EMC® NetWorker®
VSS Client for Microsoft Windows Server 2003

First Edition

Installation Guide

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Preface

As part of its effort to continuously improve and enhance the performance and capabilities of the EMC NetWorker VSS client for Microsoft Windows, EMC periodically releases new versions of the software. Therefore, some functions may not be supported by all revisions of the software currently in use. For the most up-to-date information on product features, refer to the product release notes.

If a product does not function properly or does not function as described in this document, please contact your EMC representative.

Audience

This guide is part of the EMC NetWorker VSS Client for Microsoft Windows 2003 documentation set. It is intended for use by system administrators, during installation and setup of the product.

Readers should be familiar with the following topics:

- Microsoft Volume Shadow Copy Service (VSS) technology
- Storage subsystems, such as EMC CLARiiON or Symmetrix, if used

Organization

This guide is organized as follows:

Chapter 1, "Introduction," provides the installation roadmap and checklist for the NetWorker VSS Client installation.

Chapter 2, "Installing NetWorker VSS Client," provides the information you need to install the NetWorker VSS Client successfully.

Chapter 3, "Enabling, Registering, and Authorizing the Software," provides information on how to enable the NetWorker VSS Client software for the purpose of evaluating and licensing the software for permanent use.

Chapter 4, "Configuration Tasks," contains the information you need to carry out configurations after installing the NetWorker VSS Client.

Related documentation

Related documents include:

- EMC NetWorker VSS Client for Microsoft Windows Server 2003, First Edition, Administration Guide
- EMC NetWorker VSS Client for Microsoft Windows Server 2003, First Edition, Release Notes
- EMC NetWorker, Release 7.3.2, Multiplatform Version, Administration Guide
- EMC NetWorker, Release 7.3.2, Multiplatform Version, Installation Guide
- EMC NetWorker, Release 7.3.2, Multiplatform Version, Release Notes

- EMC Software Compatibility Guide
- EMC NetWorker License Manager Installation Guide
- EMC Solutions Enabler Symmetrix CLI, Version 6.3, Quick Reference

Conventions used in this document

EMC uses the following conventions for special notices.

Note: A note presents information that is important, but not hazard-related.

CAUTION

A caution contains information essential to avoid data loss or damage to the system or equipment.

Typographical conventions

EMC uses the following type style conventions in this document:

Normal	Used in running (nonprocedural) text for: • Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) • Names of resources, attributes, pools, Boolean expressions, buttons, DQL statements, keywords, clauses, environment variables, filenames, functions, utilities • URLs, pathnames, filenames, directory names, computer names, links, groups, service keys, file systems, notifications
Bold:	Used in running (nonprocedural) text for: • Names of commands, daemons, options, programs, processes, services, applications, utilities, kernels, notifications, system call, man pages Used in procedures for: • Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) • What user specifically selects, clicks, presses, or types
Italic:	Used in all text (including procedures) for: • Full titles of publications referenced in text • Emphasis (for example a new term) • Variables
`Courier:`	Used for: • System output, such as an error message or script • URLs, complete paths, filenames, prompts, and syntax when shown outside of running text
`Courier bold:`	Used for: • Specific user input (such as commands)
`Courier italic:`	Used in procedures for: • Variables on command line • User input variables
< >	Angle brackets enclose parameter or variable values supplied by the user
[ ]	Square brackets enclose optional values
|	Vertical bar indicates alternate selections - the bar means “or”
{ }	Braces indicate content that you must specify (that is, x or y or z)
...	Ellipses indicate nonessential information omitted from the example

Where to get help

EMC support, product, and licensing information can be obtained as follows.

Product information — For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink website (registration required) at:

`http://Powerlink.EMC.com`

Technical support — For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

Your comments

Comments and suggestions about our product documentation are always welcome.

To provide feedback:

1. Go to:

   `http://Powerlink.EMC.com`

2. Click the **Feedback** link.

1 Introduction

The EMC NetWorker VSS Client for Microsoft Windows requires special installation considerations. To help you understand the environment in which the NetWorker Client can be set up, this chapter provides information on the basic configurations in which the NetWorker VSS Client is supported. This chapter also provides the installation roadmap and checklist that you must review before the installing the software and configuring it after installation.

The *EMC NetWorker VSS Client for Microsoft Windows Server 2003, First Edition, Administration Guide* contains detailed information on how to use the software.

This chapter includes the following sections:

- Supported configurations 10
- Installation roadmap 13
- Installation checklist 13
- Installation requirements 14
- Installation directories 16

Supported configurations

An EMC® NetWorker® VSS Client can be set up in a LAN-based or LAN-free environment.

Simple LAN-based configuration

Figure 1 on page 10 shows a simple LAN-based configuration with a storage area network. The application server that is being protected has the NetWorker VSS Client installed.

The data moves as follows:

1. The NetWorker server, which must be version 7.3.2 or later, initiates the process by contacting the application server where the NetWorker VSS Client software is installed.
2. The application server with the NetWorker VSS Client software creates a snapshot of the data on the storage volume.

Note: In the figures, snapshots are represented by S1 through S5.

The application server with the NetWorker VSS Client software uses a snapshot in primary storage to transfer the data over the LAN and into traditional storage such as a file type disk, advanced file type disk, or tape.

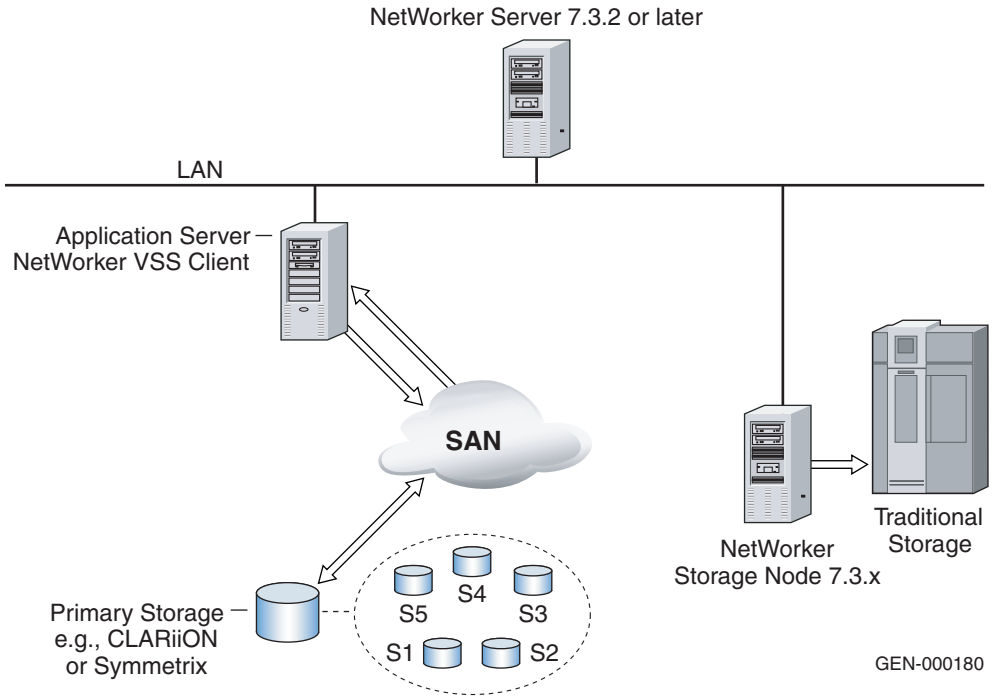


Figure 1 Simple LAN-based configuration

LAN-based configuration with a proxy client

Figure 2 on page 11 shows a LAN-based configuration with a storage area network and a proxy client. Both the application server and the proxy client have the NetWorker VSS Client installed.

A proxy client is a host that acts as a remote data mover when snapshots are rolled over to traditional storage such as a file type disk, advanced file type disk, or tape. A proxy client frees resources on the application server by offloading, from the application server, the work of processing and backing up snapshots. When a backup operation uses a proxy client, it is known as a serverless backup.

The data moves as follows:

1. The NetWorker server initiates the process by contacting the application server where the NetWorker VSS Client software is installed.
2. The application server with the NetWorker VSS Client software creates a snapshot of the data on the storage volume.

   Note: In the figures, snapshots are represented by S1 through S5.

3. The snapshot is made visible to the proxy client.
4. The proxy client uses a snapshot in primary storage to transfer the data over the LAN and into traditional storage such as a file type disk, advanced file type disk, or tape.

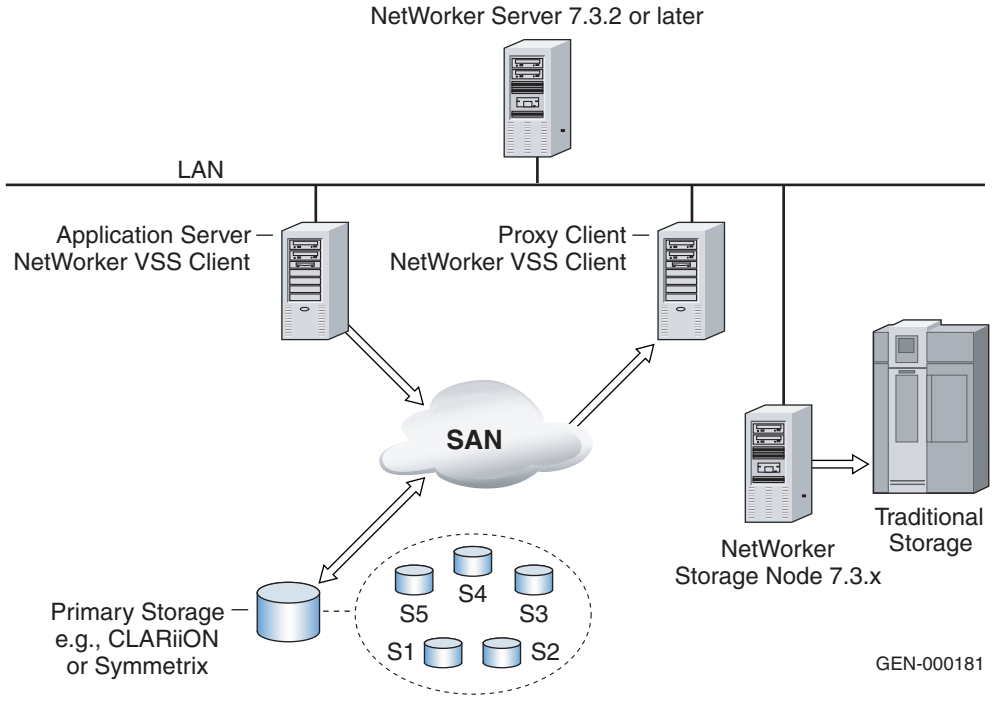


Figure 2 LAN-based configuration with a proxy client

LAN-free configuration

Figure 3 on page 13 shows a LAN-free configuration with a storage area network. The NetWorker VSS Client is installed on the application server.

You can upgrade a NetWorker storage node version 7.3.2 to a NetWorker VSS Client storage node and use it as the proxy client to avoid the network traffic that is generated when a snapshot is rolled over to a conventional backup. Network traffic is avoided because the conventional backup device is directly attached to the storage node.

Note: "Setting up a proxy server for rapid backups of VSS snapshots" on page 27 provides information about setting up the NetWorker storage node as the proxy client.

The data moves as follows:

1. The NetWorker server initiates the process by contacting the application server where the NetWorker VSS Client software is installed.
2. The application server with the NetWorker VSS Client software creates a snapshot of the data on the storage volume.

   Note: In the figures, snapshots are represented by S1 through S5.

3. The snapshot is made visible to the proxy client.
4. The proxy client, in this case the storage node, uses a copy in primary storage to transfer the data into traditional storage such as a file type disk, advanced file type disk, or tape.

The NetWorker server and the application server communicate through the LAN. However, the data itself is not transferred across the LAN because the traditional storage is attached directly to the NetWorker storage node.

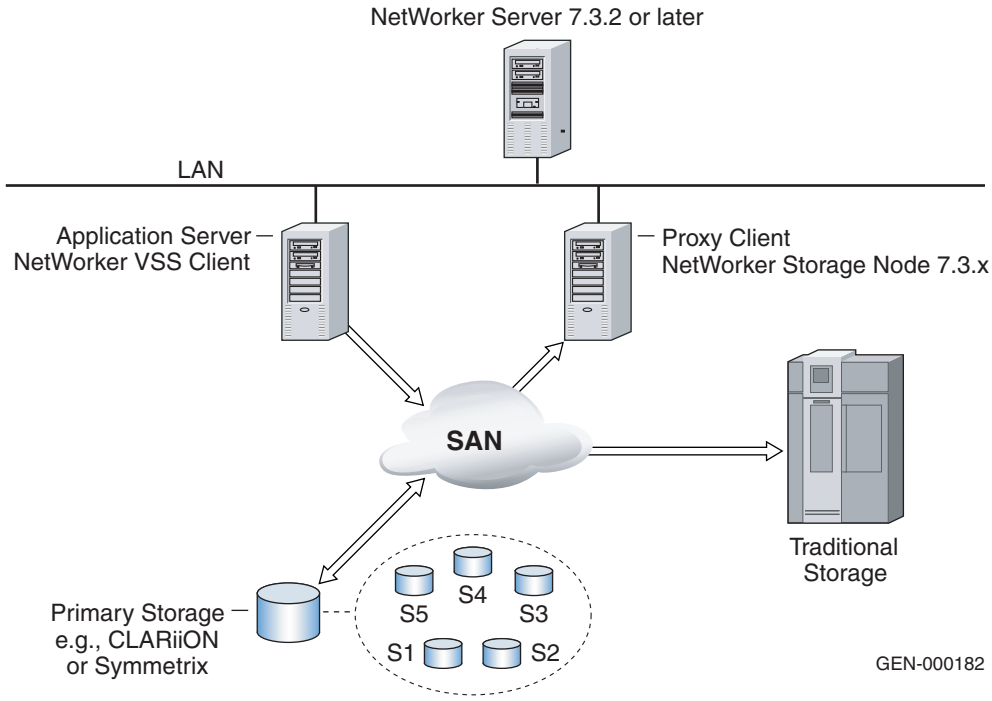


Figure 3 LAN-free configuration

Installation roadmap

Use the following roadmap when installing the software on Microsoft Windows 2003.

- Review "Installation checklist" on page 13 and ensure that you have all the required installation media, pathnames, and license information.
- Review "Installation requirements" on page 14 and ensure that you have the required software before installing the NetWorker VSS Client.
- Review "Installation directories" on page 16 and ensure that you have the required directories before installing the NetWorker VSS Client.
- Install the client according to the instructions given in Chapter 2, "Installing NetWorker VSS Client."
- After the installation is complete, configure the software components according to the instructions in the Chapter 3, "Enabling, Registering, and Authorizing the Software."

Installation checklist

Review the following checklist to ensure that you have the required media and information for the installation.

Installation Media

The NetWorker VSS Client software is distributed in the following formats:

- On the NetWorker VSS Client CD, which is included in the EMC Information Protection Product Family Media Kit, that contains the software and online documentation.
- In the downloadable file of the evaluation software, available from the EMC website at http://Powerlink.EMC.com.

Pathname

The path of the NetWorker VSS Client binaries is required for the installation.

License information

The following license information is required after the installation:

- NetWorker VSS Client temporary evaluation enabler
- NetWorker base enabler
- NetWorker VSS Client license add-on enabler—The NetWorker VSS Client requires a specific license: *Volume Shadowcopy Service for Windows*. This license must be installed on the NetWorker server.

Chapter 3, "Enabling, Registering, and Authorizing the Software," provides more information on enablers and licensing.

Installation requirements

This section provides the installation requirements that must be met before installing the NetWorker VSS Client.

Hardware requirements

The following hardware requirements must be met before the installation.

- CPU: 2.0 GHz
- Physical memory: 1 GB
- Host Architecture: 32-bit systems only

Note: The current *EMC Software Compatibility Guide* provides more information on the supported hardware, software, and operating systems for the NetWorker VSS Client software.

Software requirements

Table 1 on page 15 lists the software requirements that must be met before the installation:

CAUTION

To avoid potential data loss, do not install or use the NetWorker VSS Client with other vendor's VSS Requestor backup solutions. Data loss may occur if other VSS Requestor backup solutions delete shadowcopies created by the NetWorker VSS Client. Additionally, restoring an application using another vendor's VSS Requestor backup solution may prevent the same application from being restored with the NetWorker VSS Client.

Table 1 Software requirements

Hardware	Software requirements	Version
NetWorker Server host	NetWorker Server software	7.3.2 Jumbo Patch Update 1, available from: ftp://ftp.legato.com/pub/NetWorker/Updates/732JumboUpdate1.
EMC CLARiiON®	EMC CLARiiON FLARE® Operating Environment	FLARE version 19 or 22
	NaviCLI	The version that corresponds to the FLARE Operating Environment that is being used or higher.
	NaviAgent	
	Hotfixes for Storport drivers	For Windows 2003 configurations running Storport drivers with CLARiiON storage arrays, the following hotfix from Microsoft is required. • WindowsServer2003-KB908980-v2-x86-ENU.exe
	HBA drivers	Driver: ql2300.sys 9.1.2.16 (w32) (Consult EMC Support at http://Powerlink.EMC.com for HBA driver requirements.)
EMC Symmetrix®	EMC Symmetrix	Minimum Microcode Revision Version: 5670
	Hotfixes for STORport drivers	WindowsServer2003-KB903081-x86-ENU.exe (Consult EMC Support at http://Powerlink.EMC.com for requirements for STORport.)
Solutions Enabler	Required only if EMC CLARiiON or Symmetrix hardware is used.	VSSKIT Version 6.3.1 The EMC VSS Provider Version 3.0.1.0-4 is also installed with this version of Solutions Enabler.
	Java run-time Required for Solutions Enabler	Version 1.4.2.x
All	Microsoft hotfixes for Replication Manager	SP1 and Microsoft hotfixes The list of Microsoft hotfixes for Replication Manager are as follow: • WindowsServer2003-KB891957-x86-ENU.exe • WindowsServer2003-KB898790-x86-enu.exe • WindowsServer2003-KB912063-x86-ENU.exe (Consult EMC Support at http://Powerlink.EMC.com for requirements for Replication Manager.)
	Hotfix for any host running Microsoft Windows 2003/SP1 or Microsoft Windows 2003/R2 and connected to Symmetrix or CLARiiON storage.	KB916048 QFE

Installation directories

When the NetWorker VSS Client is installed, two directories are created.

- The NetWorker and PowerSnap™ binaries are located in the *%ProgramFiles%*`\Legato\nsr\bin` directory.
- The Replication Manager binaries are located in the *%ProgramFiles%*`\EMC\rmagentps\client\bin` directory.

Table 2 on page 16 lists the installation services for NetWorker, PowerSnap, and Replication Manager:

Table 2 Services

Service names (in service control manager)	Service nicknames (use with the 'net start' command)	Process names
NetWorker Remote Exec	Nsrexecd	Nsrexecd.exe
NetWorker PowerSnap Service	Nsrpsd	Nsrpsd.exe
Replication Manager Client for RMAgentPS	Rmagentps	Irccd.exe RMServer.exe

2

Installing NetWorker VSS Client

This chapter provides the information you need to install the NetWorker VSS Client software successfully.

This chapter includes the following sections:

- Installing the software 18
- Installing NetWorker VSS Client in a MSCS environment 19
- Verifying the installation 20
- Maintaining NetWorker Microsoft Windows VSS Client..... 20
- Removing NetWorker Windows VSS Client 24
- Removing previous installation of Solutions Enabler 26
- Upgrading to NetWorker VSS Client storage node 26
- Setting up a proxy server for rapid backups of VSS snapshots..... 27

Installing the software

CAUTION

Remove any previous installation of NetWorker before installing NetWorker VSS Client. "Removing NetWorker Windows VSS Client" on page 24 provides information about how to remove a NetWorker VSS Client installation.

To install NetWorker VSS Client software on a Microsoft Windows computer, complete the following tasks:

- "Task 1: Access the installation files" on page 18
- "Task 2: Install the software" on page 18

Task 1: Access the installation files

Access the installation files from one of the following sources:

- "From a CD-ROM" on page 18
- "From the EMC website" on page 18

From a CD-ROM

To access the NetWorker VSS Client software from a local CD-ROM:

1. Log in as administrator or equivalent on the NetWorker server.
2. Insert the NetWorker VSS Client CD into the CD-ROM drive.
3. Run **Setup.exe** directly from the CD.

From the EMC website

To access the evaluation version of the NetWorker VSS Client software from the EMC Support website:

1. Go to http://softwareforms.EMC.com/resources/downloads/.
2. On the **Evaluation Software Request** page, select **NetWorker Windows VSS Client** from the products list and click **Version 7.3** for the Windows platform.
3. Complete and submit the **Evaluation Request Form** with the contact information. An EMC Sales Representative will send you an email with a URL to the NetWorker VSS Client download file on the EMC FTP site.

Task 2: Install the software

Once you have accessed the NetWorker VSS Client software files, you are ready to begin the installation.

To install NetWorker VSS Client:

1. Run the Setup program (**Setup.exe**) to launch the installation wizard.

   The **Welcome to NetWorker User VSS Client Installation** wizard appears.
2. Click **Next**.

   The **Customer Information** dialog box appears.
3. Enter the name and organization information and click **Next**.

The **License Agreement** dialog box appears.

4. Read the license agreement. To accept, select the **I accept the terms in the license agreement** option, and click **Next**.

   The **Installation Location** dialog box appears.

5. To choose an alternate location for the installation folder, click **Change** and select a different installation location. Click **Next**.

   The **Change Folder** dialog box appears.

6. Specify the alternate folder location and name, and click **OK**.

   The **Replication Manager Client Setup** dialog box appears.

7. For **Control Port** and **Data Port**, specify two different port number values that will be used by the Replication Manager Client service.

CAUTION

If you are using Replication Manager as a stand-alone product, then ensure that the Replication Manager port number values used for Control Port and Data Port are different from the port number values used for the stand-alone Replication Manager product. By doing this, you can use both the NetWorker VSS Client and Replication Manager on the same machine without conflict.

You may change the Replication Manager port settings after the installation is complete from the command line. "Changing Replication Manager port settings" on page 43 provides more information.

The **Ready to Install** dialog box appears.

8. Click **Next** to start the NetWorker VSS Client installation.

   The installation may take several minutes.

   If Exchange Server is installed on the same installation machine, the **nwexinfo** dialog box appears. In the **nwexinfo** dialog box, enter the Exchange Server domain information (**Domain**, **Username**, and **Password**) and click **OK**.

9. In the **NetWorker User VSS Client Setup Complete** window, click **Finish** to complete the installation and exit the installation wizard.

10. Enable and register the NetWorker VSS Client software according to instructions in Chapter 3, "Enabling, Registering, and Authorizing the Software."

11. Configure the setup according to instructions in Chapter 4, "Configuration Tasks."

Installing NetWorker VSS Client in a MSCS environment

When installing the NetWorker VSS Client in a Microsoft Cluster Server (MSCS) environment, ensure that first Microsoft Distributed Transaction Coordinator (MSDTC) is installed and running before installing the Solutions Enabler. The *EMC Solutions Enabler, Version 6.3, Installation Guide* provides details about installing and running Solutions Enabler.

Note: Install EMC Solutions Enabler only when using EMC VSS Provider.

To install the NetWorker VSS Client in a MSCS environment:

1. Install the NetWorker VSS Client software on the private disk of each physical node.
2. Configure each physical node as a Client resource on the NetWorker server.
3. In the **Remote Access** attribute of each virtual Client resource, type the names of the physical nodes.
4. Configure privileges for each physical node on the NetWorker server.
   a. In the **Users** attribute of the **Administrators** user group, add the following values for each physical node in the cluster. Add each value on a separate line:

      user=administrator,host=*VSS_cluster_node*

      user=system,host=*VSS_cluster_node*

      Where *VSS_cluster_node* is the DNS hostname of the physical node.

   b. Click **OK**.

   The *EMC NetWorker VSS Client for Microsoft Windows Server 2003, First Edition, Administration Guide* provides more information about configuring a clustered Client resource.

For information about deploying Microsoft Exchange Server 2003 in a cluster, go to the Microsoft website.

Verifying the installation

Ensure that the following services are up and running.

- For NetWorker—**nsrexecd.exe**
- For PowerSnap—**nsrpsd.exe**
- For Replication Manager—**irccd.exe**

Maintaining NetWorker Microsoft Windows VSS Client

After installing the NetWorker VSS Client, you may run the Setup program in maintenance mode to change, repair, or remove the existing client installation.

How to run the Setup program in maintenance mode

To run the Setup program in maintenance mode:

1. Log in as administrator on the client server.
2. To run the Setup program in maintenance mode, do one of the following:
   - Run the **Setup.exe** file.
   - Go to **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**. Select the NetWorker VSS Client and click **Change**.

   The **Welcome to NetWorker User VSS Client Maintenance** dialog box appears.
3. Click **Next**.

The Setup program detects the existing NetWorker VSS Client installation and displays the **Maintenance Type** dialog box, as shown in Figure 4 on page 21.

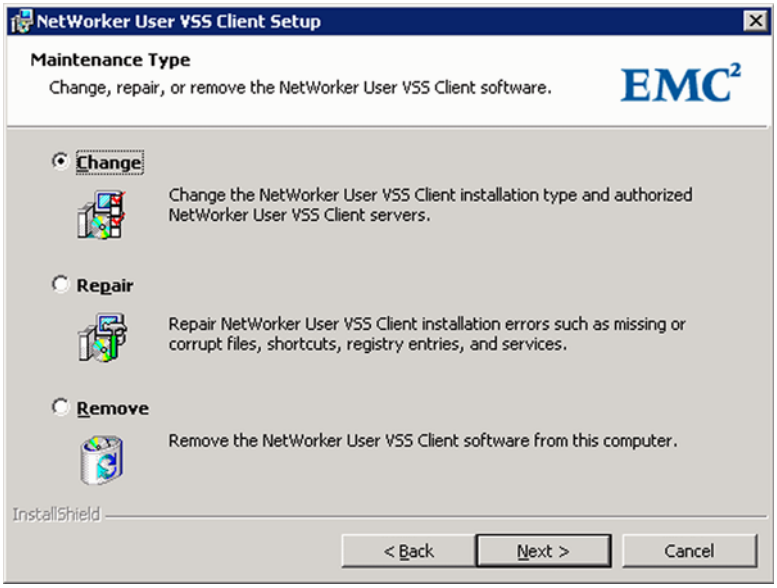


Figure 4 **Maintenance Type dialog box**

4. Select the type of maintenance to perform and click **Next**.
   - **Change**—Use to change:
     - The password for Exchange Server using nwexinfo.
     - To a different authorized NetWorker server.

     "How to change the installation type and authorized server" on page 21 provides more information.
   - **Repair**—Replaces corrupt files and adds missing files, shortcuts, registries, and services. "How to repair a software installation" on page 23 provides more information.
   - **Remove**—Removes the NetWorker VSS Client software from the system. "Removing NetWorker Windows VSS Client by running the Setup program in maintenance mode" on page 24 provides more information.

How to change the installation type and authorized server

To change the password for Exchange Server or change to a different authorized server:

1. Start the Setup program in the maintenance mode. "How to run the Setup program in maintenance mode" on page 20 provides more information.
2. In the **Maintenance Type** dialog box, select **Change** and click **Next**.

The **Ready to Change** dialog box appears.

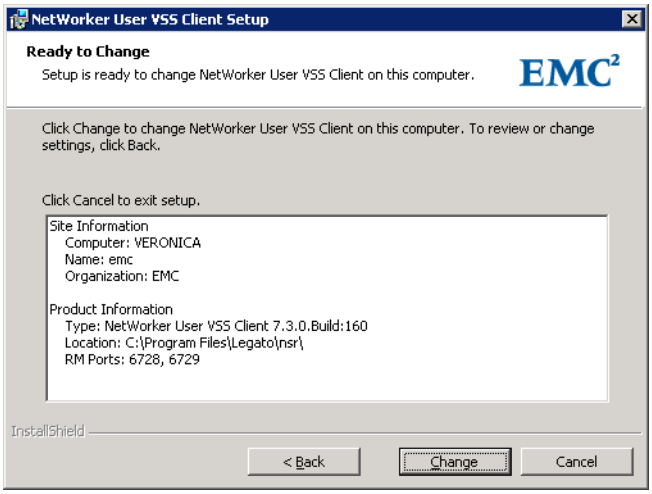


Figure 5 **Ready to Change dialog box**

3. Click **Change** to proceed.

The **NetWorker Server Selection** dialog box appears.

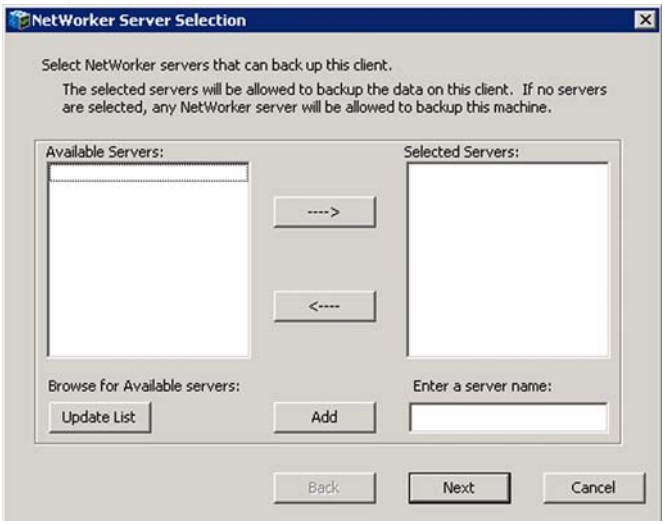


Figure 6 **NetWorker Server Selection dialog box**

4. In the **NetWorker Server Selection** dialog box, do any of the following:
   a. Click **Update List** to browse for all the available servers, and click **Add** to add a server to the **Available Servers** list.
   b. Select a server from the **Available Servers** list and click ----> to move the server to the **Selected Servers** list.
   c. Select a server from the **Selected Servers** list and click <---- to move it back to the **Available Servers** list.
   d. Type a server name in the **Enter a server name** field.

CAUTION

If an authorized server list is used together with a proxy server, then the proxy server must also authorize the production server, and visa versa.

5. Click **Next**.

   The selected NetWorker server is used to backup the data on the client. Incase you have not selected an alternate server, the default server is used to backup the data on the client.

   The **nwexinfo** dialog box appears.

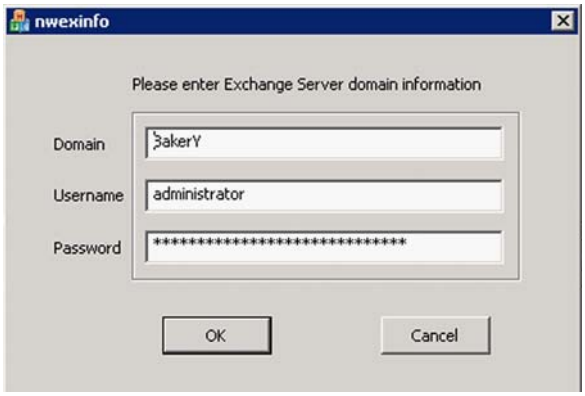


Figure 7 nwexinfo dialog box

6. Type the **Domain**, **Username**, and **Password**, and click **OK**.

   The password for the Exchange Server is changed.

How to repair a software installation

To repair the NetWorker VSS Client software installation:

1. Start the Setup program in the maintenance mode. "How to run the Setup program in maintenance mode" on page 20 provides more information.
2. In the **Maintenance Type** dialog box, select **Repair** and click **Next**.

The **Ready to Repair** dialog box appears.

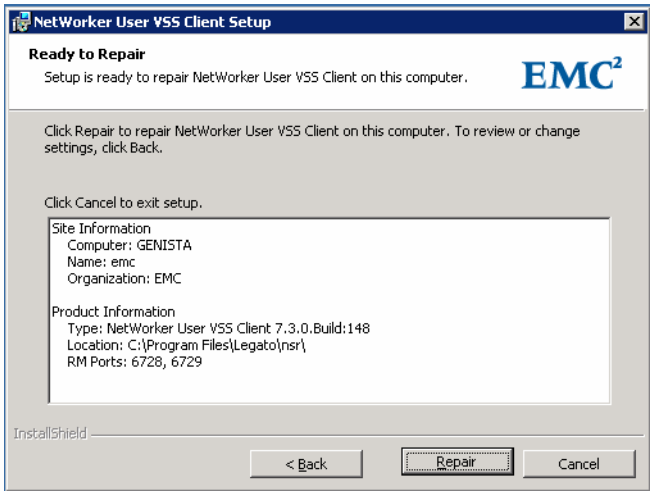


Figure 8 **Ready to Repair dialog box**

3. Click **Repair** to proceed.

   The Setup repairs the NetWorker VSS Client. The process may take several minutes.

Note: You can repair the PowerSnap and Replication Manager binaries from **Settings** > **Control Panel** > **Add/Remove Programs**.

Removing NetWorker Windows VSS Client

Before installing NetWorker VSS Client, remove any previous version of the NetWorker client.

You may remove the NetWorker VSS Client by any of the following methods:

- Running the Setup program (**Setup.exe**) in the maintenance mode and selecting the Remove option.

  "Removing NetWorker Windows VSS Client by running the Setup program in maintenance mode" on page 24 provides more information.

- Using the Windows Add/Remove Programs option.

  "Removing NetWorker Windows VSS Client by using the Windows Add/Remove Programs option" on page 25 provides more information.

Removing NetWorker Windows VSS Client by running the Setup program in maintenance mode

This procedure removes the NetWorker VSS Client, PowerSnap, and Replication Manager installations.

To remove NetWorker VSS Client software, PowerSnap, and Replication Manager:

1. Start the Setup program in the maintenance mode. "How to run the Setup program in maintenance mode" on page 20 provides more information.
2. In the **Maintenance Type** dialog box, select **Remove** and click **Next**.

The **Ready to Remove** dialog box appears.

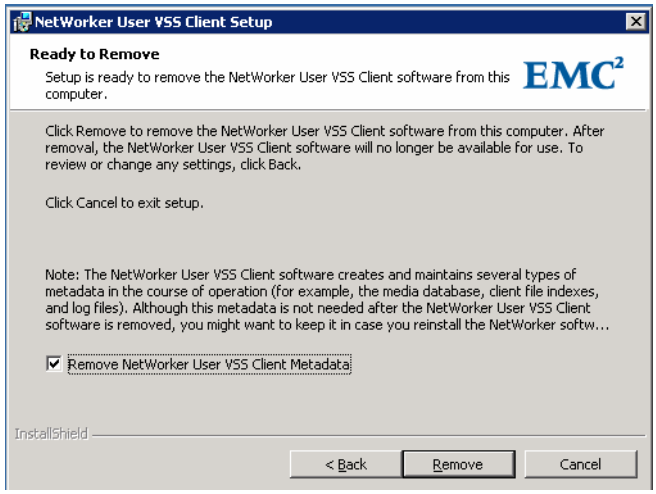


Figure 9 **Ready to Remove dialog box**

3. In the **Ready to Remove** dialog box,
   a. Select the **Remove NetWorker User VSS Client Metadata** option.

      The Legato and rmagentps directories, and the Legato and RMService registry entries are removed.

      Note: If you want to keep the existing data for reinstallation of the NetWorker VSS Client, then leave the **Remove NetWorker User VSS Client Metadata** option unchecked.

   b. Click **Remove**.

Removing NetWorker Windows VSS Client by using the Windows Add/Remove Programs option

Use either of the following procedures to remove the NetWorker VSS Client:

- "How to remove only the NetWorker VSS Client software" on page 25
- "How to remove NetWorker VSS Client, PowerSnap, and Replication Manager software" on page 26

How to remove only the NetWorker VSS Client software

You may remove *only* the NetWorker VSS Client using **Add/Remove Programs**. After removing the NetWorker VSS Client using this procedure, you must explicitly remove PowerSnap and Replication Manager.

To remove only the NetWorker VSS Client:

1. Go to **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.
2. Select the **NetWorker VSS Client** and click **Remove** button.

Note: Use this procedure to remove NetWorker VSS Client storage node installation.

To remove PowerSnap and Replication Manager after removing the NetWorker VSS Client:

1. Go to **Start** > **Settings** > **Control Panel** >**Add/Remove Programs**.

2. Select **PowerSnap** and click **Change**.
3. Click **Remove**, and then **Next**.
4. Click **Remove**.

   Removing PowerSnap also removes Replication Manager. After removing PowerSnap, **Add/Remove Programs** continues to show that Replication Manager is installed. To confirm that Replication Manager is uninstalled, refresh the screen by pressing the **F5** key.
5. If Replication Manager is still uninstalled, go to **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**, and remove **RMAgentPS**.

How to remove NetWorker VSS Client, PowerSnap, and Replication Manager software

To remove NetWorker VSS Client, PowerSnap, and Replication Manager software:

1. Go to **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.
2. Select the **NetWorker VSS Client** and click **Change**.
3. Click **Remove**, and then **Next**.
4. Click **Remove**.

   First PowerSnap and Replication Manager software are removed, followed by the NetWorker software.

Note: Do not use this procedure to remove NetWorker VSS Client storage node installation because it does not remove the PowerSnap and Replication Manager binaries.

Removing previous installation of Solutions Enabler

To uninstall Solutions Enabler:

1. Stop the Solutions Enabler services before uninstalling the Solutions Enabler by using the following command:

   ```
   net stop storapid
   ```
2. Go to **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**, and select **EMC Solutions Enabler**.
3. Click **Remove**.

Upgrading to NetWorker VSS Client storage node

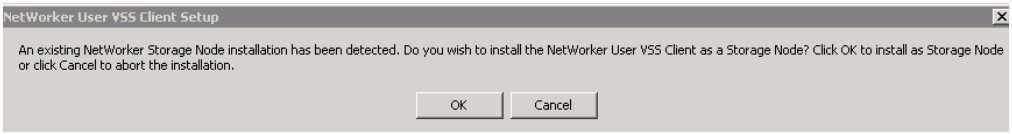
To upgrade from NetWorker 7.3.2 storage node to NetWorker VSS Client storage node:

1. Ensure that you have installed NetWorker 7.3.2 storage node on the server.

   The *EMC NetWorker, Release 7.3.2, Multiplatform Version, Installation Guide* provides information about installing NetWorker 7.3.2 storage node.

   For NetWorker VSS Client storage node installation, the NetWorkerEXT.XML file is located in the installation media and can be copied to other locations when setting up or configuring the NetWorker VSS Client storage node.
2. Install the NetWorker VSS Client. "Installing the software" on page 18 provides more information.

When the NetWorker VSS Client installation detects that a NetWorker 7.3.2 storage node is already installed on the server, a dialog window appears.



3. Click **OK** to upgrade to NetWorker VSS Client storage node.

   The NetWorker VSS Client storage node is installed.

   Although the PowerSnap and Replication Manager binaries are installed on the existing storage node during the upgrade procedure, the NetWorker VSS Client storage node can not be used as the NetWorker VSS Client.

Setting up a proxy server for rapid backups of VSS snapshots

To be able to take rapid backups of VSS Snapshots created by NetWorker VSS Client, you can set up the NetWorker VSS Client or the NetWorker VSS Client storage node to act as the proxy client. The NetWorker VSS Client storage node acts as the proxy client in a SAN-based storage node configuration.

The *EMC NetWorker VSS Client for Microsoft Windows Server 2003, First Edition, Administration Guide* provides more information.

3

Enabling, Registering, and Authorizing the Software

This chapter explains how to enable the NetWorker VSS Client software and features for permanent use. When the NetWorker VSS Client software is installed, it is in a temporary evaluation mode with all of the features available. For specific licensing questions, go to http://Powerlink.EMC.com.

This chapter includes the following sections:

- How NetWorker VSS Client software is licensed 30
- The evaluation process 30
- The licensing process 31
- Update enablers 34
- Managing EMC licenses 35

How NetWorker VSS Client software is licensed

The NetWorker VSS Client software is installed in evaluation mode. The licensing of NetWorker software means entry of enabler and authorization codes on the server for the NetWorker environment. Without these codes, the software or added features will not run beyond the evaluation period.

Each installation of NetWorker VSS Client must be licensed with a base enabler that *turns-on* the software and allows you to use the software. All licensing takes place on the server. The licenses are entered and stored on the server, and the server enforces the licensing.

Base enablers come in different editions, which enable varying degrees of functionality. Add-on enablers allow a broader scope of features. The specific add-on enabler for NetWorker VSS Client is *Volume Shadowcopy Service for Windows.*

The steps in this chapter assume that all of the software and hardware requirements have been met and the NetWorker VSS Client software is installed.

The evaluation process

Evaluating NetWorker VSS Client software can take place in two ways:

- By evaluating a new installation of the software on a Windows server
- By evaluating NetWorker features on an existing NetWorker installation

Evaluating a new installation

When you first install the NetWorker VSS Client software, you can evaluate it with all the modules and features for 30 days free without entering any codes.

By the end of the evaluation period, you must purchase, enter, and authorize a base enabler to continue to use the NetWorker VSS Client software to restore data. The base enabler is the license that enables the edition purchased.

To continue to use the modules and features that were available with the evaluation software, you might need to purchase the NetWorker VSS Client add-on enabler, depending on the edition of the base enabler.

Evaluating features on an existing installation

If you are evaluating one or more NetWorker VSS Client modules or features on an edition of the software that has already been installed and enabled, you must enter a temporary enabler for each module or feature. The temporary enabler is valid for 45 days.

Contents documentation in the *EMC Information Protection Media Kit*, and "Where to get help" on page 7 provide information about how to obtain a temporary enabler code.

"How to enter a temporary enabler code" on page 31 provides information about how to enter the temporary enabler code. By the end of the evaluation period, you must purchase, enter, and authorize the corresponding license enablers to continue to use modules or features evaluated by you. "The licensing process" on page 31 provides instructions.

How to enter a temporary enabler code

CAUTION

The temporary enabler code is valid on only one computer in a network. If you enter the same code on more than one computer in a network, a copy protection violation error occurs and the NetWorker VSS Client software is disabled on all NetWorker servers with duplicate enablers.

To enter the temporary enabler code:

1. Start the NetWorker Management Console software.
2. Launch the **Administration** window:
   a. From the **Console** window, click **Enterprise**.
   b. From the left pane, select a NetWorker server in the **Enterprise** list.
   c. From the right pane, select the application.
   d. From the **Enterprise** menu, click **Launch Application**.

   The **Administration** window is launched as a separate application.
3. From the **Administration** window, click **Configuration**.
4. In the left pane, select **Registration**.
5. From the **File** menu, select **New**.
6. In the **Enabler Code** attribute, type the enabler code.
7. In the **Name** attribute, type the name of the license.
8. (Optional) In the **Comment** attribute, type a description of the license.
9. Click **OK**.

The licensing process

To permanently use NetWorker VSS Client software, you must purchase and enter a license enabler code, and then authorize it. This licensing process is the same for all editions of software as well as for individual modules and features.

The license enabler code that you purchase is valid for 45 days, as a registration period. During the registration period, you must obtain and enter a corresponding authorization code.

The following sections explain how to enter and authorize the license enabler:

- "Task 1: Enter the license enabler code" on page 31
- "Task 2: Obtain an authorization code" on page 32
- "Task 3: Enter the authorization code" on page 33

Task 1: Enter the license enabler code

License enabler codes are included in either the letter announcing the updated or upgraded software, or on the Enabler Certificate you receive when you purchase a software license. This depends on whether the software purchased is a first-time purchase or an updated or upgraded version.

Note: To save time when entering multiple licenses, enter the base enabler last. Otherwise, once a base enabler is entered, devices that do not yet have licenses entered may be disabled. Those devices would have to be reenabled manually after their licenses are installed.

To enter the license enabler code:

1. Start the NetWorker Management Console software.
2. Launch the **Administration** window:
   a. From the **Console** window, click **Enterprise**.
   b. From the left pane, click a NetWorker server in the **Enterprise** list.
   c. From the right pane, click the application.
   d. From the **Enterprise** menu, select **Launch Application**. The **Administration** window is launched as a separate application.
3. In the **Administration** window, click **Configuration**.
4. In the left pane, select **Registrations**.
5. From the **File** menu, select **New**.

   The **Create Registration** dialog box appears.
6. In the **Enabler Code** attribute, type the enabler code.
7. In the **Name** attribute, type the name of the license.
8. (Optional) In the **Comment** attribute, type a description of the license.
9. Click **OK**.

   The new license is added and appears in the right pane. Repeat the procedure to add any additional enabler codes. After you enter a license enabler code, you have 45 days as a registration period to authorize the NetWorker VSS Client software.

Task 2: Obtain an authorization code

Registration of NetWorker VSS Client software takes place by obtaining an authorization code. Obtain a unique authorization code through one of the following methods:

- "Using the EMC website" on page 32
- "Using email" on page 33

CAUTION

If the software or feature is not authorized by the end of the 45-day registration period, the NetWorker VSS Client function or feature is disabled.

Using the EMC website

Register products and obtain authorization codes online by completing a registration form on the EMC website at http://Powerlink.EMC.com. Web registration takes just a few minutes and is available 24 hours a day, 7 days a week.

An authorization code that permanently enables the NetWorker license is sent by email.

Using email

To register the software and obtain an authorization code by email:

1. Start the NetWorker Management Console software.
2. Launch the **Administration** window:
   a. From the **Console** window, click **Enterprise**.
   b. From the left pane, select a NetWorker server in the **Enterprise** list.
   c. From the right pane, click the application.
   d. From the **Enterprise** menu, select **Launch Application**. The **Administration** window is launched as a separate application.
3. In the **Administration** window, click **Configuration**.
4. In the left pane, select the NetWorker server.
5. From the **File** menu, select **Properties**.

   The **Properties** dialog box appears.
6. Select the **Customer Information** tab and complete your contact information.
7. Email your registration information. For contact information, go to the EMC CustomerNet portal at http://Powerlink.EMC.com.

   An authorization code that permanently enables the updated NetWorker software is sent to you.

Task 3: Enter the authorization code

To complete the licensing process, you must enter the unique authorization code on the NetWorker server within 45 days of entering the license enabler code.

If the authorization process is successful, the expiration date for the license displays "Authorized - No expiration date." If the authorization is not verified in this way, contact http://Powerlink.EMC.com.

To avoid an interruption in restores, if you move the NetWorker VSS Client software from one computer to another, or to change the network address of a computer after the software is installed, perform one of the following:

- Obtain a new authorization code. You need the host ID of the original server as well as the new server. The host ID appears in the server's Registration window.
- Install and configure the License Manager software. For more information on using the License Manager, refer to "Managing EMC licenses" on page 35 and the latest *EMC NetWorker License Manager Installation Guide*.

How to enter the authorization code

To enter the authorization code:

1. Start the NetWorker Management Console software.
2. Launch the **Administration** window:
   a. From the **Console** window, click **Enterprise**.
   b. From the left pane, select a NetWorker server in the **Enterprise** list.
   c. From the right pane, click the application.
   d. From the **Enterprise** menu, select **Launch Application**.

The **Administration** window is launched as a separate application.

3. In the **Administration** window, click **Configuration**.
4. In the left pane, select **Registration.**
5. In the right pane, select a license.
6. From the file menu, select **Properties**.
7. In the **Auth Code** attribute, type the authorization code for the product (the authorization code assigned to the specified permanent enabler or update enabler code).
8. Click **OK**.

   The license is now permanently enabled.

Update enablers

To update existing NetWorker VSS Client software to a major release (one that introduces important new features), an update enabler is necessary. Update enablers are required for any major NetWorker software update, including the current NetWorker release. To use the License Manager, the NetWorker server must be release 5.0 or later.

With a first-time purchase of NetWorker VSS Client software, a one-year update agreement might be included. After one year, an update enabler may be acquired with a new update agreement purchase.

Additional licenses

This section describes a few of the additional licenses required to operate some of the NetWorker features.

Client connection licenses

Every computer to be restored in a NetWorker datazone requires a client connection license, even the NetWorker server. The client connection license may be one of the licenses supplied with the base enabler or purchased separately. A cluster client or NDMP data server requires a special type of client connection license, as described in "Cluster clients" on page 34 or "Managing EMC licenses" on page 35.

NetWorker application modules

NetWorker application modules are licensed on the basis of one enabler per database type host. For example, to back up the Exchange database on two hosts, two NetWorker module for Exchange enablers are required, even if the two hosts are backed up by the same server.

However, if multiple database instances are running on a NetWorker client host, only one NetWorker module enabler is required for that one host.

Cluster clients

For each physical node in a cluster, you must purchase a Cluster Client Connection, which takes the place of one standard client connection. The *EMC NetWorker, Release 7.3.2, Multiplatform Version, Administration Guide* provides more information on licensing computers in a cluster.

Managing EMC licenses

The License Manager provides centralized license management, allowing you to maintain all of an enterprise's NetWorker licenses from a single computer. With the License Manager, you can move NetWorker VSS Client software from one computer to another, or change the IP address on an existing NetWorker server without having to reauthorize the software. The License Manager can be installed as an option during NetWorker VSS Client software installation.

To begin to implement the License Manager:

1. Contact Licensing to obtain bulk enabler codes. Go to http://Powerlink.EMC.com for more information.
2. Install the License Manager software.
3. Configure the License Manager software.
4. Configure the NetWorker servers to access the License Manager for their licenses.

   The *EMC NetWorker License Manager Installation Guide* provides details on installing and using the License Manager.

4

Configuration Tasks

This chapter provides information on how to configure and use the NetWorker VSS Client after installing the software.

This chapter includes the following sections:

- Using Windows 2003 SP1 Security Configuration Wizard 38
- Configurations specific to PowerSnap 39
- Configurations specific to CLARiiON 39
- Configurations specific to Symmetrix 41
- Updating the NetWorker VSS Client with Exchange username, password, or domain 43
- Changing Replication Manager port settings 43

Using Windows 2003 SP1 Security Configuration Wizard

This section describes how to set up security on a Microsoft Windows Server 2003 (Service Pack 1) platform that is running NetWorker VSS Client software.

Before configuring the NetWorker VSS Client, install the Security Configuration Wizard (SCW). The wizard is included with Microsoft Windows Server 2003 (Service Pack 1), but is not installed by default. For information about the wizard installation, select the Security Configuration Wizard shortcut that appears on the Microsoft Windows 2003 desktop after the Service Pack 1 is installed.

After installing the wizard, use it to select the appropriate security parameters and ensure that the firewall settings do not impact NetWorker processes.

By default, the Microsoft Windows firewall is disabled. If the Microsoft Windows firewall is enabled, you must also enable exceptions so that the NetWorker processes are able to send information through the firewall.

The NetWorker VSS Client software fails:

- If during the installation of Service Pack 1, you skip the Network Security step and select the defaults.

  The Microsoft Windows firewall configuration prevents the NetWorker software from functioning correctly.

- If you increase the network security by using the SCW.

  The Microsoft Windows firewall prevents NetWorker processes from passing information through the firewall.

To configure the NetWorker system to function properly on a Microsoft Windows Server 2003 (Service Pack 1) platform, use one of the following procedures:

- "How to extend the Security Configuration wizard" on page 38
- "How to manually configure exceptions for the Windows firewall" on page 38

How to extend the Security Configuration wizard

To extend the Security Configuration wizard:

1. Copy `%ProgramFiles%\Legato\nsr\bin\NetWorkerEXT.XML` to the `%SystemDrive%\WINDOWS\security\msscw\kbs` directory.
2. Run the following command from the `%SystemDrive%\WINDOWS\security\msscw\kbs` directory:

   ```
   scwcmd register /kbname:NetWorker /kbfile:NetWorkerEXT.XML
   ```

3. Run the Security Configuration Wizard.

How to manually configure exceptions for the Windows firewall

To manually configure exceptions for the Windows firewall:

1. From the Windows **Start** menu, click **Control Panel**, and select **Windows Firewall**.
2. Select the **Extensions** tab and click **Add Program**.
3. Click **Browse**, then navigate to the directory that contains the NetWorker software.

The default installation directory for the NetWorker software is `%ProgramFiles%\Legato\nsr\bin`.

4. For each NetWorker Client Binary executable file, click **Open**, and then click **Add**.
   - **nsrexecd.exe**
   - **nsrexec.exe**
   - **nsrpsd.exe**
   - **nsrsnapagent.exe**
   - **nsrbragent.exe**
   - **nsrbwragent.exe**
   - **ircd.exe**
   - **nsrsnap_vss_save.exe**
   - **nsrsnap_vss_recover.exe**
5. Restart the NetWorker VSS Client software.

Configurations specific to PowerSnap

If you do not have administrative rights and are running programs, add the username for the account that is logged into the server.

1. Set the PowerSnap NetWorker security using either:
   - *nwadmin* (User Groups)
   - or
   - *NMC* (from Configuration > User Groups)
2. Add the following values to the Administrators User Group for the production host and proxy host:

   user=Administrator,host=<fqdn>

   For example:
   - For production host:

     user=system,host=bv-clsrv.belred.emc.com
   - For proxy host:

     user=system,host=qe2.belred.emc.com

Configurations specific to CLARiiON

To configure CLARiiON storage arrays, refer to your CLARiiON documentation. Additionally, ensure that the following configuration tasks are performed:

- "Task 1: Update the CLARiiON configuration file" on page 40
- "Task 2: Update the SYMCFG authorization list" on page 40
- "Task 3: Update the Navisphere Privileged Users list" on page 41

Task 1: Update the CLARiiON configuration file

To support Replication Manager, edit the CLARiiON configuration file (`clarcnfg`) with the CLARiiON array name and the IP addresses or DNS host names of the two storage processors that exist in each CLARiiON machine.

The `clarcnfg` file is located in the `%ProgramFiles%\EMC\SYMAPI\config\clarcnfg` directory.

Use the following sample configuration file template as a guide when adding values to your CLARiiON configuration file. Obtain the values from the CLARiiON array configuration.

```
############################################################
#               CLARiiON CONFIGURATION FILE TEMPLATE
# This CLARiiON configuration file provides network addresses
# (hostnames or IP addresses) for the two Storage Processors on
# each CLARiiON which can be seen by this host.  To load
# information about CLARiiON systems, CLARAPI must be able to
# communicate with the Navisphere Agent that administers them.
# CLARAPI Discovery depends on valid entries in this file.
#
# CLARiiON Arrayname    Storage Processor A     Storage Processor B
# XXXXXXXXXXXX          losat246                losat247

    APM00052211461          10.5.221.132             10.5.221.133
```

Task 2: Update the SYMCFG authorization list

The SYMCFG authorization list must be updated to support the EMC VSS Provider. Use the following example to update the SYMCFG authorization list for your configuration. In the following example, the two host name IP addresses identify the two storage processors that exist on each CLARiiON machine.

1. Update the SYMCFG authorization list with the host name IP address, user name, and password for storage processor A. For example:

   %ProgramFiles%`\EMC\SYMCLI\bin>`**symcfg authorization add -host** *10.5.221.132* **-username** *gadmin* **-password** *rdc4xyz*

2. Update the SYMCFG authorization list with the host name IP address, user name, and password for storage processor B. For example:

   %ProgramFiles%`\EMC\SYMCLI\bin>`**symcfg authorization add -host** *10.5.221.133* **-username** *gadmin* **-password** *rdc4xyz*

3. Verify that the SYMCFG authorization list has been updated correctly. For example:

   %ProgramFiles%`\EMC\SYMCLI\bin>`**symcfg authorization list**

   ```
   Host name           Username
   ------------------  ------------------
   10.5.221.132        gadmin
   10.5.221.133        gadmin
   ```

Task 3: Update the Navisphere Privileged Users list

EMC Navisphere® is software that enables one to manage CLARiiON storage systems. To create a secure environment, update the EMC Navisphere **Privileged Users** list with the DNS host name or IP address of the CLARiiON Storage Processors (SPA and SPB).

Enter values in the **Privileged Users** list in the following format:

system@*hostname_SPA*

system@*hostname_SPB*

where *hostname_SPA* and *hostname_SPB* are the DNS host names or IP addresses of the CLARiiON storage processors.

The *EMC Navisphere Manager Administrator's Guide* provides more information about adding entries to the Privileged Users list.

Configurations specific to Symmetrix

This section contains instructions for setting up the device group and establishing mirrors with BCVs on Symmetrix.

For all other options, use the **-help** option with any SYMCLI or refer to the *EMC Solutions Enabler Symmetrix CLI, Version 6.3, Quick Reference* or *EMC Solutions Enabler Symmetrix TimeFinder Family CLI, Version 6.3, Product Guide*.

To create a device group and attach the STD and BCV devices:

1. To create device group, type the following command:

   symdg create <*device group name*>

   For example:

   ```
   symdg create nw_group
   ```

2. To add a STD device to the device group, use the following command:

   symld -g <*device group name*> **-sid** <*Symm id*> **add dev** <*symm device name*>

   For example:

   ```
   symld -g nw_group -sid 197 add dev 019
   ```

3. To add a BCV to the device group, use the following command:

   symbcv -g <*device group name*> **-sid** <*Symm id*> **add dev** <*symm device name*>

   For example:

   ```
   symbcv -g nw_group -sid 197 add dev 0C0
   ```

4. Check the device group:

   symld -g <*device group name*> **list**

   For example:

   ```
   symld -g nw_group list
   ```

   This command examines information about the new device group created inside the SYMAPI database (`sympai_db_bin`) which resides on the host.

5. To query the mirror status on device group, use the following command:

   symmir -g *<device group name>*

   For example:

   ```
   symmir -g nw_group
   ```

   This displays the mirror relationship, though it is shown as *Split* because no mirror is established between the STD and BCV devices.

   Note: The logical device name for the STD device from the output, for example, `DEV001`.

6. Attach the STD and BCV device using the following command:

   symmir -g *<device group name>* **attach** *<STD logical device name>* **BCV dev** *<symm device name>*

   For example:

   ```
   symmir nw_group attach DEV001 BCV dev 0C0
   ```

7. To display the attachment status and current pairing relationship, use the following command:

   symmir -g *<device group name>* **-attach query**

   For example:

   ```
   symmir -g nw_group -attach query
   ```

8. Establish the mirror between STD device and BCV device using the following command:

   symmir -g *<device group name>* **-full -noprompt -v establish**

   For example:

   ```
   symmir -g nw_group -full -noprompt -v establish
   ```

9. To query the status and attach info, use the following command:

   symmir -g *<device group name>* **query**

   symmir -g *<device group name>* **-attach query**

   For example:

   ```
   symmir -g nw_group query
   ```

   ```
   symmir -g nw_group -attach query
   ```

   This should show *SyncInProg* or *Synchronized* state.

10. To detach the relationship use the following command:

    symmir -g *<device group name>* **detach** *<STD Logical name>* **BCV dev** *<symm device name>*

    For example:

    ```
    symmir -g nw_group detach DEV001 BCV dev 0C0
    ```

11. To add more BCVs to any STD device, use the following command:

    symmir -g *<device group name>* **-full establish** *<STD logical device name>* **bcv ld** *<BCV logical device name>* **-noprompt**

    For example:

```
symmir -g nw_group -full establish DEV002 bcv ld BCV004
-noprompt
```

12. To check the status of all mirrors, use the following command:

    symmir -g *<device group name>* **query -multi**

    For example:

    symmir -g nw_group **query -multi**

Updating the NetWorker VSS Client with Exchange username, password, or domain

When the NetWorker VSS Client is installed on an Exchange server, the **nwexinfo.exe** utility runs as part of the NetWorker VSS Client installation. This utility updates the NetWorker VSS Client with the Exchange username, password, and domain.

Run the **nwexinfo.exe** utility again if:

- The Exchange server is installed after the NetWorker VSS Client is installed.
- The username, password, or domain changes after the NetWorker VSS Client is installed.

To run the **nwexinfo.exe** utility, double-click the **nwexinfo.exe** file from the *%ProgramFiles%*\Legato\nsr\bin directory.

Changing Replication Manager port settings

The Replication Manager port settings are specified during the NetWorker VSS Client installation. However, you can use the following procedure to change the Replication Manager port settings after the NetWorker VSS Client is installed.

To change the Replication Manager port settings:

1. From the command line, stop the **rmagentps** service.

   For example:

   net stop rmagentps

2. From the %ProgramFiles%\EMC\rmagentps\client\bin directory, run the irccd command to change the port settings.

   For example:

   irccd -p *<control_channel_port>* **-P** *<data_channel_port>*

3. Start the **rmagentps** service.

   For example:

   net start rmagentps

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