` files into the folder. This will replace the default `policy.sen` and `setup.sen` files.

9.3 Running the Endpoint Security Client 4.0

The Endpoint Security Client 4.0 runs automatically at system startup. For more information about the Endpoint Security Client 4.0, see the *ZENworks Endpoint Security Client 4.0 User Guide*.

The User Guide can be distributed to all users to help them better understand the operation of their new endpoint security software.

9.4 Features Not Supported In the Endpoint Security Client 4.0

The features that are not supported or are partially supported with Endpoint Security Client 4.0 include:

- Client Self Defense.
- Modem support.
- Scripting.
- Manually changing firewalls in a location.
- Having multiple firewalls visible in a location. Only the default firewall is available.
- Integrity rules.
- Application blocking.
- Mouse-over notification area icon information has changed. The icon only shows Policy and Location information.
- USB connectivity.
- Wi-Fi key management.
- Wired connections are not valued above wireless connections.
- Endpoint Security Client updates (by policy).
- VPN authentication timeout.
- Autoplay for storage device control.
- Phonebook entries in the network environment.

ZENworks Endpoint Security Management Unmanaged Installation

10

An enterprise can run the ZENworks® Security Client and Management Console in an Unmanaged mode (without connection to the Policy Distribution Service, or the Management Service). This is available as an installation option, primarily intended for setting up simple evaluations. This option is also ideal for enterprises with little or no server space, or with basic security needs. However, quick policy updates and Compliance Reporting are not available in this configuration.

10.1 Unmanaged Endpoint Security Client Installation

To install an unmanaged Endpoint Security Client, follow the instructions on Chapter 8, "Endpoint Security Client 3.5 Installation," on page 55, and select the *Not Connected to ZENworks Endpoint Security Management Servers (policies received as files)* option. The installation bypasses the questions regarding the names of the servers and installs the Endpoint Security Client onto this machine (an MSI package can also be created for an Unmanaged Endpoint Security Client).

Figure 10-1 *Select "Not Connected to ZENworks Endpoint Security Management Servers"*

10.2 Stand-Alone Management Console

This configuration allows a ZENworks Endpoint Security Management Management Console to be installed and create policies without connecting to an outside Management Service, or distributing policies through the Policy Distribution Service. Select *Stand-Alone Management Console Installation* from the Master Installer menu, then follow the instructions on Chapter 7, "Performing the Management Console Installation," on page 45 for installation.

At the start of the installation, a SQL database is installed (if one exists on the machine, the installer will set up the appropriate databases instead). After the database is installed, the installation stops. The machine must be restarted to activate the SQL database. Following the reboot, activate the installation again to continue.

Most policy functionality is available for deployment, with the exception of Reporting. All exported policy files must be distributed to a Endpoint Security Client's `\Program Files\Novell\ZENworks Security Client\` directory.

10.3 Distributing Unmanaged Policies

To distribute unmanaged polices:

1. Locate and copy the Management Console's `setup.sen` file to a separate folder.

   The `setup.sen` file is generated at installation of the Management Console, and placed in the `\Program Files\Novell\ESM Management Console\` directory.
2. Create a policy in the Management Console (for more information, see the *ZENworks Endpoint Security Management Administration Guide*).
3. Use the *Export* command to export the policy to the same folder containing the `setup.sen` file. All policies distributed must be named `policy.sen` for the Endpoint Security Client to accept them.
4. Distribute the `policy.sen` and `setup.sen` files. These files must be copied to the `\Program Files\Novell\ZENworks Security Client\` directory for all unmanaged clients.

   The `setup.sen` file only needs to be copied to the unmanaged devices once, with the first policy. Afterwards, only new policies need to be distributed.

If an Unmanaged Endpoint Security Client is installed on the same machine as the Stand Alone Management Console, the `setup.sen` file must also be copied to the `\Program Files\Novell\ZENworks Security Client\` directory. If the Unmanaged Endpoint Security Client is installed on the machine after the Stand Alone Editor, the file must be transferred manually as described above.

Clicking the *Publish* button immediately publishes the policy to that machine's unmanaged Endpoint Security Client. To provide policies to multiple, unmanaged users, use the Export feature as described above.

Upgrading

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To upgrade your software from one release to another, complete the following process:

1. Export all policies. For instructions, see "Exporting a Policy" in the *ZENworks Endpoint Security Management Administration Guide*.
2. Export all encryption keys. For instructions, see "Managing Keys" in the *ZENworks Endpoint Security Management Administration Guide*.

   You do not have to export the encryption keys if you exported your encryption policies. Each encryption policy includes all encryption keys. However, it is best practice to export the keys regularly to back up the keys, so we recommend that you do it at this time.
3. Uninstall the Management Service, Policy Distribution Service, and Management Console. To do so, use the Windows Add/Remove Programs feature.

   You can uninstall the components in any order. Make sure you also remove the databases.
4. Reinstall the components in the following order:
   - Policy Distribution Service
   - Management Service
   - Management Console

   If you are installing the Policy Distribution Service and Management Service on the same machine, see Chapter 3, "Performing a Single-Server Installation," on page 19 for instructions. If you are installing them on separate machines, see Chapter 4, "Performing a Multi-Server Installation," on page 23.

   For Management Console installation instructions, see Chapter 7, "Performing the Management Console Installation," on page 45.
5. Import the policies using the Management Console. For instructions, see "Importing Policies" in the *ZENworks Endpoint Security Management Administration Guide*.
6. Import the encryption keys. For instructions, see "Managing Keys" in the *ZENworks Endpoint Security Management Administration Guide*.

   If you've already imported your encryption policies, this step is not necessary. However, it doesn't harm your system and ensures that your system contains all of the encryption keys.
7. Uprade the Security clients. For instructions, see "Upgrading the Endpoint Security Client 3.5" in the *ZENworks Endpoint Security Management Administration Guide*.

   Typically, the new certificates for the Management Service and Policy Distribution Service work with the Security clients existing certificates. If you encounter problems with Security clients communicating with the services, redistribute the new certificates as part of the client upgrade.
8. Republish the policies.

Documentation Updates

A

This section contains information on documentation content changes that were made in this *Novell ZENworks Endpoint Security Management Installation Guide* after its initial release for version 3.5. The changes are listed according to the date they were published.

The documentation for this product is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the changes listed in this section.

If you need to know whether a copy of the PDF documentation that you are using is the most recent, the PDF document includes a publication date on the title page.

The documentation was updated on the following dates:

A.1 July 31, 2009

Updates were made to the following sections:

Location	Update
Chapter 11, "Upgrading," on page 73	Added this section explaining the process for upgrading from one release to another.

A.2 January 5, 2009

Updates were made to the following sections:

Location	Update
All sections	The name of the client was changed throughout the guide. Formally it is now called Novell ZENworks Endpoint Security Client. In its respective chapters, the clients are called Endpoint Security Client 3.5 (for Windows XP) and Endpoint Security Client 4.0 (for Windows Vista).
Section 1.1, "System Requirements," on page 10	Added system requirements for the new Vista client and standalone Management Console.
Chapter 8, "Endpoint Security Client 3.5 Installation," on page 55	Added information and name change indicating that the Endpoint Security Client 3.5 is for Windows XP.
Chapter 9, "Endpoint Security Client 4.0 Installation," on page 63	Added a chapter on Endpoint Security Client 4.0 (for Windows Vista).