

EMC[®] NetWorker[®]

Version 8.2

Updating to NetWorker 8.2 from a Previous NetWorker Release Guide

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Preface

As part of an effort to improve its product lines, EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

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Note

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Purpose

This document describes how to update the NetWorker software.

Audience

This document is part of the NetWorker documentation set and is intended for use by system administrators during upgrading of the NetWorker software.

Revision history

The following table presents the revision history of this document.

Table 1 Revision history

Revision	Date	Description
01	June 18, 2014	First release of this document for EMC NetWorker 8.2
02	June 24, 2014	Revised the following content: <ul style="list-style-type: none">• Updating NetWorker for Windows from 8.0.x or 8.1.x• Updating NetWorker for UNIX from 7.6.x

Related documentation

The following EMC publications provide additional information:

- ◆ *Online Software Compatibility Guide*
Provides a list of client, server, and storage node operating systems supported by the EMC information protection software versions. You can access the Online Software Compatibility Guide on the EMC Online Support site at <https://support.emc.com>. From the Support by Product pages, search for NetWorker using "Find a Product", and then select the **Install, License, and Configure** link.
- ◆ *EMC NetWorker Administration Guide*
Describes how to configure and maintain the NetWorker software.
- ◆ *EMC NetWorker Cluster Installation Guide*
Describes how to install and administer the NetWorker software on cluster servers and clients.
- ◆ *EMC NetWorker Installation Guide*
Provides information on how to install, uninstall and update the NetWorker software for clients, storage nodes, and servers on all supported operating systems.

- ◆ *EMC NetWorker Release Notes*
Contains information on new features and changes, fixed problems, known limitations, environment and system requirements for the latest NetWorker software release.
- ◆ *EMC NetWorker Command Reference Guide*
Provides reference information for NetWorker commands and options.
- ◆ *EMC NetWorker Avamar Devices Integration Guide*
Provides planning and configuration information on the use of Avamar devices in a NetWorker environment.
- ◆ *EMC NetWorker Cloning Integration Guide*
Contains planning, practices, and configuration information for using the NetWorker, NMM, and NMDA cloning feature.
- ◆ *EMC NetWorker Data Domain Deduplication Devices Integration Guide*
Provides planning and configuration information on the use of Data Domain devices for data deduplication backup and storage in a NetWorker environment.
- ◆ *EMC NetWorker Security Configuration Guide*
This guide provides an overview of security configuration settings available in NetWorker, secure deployment, and physical security controls needed to ensure the secure operation of the product.
- ◆ *EMC NetWorker Snapshot Management for NAS Devices Integration Guide*
Describes how to catalog and manage snapshot copies of production data that are created by using replication technologies on NAS devices.
- ◆ *EMC NetWorker Disaster Recovery Guide*
Contains information about preparing for a disaster and recovering NetWorker servers, storage nodes, and clients.
- ◆ *EMC NetWorker Error Message Guide*
Provides information on common NetWorker error messages.
- ◆ *EMC NetWorker Licensing Guide*
Provides information about licensing NetWorker products and features.
- ◆ *EMC NetWorker Performance Optimization Planning Guide*
Contains basic performance sizing, planning, and optimizing information for NetWorker environments.
- ◆ *EMC NetWorker Management Console Online Help*
Describes the day-to-day administration tasks performed in the NetWorker Management Console and the NetWorker Administration window. To view Help, click Help in the main menu.
- ◆ *EMC NetWorker User Online Help*
The NetWorker User program is the Windows client interface. Describes how to use the NetWorker User program which is the Windows client interface connect to a NetWorker server to back up, recover, archive, and retrieve files over a network.
- ◆ *NetWorker VMware Release Integration Guide*
Describes how to plan and configure VMware and the vStorage API for Data Protection (VADP) within an integrated EMC® NetWorker® environment.
- ◆ **Technical Notes/White Papers**
Technical Notes and White Papers provide an in-depth technical perspective of a product or products as applied to critical business issues or requirements. Technical Notes and White paper types include technology and business considerations, applied technologies, detailed reviews, and best practices planning.

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NOTICE

Addresses practices not related to personal injury.

Note

Presents information that is important, but not hazard-related.

Typographical conventions

EMC uses the following type style conventions in this document:

Bold	Use for names of interface elements, such as names of windows, dialog boxes, buttons, fields, tab names, key names, and menu paths (what the user specifically selects or clicks)
<i>Italic</i>	Use for full titles of publications referenced in text
Monospace	Use for: <ul style="list-style-type: none"> • System code • System output, such as an error message or script • Pathnames, file names, prompts, and syntax • Commands and options
<i>Monospace italic</i>	Use for variables
Monospace bold	Use for user input
[]	Square brackets enclose optional values
	Vertical bar indicates alternate selections - the bar means “or”
{ }	Braces enclose content that the user must specify, such as x or y or z
...	Ellipses indicate non-essential information omitted from the example

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PART 1

Preparing to Update the NetWorker software

This section provides you with the information to review before you update a NetWorker host to 8.2 and provides detailed information about the update procedure on each supported operating system.

[Chapter 1, "Preparing to Update the NetWorker Software"](#)

[Chapter 2, "Introduction and Software Requirements"](#)

CHAPTER 1

Preparing to Update the NetWorker Software

This chapter includes the following sections:

- ◆ [Roadmap for Updating the NetWorker software](#)..... 14
- ◆ [Introduction](#)..... 14
- ◆ [Interoperability and backward compatibility](#) 14
- ◆ [Preparing the NetWorker server](#)..... 16
- ◆ [Preparing the storage node for Virtual Synthetic Full](#)..... 17
- ◆ [Preparing for a Console server update](#)..... 17

Roadmap for Updating the NetWorker software

Use this roadmap to update the NetWorker software from a previous release.

Procedure

1. Review the Preparing to Update the NetWorker software chapter for general information.
2. Review the Software Requirements chapter for general requirements and considerations.
3. Review the Updating the NetWorker software chapter for instructions on how to update the software.
4. Review the Verify the Installation chapter to test the NetWorker software functionality.
5. Enable and register the NetWorker products. The *NetWorker Licensing Guide* provides more information.

Introduction

This guide provides you with the information to review before you update a NetWorker host to 8.2.x and provides detailed information about the update procedure on each supported operating system.

This guide uses *NetWorker_install_dir* and *NMC_install_dir* variables to describe the installation directories. The default installation path for the NetWorker and NMC software on Windows changed in the NetWorker 8.1.x release. The updating process does not change the directory location. The following table summarizes the default directory locations that the *NetWorker_install_dir* and *NMC_install_dir* variables represent.

Table 2 Default installation directories for NetWorker and NMC software

Earliest version of software installed on host	Default directory location used in the update process
NetWorker 8.0.x or earlier	C:\Program Files\Legato\nsr
NetWorker 8.1.x and later	C:\Program Files\EMC NetWorker\nsr
NMC server 8.0.x or earlier	C:\Program Files (x86)\Legato\Management\GST\
NMC server 8.1.x or later	C:\Program Files\EMC NetWorker\Management

Interoperability and backward compatibility

When you update the NetWorker server or Console server software from 8.0.x or 8.1.x to 8.2, you can revert to the NetWorker 8.0.x or 8.1.x software without additional steps.

After you update the NetWorker server or Console server to version 8.2, you cannot revert to a 7.6.x or earlier version without additional steps. The NetWorker Installation Guide provides the steps required to downgrade the NetWorker software.

Before you update any host in the data zone, review information about the interoperability and backwards compatibility.

The following table summarizes interoperability and backward compatibility requirements.

Table 3 NetWorker interoperability and backward compatibility

When updating	Interoperability Information
7.6.x and earlier storage nodes	<p>NetWorker 8.2 server supports NetWorker 8.0.x and later storage nodes only.</p> <p>Update all NetWorker 7.6.x storage nodes to version 8.2 before updating the NetWorker server. This includes storage nodes that are operating on standalone servers and dedicated storage nodes operating on application servers. Update storage nodes embedded within the EMC Disk Library (EDL SN) to NetWorker 8.0.x. EDL SN does not support NetWorker 8.2.</p> <hr/> <p>Note</p> <p>A NetWorker 8.2 server disables NetWorker 7.6.x and earlier storage nodes.</p>
7.5.x NetWorker server	<p>You cannot directly update a NetWorker 7.5.x server to NetWorker 8.2.</p> <p>Use the following method to update the hosts in a NetWorker 7.5.x data zone:</p> <ol style="list-style-type: none"> 1. Update the NetWorker 7.5.x server to version 7.6.x. 2. Update each NetWorker storage node to version 8.2. 3. Update an EDL SN to NetWorker 8.0 or later. 4. Update the NetWorker 7.6.x server to version 8.2. 5. Update the NetWorker clients to version 8.2.
8.0.x or 8.1 NetWorker server with synthetic full backups	<p>Starting with NetWorker 8.1 SP1 and later, you cannot set the synthetic full (synth_full) backup level for a group.</p> <p>When you update the NetWorker server to 8.2, the backup level for a group that was configured to use the synth_full backup level will be blank.</p> <p>Before you update the NetWorker server software from 8.0.x or 8.1 to 8.2, change the backup level from synth_full to incr_synth_full for groups and scripts that perform synthetic backups by using the savegrp command.</p>
7.5.x Console server	<p>Update a NetWorker 7.5.x Console server directly to NetWorker 8.2 when the Console server is not the NetWorker server.</p>
NMM 2.3 clients	<p>NetWorker 8.2 does not support NMM 2.3. Update hosts to NMM 2.4 before you update the NetWorker server and storage nodes.</p>
Storage node	<p>NetWorker 7.6.x, 8.0.x, 8.1.x server supports a NetWorker 8.2 storage node.</p>
Console server	<p>Console server 8.2.x supports NetWorker 7.6.x and 8.0.x servers.</p> <p>When the Console server is not the NetWorker server, update the Console server before you update the NetWorker server. NetWorker 7.6.x and 8.0.x Console servers do not support NetWorker 8.2 servers.</p>
Clients	<p>NetWorker 8.2.x server supports NetWorker 8.0.x and 7.6.x clients.</p> <p>The Client Configuration Wizard supports NetWorker 7.6 SP4 or later client only.</p> <p>NetWorker 7.6.x and 8.0.x servers and storage nodes support NetWorker 8.2 clients.</p>
Operating system	<p>Update the operating system first, and then update the NetWorker software.</p>

Preparing the NetWorker server

Before you update the NetWorker server, ensure that the media database and client file indexes are in a consistent state and that you have a backup of the databases.

To prepare the NetWorker server, perform these steps from a command prompt on the NetWorker server as root on UNIX or administrator on Windows.

Procedure

1. Put the NetWorker databases in a consistent state:

```
nsrim -X
nsrck -m
nsrck -L6
```

2. Record the current location of the NetWorker media database:

```
nsrls -m
```

3. Record the current location of the NetWorker client file indexes:

```
nsrls
```

4. Record the range of ports the NetWorker software uses:

```
nsrports
```

5. Perform a back up of the bootstrap, the client file indexes, and the resource database:

```
savegrp -O group
```

To back up all client file indexes:

- a. Specify a group that contain all the NetWorker clients in the datazone on the NetWorker server.
 - b. If a group that contains all the clients does not exist, run multiple `savegrp` commands, specifying a different group each time, until you back up all clients indexes.
 - c. Ensure the media pool associated with the group has appendable media available.
6. Record the latest bootstrap save set ID (ssid) including the file number, the record number, and the associated volume label.

For example:

```
mminfo -B
date time level ssid file record volume
10/11/11 16:29:40 full 4254377781 0 0 bootstrap_vol.001
```

In this example:

- The save set ID (ssid) is 4254377781.
- The file number is 0.
- The record number is 0.
- The label of the volume that contains the bootstrap save set is bootstrap_vol.001.

Preparing the storage node for Virtual Synthetic Full

Virtual Synthetic Full (VSF) requires a value in the volume location attribute for a Data Domain device.

NetWorker updates the volume location attribute during the device mount operation. Before you update a storage node that uses Data Domain devices, unmount each device. Once the update completes, mount each device.

Preparing for a Console server update

This section describes the steps you need to do on the Console server and Console clients before you update the Console server.

Preparing the Console server

Before you update the Console server, perform a level Full backup of the Console server database.

“Backing up NetWorker Console Management data” in the NetWorker Administration Guide provides more information.

Console client

A Console client is any host in the environment that uses a web browser and Java Runtime Environment (JRE) to display the Console server GUI. Multiple users can access the Console server GUI concurrently from different browser sessions.

This table summarizes the JRE and browser requirements for a Console client.

Table 4 Console client requirements

Operating system	JRE and browser requirements
AIX 6.1, 7.1	<ul style="list-style-type: none"> JRE 1.6.x Mozilla Firefox
HP-UX 11iv1, 11iv2, 11iv3	<ul style="list-style-type: none"> JRE 1.6.x Mozilla Firefox
Linux x86 (32-bit) RHEL 5, 6	<ul style="list-style-type: none"> JRE 1.6.x or JRE 1.7.x Mozilla Firefox
Linux em64T & AMD64 (64-bit), RHEL 5, RHEL6, SLES 10, SLES 11	<ul style="list-style-type: none"> JRE 1.6.x or JRE 1.7.x Mozilla Firefox
Solaris 10 & 11 for Solaris SPARC, Solaris Opteron (64-bit)	<ul style="list-style-type: none"> JRE 1.6.x or JRE 1.7.x Mozilla Firefox
Windows 7, Vista, Windows 1008, Windows 2008 R2 for x86, em64T & AMD64 (64-bit)	<ul style="list-style-type: none"> JRE 1.6.x or JRE 1.7.x Microsoft Internet Explorer 7 Microsoft Internet Explorer 8

Table 4 Console client requirements (continued)

Operating system	JRE and browser requirements
	<ul style="list-style-type: none"> • Mozilla Firefox
Windows 8 and Windows 2012	<ul style="list-style-type: none"> • JRE 1.7 only • Microsoft Internet Explorer 10 in Desktop mode only

Preparing the Console clients

Review this section before you update the Console server for information about Console clients and how to clear the java cache.

NetWorker 8.1.x does not support the following previously supported Console clients:

- ◆ Apple OS-X for Intel
- ◆ Linux ia64-bit
- ◆ IBM system Z
- ◆ IBM Power Linux

The Console server update process replaces the `gconsole.jnlp` file in the Java Web Start cache on the Console server. As a result, after a Console server update, the Console client fails to start the NMC GUI with an error message similar to the following:

```
Unable to launch NetWorker Management Console
```

To prevent this issue, on each host that you use as a Console client, clear the local java cache. This enables the Console client to download the new `gconsole.jnlp` file from the Console server.

The procedure is different for UNIX and Windows.

UNIX Console client

Use the following procedure to clear the java cache on a UNIX Console client.

Procedure

1. Run the **Java Web Start** program.
2. Move or delete the `$HOME/.java` directory:


```
cd $HOME
mv .java .java_orig
```
3. Run the `javaws -viewer` command to create a new `$HOME/.java` directory.
4. Start the **Java Cache Viewer**.
5. Reconfigure Java Web Start preferences if required and exit the **Java Cache Viewer**.

Windows Console client

Use the following procedure to clear the java cache on a Windows Console client.

Procedure

1. Open the **Java Control Panel** application.
2. On the **General** tab, in the **Temporary Internet Files** Temporary Internet Files section, select **View....**

3. Delete the **NetWorker Management Console** entry, then click **Close**.
4. On the **General** tab, in the **Temporary Internet Files** section, select **Settings**.
5. Select **Delete files...** and then click **OK**.
6. Close the **Java Cache Viewer** window.
7. Close the **Java Control Panel** window.

CHAPTER 2

Introduction and Software Requirements

This section contains the following chapters:

- ◆ [Multi-locale datazone requirements](#)..... 22
- ◆ [TCP/IP requirements](#)..... 24
- ◆ [IPv6 protocol](#)..... 24

Multi-locale datazone requirements

This section provides information to consider when using the NetWorker software in a multi-locale datazone.

In a multi-locale datazone, you can configure hosts to run in different locales. The NetWorker software supports a multi-locale datazone. The NetWorker software includes language pack support for the French, the Japanese, the Simplified Chinese, the Korean, and the English locales.

The NetWorker command line interface (CLI), the Console server graphical user interface (NMC GUI), and the NetWorker User program are I18N compliant.

In a multi-locale datazone, users can display data and remotely manage their NetWorker environment in the locale defined on their local host. NetWorker supports different locales on the local host, the NetWorker server, and the Console server.

The NetWorker software supports:

- ◆ The languages and the character sets that the underlying OS supports.
- ◆ UTF-8 encoded input and output files.
- ◆ Non-English scheduled backup and archive requests.
- ◆ Non-English mounts on UNIX hosts. The NetWorker software detects these mounts during a “All” save set backup.
- ◆ A directed recover to a non-English relocation directory.
- ◆ A save set recover of a non-English save set, independent of the locale of the source host.
- ◆ The *NetWorker Administration Guide* describes how to perform NetWorker tasks in a multi-locale datazone.

Before you configure the NetWorker software in a multi-locale datazone, review the following considerations.

General multi-locale considerations

This section describes general considerations to review before installing the NetWorker software in a multi-locale datazone.

To view localized textual elements, for example, radio buttons and menu options, the dates, the times, and the numbers in the CLI, the Console server GUI, and the NetWorker User application, ensure that you:

- ◆ Install the required language font on the operating system of the host that is accessing the application interface.
- ◆ Enable the corresponding language locale on the operating system of the host that accesses the application interface.
- ◆ Enable the corresponding language locale on the Console server.
- ◆ Install the corresponding language pack included with the NetWorker software package on the NetWorker client, server, storage node, and Console server.

The NetWorker software does not support locales that the operating system defines or code sets that remap characters that have a special meaning for file systems, for example De_DE.646. Depending on the file system, these special characters might include the forward slash (/), the backward slash (\), the colon (:), or the period(.

When the appropriate non-English font is not available on the Console client, the Console GUI renders the localized textual elements in English or the elements might appear as illegible.

The CLI displays the data correctly when the current locale supports the characters and the encoding. However, when the user and system locales do not match on a Windows host, characters might display incorrectly.

The `nsr_render_log` command enables you to render English log file messages into the locale of the user that runs `nsr_render_log` command. The *NetWorker Command Reference Guide* or the UNIX man pages describe how to use the `nsr_render_log` program.

Message files that support localization include:

- ◆ `daemon.raw` file
- ◆ `nsr_cpd.raw` file — the client push log
- ◆ `gstd.raw` file — the Console server log file
- ◆ `networkr.raw` file — the Windows recovery log file

The *NetWorker Administration Guide* on the EMC Online Support Site describes how to view raw log files.

Windows requirements

Consider these general locale requirements when using a Windows Console client or the **NetWorker User** program in a multi-locale NetWorker datazone.

When non-UTF8 data from a UNIX host uses encoding that Windows does not support natively, for example, `eur-jp`, the UNIX host data will not appear correctly on the Windows host.

The **NetWorker User** program displays the textual elements, dates, times, and numbers based on the **Regional and Language Options** settings in the **Control Panel**.

UNIX requirements

Consider these general locale requirements when using a UNIX Console client in a multi-locale NetWorker datazone.

NetWorker does not support a non-ASCII installation directory. Create a symbolic link of the `/nsr` folder to a non-ASCII directory.

To display non-English textual elements, the dates, the times, and the numbers in the NMC GUI ensure that you:

- ◆ Install the appropriate NetWorker language package on the client.
- ◆ Define the `LC_ALL` and `LANG` environment variables to match the NetWorker language pack installed.

For example, on Solaris:

- To use the French NetWorker language pack, type:


```
setenv LANG fr
setenv LC_ALL fr
```
- To use the Japanese NetWorker language pack, type:


```
setenv LANG ja
setenv LC_ALL ja
```
- To use the Simplified Chinese NetWorker language pack, type:


```
setenv LANG zh
setenv LC_ALL zh
```

- To use the Korean NetWorker language pack, type:

```
setenv LANG ko
setenv LC_ALL ko
```

TCP/IP requirements

The NetWorker software requires that you install and configure TCP/IP on each host.

Before you install the NetWorker software, ensure that:

- ◆ The `/etc/hosts` file on each Solaris and Linux NetWorker host contains an entry for the IPv4 loopback address:


```
127.0.0.1      localhost.localdomain localhost
```
- ◆ The NetWorker server, when configured as a DHCP client, uses a reserved address that is synchronized with DNS.
- ◆ The name of the host that the `hostname` command returns on the system must match the name that the IP address resolves to when using `nslookup`.
- ◆ When using OS tools, for example, `nslookup`, the IP address of the host must resolve to the same hostname defined for the NIC used by NetWorker.
- ◆ The hostname does not contain an underscore character (`_`).

IPv6 protocol

Internet Protocol version 6 (IPv6) is a next generation Internet protocol used concurrently with IPv4 or in a pure IPv6 environment. IPv6 increases the number of available IP addresses and adds improvements in the areas of routing and network autoconfiguration.

Consider the following:

- ◆ IPv6 addresses are represented by 8 groups of 16-bit hexadecimal values that are separated by colons (`:`).
For example:


```
2001:0db8:85a3:0000:0000:8a2e:0370:7334
```
- ◆ Most newer operating systems configure the IPv6 loopback interface by default. To determine if the IPv6 loopback interface is configured on the host, use operating system tools such as `ifconfig` on UNIX and `ipconfig` on Windows. On UNIX systems, the device name of the loopback interface is usually `lo` or `lo0`.
- ◆ NetWorker does not support temporary or link-local IPv6 addresses.
- ◆ The client backup fails when the IPv6 address for the client is not:
 - Stored in DNS or in the hosts file.
 - Added to the client resource.

When the operating system configures the IPv6 loopback interface, ensure that:

- The hosts file on each NetWorker host has an entry that associates the IPv6 loopback interface (`::1`) with the localhost. Add the IPv6 loopback interface entry before the IPv4 loopback entry (`127.0.0.1 localhost`)

For example:

```
::1 localhost
127.0.0.1      localhost.localdomain localhost
```

- The IPv6 loopback entry must remain in the hosts file when the host is operating in a pure IPv4, pure IPv6, or dual stack configuration.

PART 2

Updating NetWorker from Release 8.0.x or 8.1.x

The updating procedures for the supported NetWorker operating systems are unique. Refer to the appropriate operating systems chapters to update the NetWorker software.

This section contains the following chapters:

[Chapter 3, "Updating NetWorker for Linux from 8.0.x or 8.1.x"](#)

[Chapter 4, "Updating NetWorker for OS-X from 8.0.x or 8.1.x"](#)

[Chapter 5, "Updating NetWorker for UNIX from 8.0.x or 8.1.x"](#)

[Chapter 6, "Updating NetWorker for Windows from 8.0.x or 8.1.x"](#)

CHAPTER 3

Updating NetWorker for Linux from 8.0.x or 8.1.x

This chapter includes the following sections:

- ◆ [Roadmap for updating NetWorker software on Linux](#).....30
- ◆ [Updating NetWorker on Asianux, CentOS, OEL, RedFlag, RHEL, and SuSE](#)..... 30
- ◆ [Updating the NetWorker client software on Debian and Ubuntu](#).....35
- ◆ [Updating the NetWorker client software on Fedora](#)..... 37

Roadmap for updating NetWorker software on Linux

Updating the NetWorker software from a previous release requires updating the NetWorker software and then configuring the Console server, if used.

Depending on the flavor of the Linux OS that you are updating the NetWorker software from, select and follow the procedures outlined in one the following scenarios:

- ◆ [Updating NetWorker software on Asianux, CentOS, OEL, RHEL, and SuSE on page 30](#)
- ◆ [Updating the NetWorker client software on Debian and Ubuntu on page 35](#)
- ◆ [Updating the NetWorker client software on Fedora on page 37](#)

NOTICE

Some Linux operating systems allow you to update the NetWorker software without removing the previous version.

Updating NetWorker on Asianux, CentOS, OEL, RedFlag, RHEL, and SuSE

Use the following procedures to update the NetWorker and Console server software.

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

Updating the NetWorker software

You can use the `rpm -U` command to update the NetWorker client, server, storage node, and Console server software without first removing the previous version of the software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software. The NetWorker module software includes the NetWorker Module for Database Applications and the NetWorker PowerSnap module software.
The appropriate module installation guide describes how to uninstall the module software.
2. Use the `rpm -qa | grep lgto` command to display the list of installed NetWorker packages.
3. From the directory that contains the latest version of extracted NetWorker software packages, type:

```
rpm -Uvh package [package]...
```

where *package [package]...* is a list of the software package required for the installation type.

4. Specify optional packages such as language packs and man pages in `rpm` command after the required packages for the installation type.

This table provides a list of the software packages required for each installation type.

Table 5 List of NetWorker packages to update by installation type

Installation type	Packages
Client software	lgtocInt-nw*.rpm
Storage node software	lgtocInt-nw*.rpm lgtonode*.rpm
Server software	lgtocInt-nw*.rpm lgtonode*.rpm lgtoserv*.rpm
Console server	lgtocInt-nw*.rpm lgtonmc*.rpm
Man pages	lgtoman*.rpm
Simplified Chinese language support	lgtozh*.rpm
French language support	lgtofr*.rpm
Japanese language support	lgtoja*.rpm
Korean language support	lgtoko*.rpm

5. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
6. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:

- a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.
5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:
 - On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
4. Rename the `Config.xml.template` file to the following:


```
Config.xml
```
5. Start the NetWorker daemons.

Updating and configuring the Console server software

If the Console server was previously installed, perform the following tasks to configure the software.

Configuring the Console server software

Use the `nmc_config` command to configure the Console server software program.

Procedure

1. Start the configuration script:


```
/opt/lgtonmc/bin/nmc_config
```
2. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server. For example, use the default user/group:


```
[nobody/nobody]
```
3. For the web server port number, use the either of the following:
 - The default port number (9000).
 - A custom port number.

Note

Valid port numbers are between 1024 and 49151.

4. For the Console server, use one of the following:

- The default port number (**9001**)
- A custom port number. Valid port numbers are between **1024** and **49151**.

Note

Do *not* use port numbers that are already in use. For example, the Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**.

5. Specify the directory to use for the lgtonmc database. For example, `/opt/lgtonmc/lgto_gstdb`.
6. If the installation process detects an existing database, then type **y** to retain the existing database.
7. If the installation process detects a NetWorker 7.6.x Console server database:
 - a. To continue with the installation and Console server database conversion, type **y**.
 - b. Specify the location to store the database backup file. For example: `/opt/lgtonmc/lgto_gstdb`.

If the conversion fails, then a message similar to the following appears:

```
Install failed to upgrade the database <full path and database
name>. Check the upgrade log <full path and log name file> for
details.
Please, fix any environment related errors mentioned in the log
and then run the script <full path to gstdbupgrade.sh>
manually to upgrade the database after the install is complete.
```

8. Specify the location of the NetWorker binaries. For example:


```
/usr/sbin
```
9. When prompted to start the Console server daemons:
 - If the database conversion is successful, type **y**.
 - If the database conversion encountered errors, type **n**.
10. To continue with the installation of the Console server package, type **y**.
11. Update the **MANPATH** variable for the Console server man pages. For example:

```
MANPATH=$MANPATH:/opt/lgtonmc/man
export MANPATH
```

12. If there is no plan to update or reinstall the NetWorker software, use the following command to remove the NetWorker configuration files:

```
dpkg-P lgtoclnt
```

Reconfigure LDAP

When the Console server uses Lightweight Directory Access Protocol (LDAP) authentication, attempts to log in to the NMC server with the LDAP account after upgrading will succeed, but the LDAP account will not have NetWorker Server Administration privileges.

Use the following procedure to resolve this issue and reconfigure LDAP authentication:

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/cst`
 - Windows: `NMC_installation_directory\gst\cst`

2. Move the following files to a temporary location:
 - `Config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`, if present
3. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
4. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

 - a. Set the Environment Variable `GST_RESET_PW` to a value of 1.
 - b. Start the **EMC GST** service.
 - c. Use a browser to connect to the Console server.
 - d. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.
5. Reconfigure the Console server to use LDAP authentication. The section *An external authentication authority* in the *NetWorker Administration Guide* describes how to reconfigure LDAP authentication.
6. If set, delete the `GST_RESET_PW` environment variable. This step prevents a password reset at each Console server login attempt.

Updating the NetWorker client software on Debian and Ubuntu

Use the following procedure to update the NetWorker software on Debian and Ubuntu.

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker client packages

Use the `dpkg` program to install the NetWorker client software. To install the operating system packages that the NetWorker client software requires, use the `apt-get` program.

NOTICE

Ubuntu 10 requires the `libstdc++5` package but the Ubuntu software package repository does not include this package. Manually download and install the `libstdc++5` package for Debian before installing the NetWorker client software. <http://packages.debian.org/squeeze/libstdc++5> provides more information.

Procedure

1. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
2. From a system prompt, run the `dpkg` command. For example:

```
dpkg -i lgtocln_t_XXX.deb
```

where `lgtocln_t_XXX.deb` is the name of the NetWorker client software package.

NOTICE

For Ubuntu, use `sudo` to run this command.

3. If the required operating system packages are missing, then dependency errors similar to the following appear:

```
Unpacking lgtocln_t (from lgtocln_t_8.1_i386.deb) ...
dpkg: dependency problems prevent configuration of lgtocln_t:
 lgtocln_t depends on ksh | pdksh; however:
  Package ksh is not installed.
  Package pdksh is not installed.
 lgtocln_t depends on libstdc++5; however:
  Package libstdc++5 is not installed.
 lgtocln_t depends on libxp6; however:
  Package libxp6 is not installed.
dpkg: error processing lgtocln_t (--install):
 dependency problems - leaving unconfigured
Errors were encountered while processing:
 lgtocln_t
```

4. Use the `apt-get` command to install the missing packages.

```
sudo apt-get -f upgrade
```

The `apt-get` command automatically completes the NetWorker software installation.

5. Confirm that the `nsrexecd` process starts:

```
ps -ef | grep nsrexecd
```

6. Optionally, start the `nsrexecd` process:

```
sudo nsrexecd
```

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.

2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Updating the NetWorker client software on Fedora

Use the following procedure to update the NetWorker software on Fedora.

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker client packages

Use the following procedure to install the NetWorker software on the Fedora operating system. You must perform additional steps to resolve package dependencies issues.

This table lists the available NetWorker software packages.

Table 6 List of NetWorker software packages

Installation type:	Packages:
Client software	lgtoclnt*.rpm
Man pages	lgtoman*.rpm
Simplified Chinese language support	lgtozh*.rpm
French language support	lgtofr*.rpm

Table 6 List of NetWorker software packages (continued)

Installation type:	Packages:
Japanese language support	lgtoja*.rpm
Korean language support	lgtoko*.rpm

Procedure

1. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
2. Before you install the NetWorker software, manually install the missing package dependencies, with the exception of `libcap.so.1`.
 - a. Use the `yum` command to identify missing dependencies.

For example:

```
# yum localinstall lgtocInt*.rpm
Packages skipped because of dependency problems:
  compat-libstdc++-33-3.2.3-68.1.x86_64 from fedora
  glibc-2.14.90-24.fc16.9.i686 from updates
  ksh-20120801-1.fc16.x86_64 from updates
  libXp-1.0.0-16.fc15.x86_64 from fedora
  nss-softokn-freebl-3.13.5-1.fc16.i686 from updates
```

The `yum` command does not successfully install the NetWorker software.

- b. Use the `yum` command to manually install the missing package dependencies.
- For example:

```
yum install compat-libstdc++-33 ksh libXp
glibc-2.14.90-24.fc16.9.i686
```

When you specify the `glib` package, use the full package name to ensure the correct `glib` package installs and not the `glibc-2.14.90-24.fc16.9.x86_64` package.

3. Use the `rpm` command to confirm that you resolved all missing package dependencies, with the exception of `libcap.so.1`. For example:

```
# rpm -ivh lgtocInt*.rpm
error: Failed dependencies:
libcap.so.1 is needed by lgtocInt-8.1-1.i686
```

4. Use the `rpm` command with the `--nodeps` option to install the NetWorker software and ignore the `libcap.so.1` dependency:

```
rpm -ivh --nodeps package [package]...
```

where `package [package]...` is a list of the software package required for the installation type.

For example, to install the man pages during a NetWorker client install, type:

```
rpm -ivh --nodeps lgtocInt*.rpm lgtoman*.rpm
```

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.

2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

CHAPTER 4

Updating NetWorker for OS-X from 8.0.x or 8.1.x

This chapter describes how to update the NetWorker software for OS-X.

- ◆ [Roadmap for updating NetWorker client software on OS-X](#)..... 42
- ◆ [Uninstalling the previous version of NetWorker](#)..... 42
- ◆ [Installing the NetWorker client from the Mac Console](#)..... 42
- ◆ [Authorize the NetWorker Software](#)..... 42

Roadmap for updating NetWorker client software on OS-X

When you update the NetWorker client software, remove the previous version of the NetWorker software, then install the newer version.

Note

OS-X only supports updating the NetWorker client software.

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker client from the Mac Console

Use the following procedure to install the NetWorker client software from the Mac Console.

Procedure

1. Download the NetWorker software.
2. Double-click **NetWorker.dmg** file.
This mounts the NetWorker software on a NetWorker volume.
3. Double-click **NetWorker.pkg** on the NetWorker volume to launch the NetWorker software.
4. In the **Welcome to the NetWorker Client Installer** window, click **Continue**.
5. In the **End User License and Basic Maintenance Agreement** window, click **Continue**.
6. Click **Agree** to agree to the terms of the software license agreement.
7. Click **Install** to install the NetWorker client on the default volume.
Optionally, click **Change Install Location...** and select another volume.
8. Click **Close**.

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.

2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

CHAPTER 5

Updating NetWorker for UNIX from 8.0.x or 8.1.x

This chapter includes the following sections:

- ◆ [Roadmap for Updating NetWorker on UNIX](#)..... 46
- ◆ [Updating the NetWorker software](#)..... 46
- ◆ [Updating and configuring the Console server software](#)..... 53

Roadmap for Updating NetWorker on UNIX

When you update the NetWorker software including the server, the storage node, the client, and the Console server software from 8.0.x, you must remove the previous version of the NetWorker software, then install the newer version.

The procedures outlined in this section apply to AIX, HP-UX, and Solaris:

- ◆ [Updating the NetWorker software on page 46](#)
- ◆ [Updating and configuring the Console server software on page 53](#)

Updating the NetWorker software

Use the following procedures to update the NetWorker software, which includes the server, the storage node, and the client.

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker software

Follow these procedures to install the NetWorker client, storage node, and server software.

The procedures differ for AIX, HP-UX, and Solaris.

AIX: Installing the NetWorker client, server, storage node software

Use the procedure to install the client, the storage node, and the server software and optional software such as the man pages and language packs.

NOTICE

The NetWorker software ships in a 32-bit version. Install this version on both the 32-bit and the 64-bit versions of the AIX operating system.

This table lists the software packages required for each installation type.

Table 7 List of NetWorker packages required for each installation type

Installation type:	Packages:
Client software	LGTONw.clnt.rte
Storage Node software	LGTONw.clnt.rte LGTONw.node.rte
Server software	LGTONw.clnt.rte LGTONw.node.rte LGTONw.serv.rte
Man pages	LGTONw.man.rte
Simplified Chinese language support	LGTONw.zh.rte
French language support	LGTONw.fr.rte
Japanese language support	LGTONw.ja.rte
Korean language support	LGTONw.ko.rte

Follow these steps to install the NetWorker client, server, and storage node software.

Procedure

1. Log in to the target host as root.
2. Create a backup copy of the operating system configuration files:


```
cp /etc/rpc /etc/rpc.orig
cp /etc/inittab /etc/inittab.orig
```
3. Use the **installp** program to install the NetWorker software from the system prompt.

For example:

```
installp -a -d /dir_pathname package [package]...
```

where:

- */dir_pathname* is the complete pathname of the directory that contains the installation software.

For example, if you extract the NetWorker software packages to the `/software` directory, the `dir_pathname` is `/software/aixpower`.

- *package [package]...* is a list of the software package required for the installation type.

For example, to install the NetWorker server software, the man pages and the Japanese language pack, type:

```
installp -a -d /nw_packages/aixpower LGTONw.clnt.rte
LGTONw.node.rte LGTONw.serv.rte LGTONw.man.rte LGTONw.ja.rte
```

4. Confirm that the required packages are successfully installed for each installation type:

```
lslpp -L all | grep -i lgto*
```

HP-UX: Installing the NetWorker client, server, and storage node software

Use *swinstall* to install the client, storage node, server software packages, and optional packages such as the man pages and language packs on HP-UX 11.x or HP-UX 11i platforms on IPF.

The *swinstall* utility uses the character mode or the *System Administration Manager (SAM)* utility. The character mode *swinstall* screens contain the same information as the *SAM* utility. The same choices are made with both formats.

This table lists the required NetWorker software packages for each NetWorker component.

Table 8 HP-UX software packages

To install the:	Select these packages:
Client software	NWr-Client
Storage node software	NWr-Client NWr-Node
Server software	NWr-Client NWr-Node NWr-Server
Man pages	NWr-Man
French language support	NWr-FR
Japanese language support	NWr-JA
Korean language support	NWr-KO
Simplified Chinese language support	NWr-ZH

Follow these steps to install the NetWorker client, server, and storage node software

Procedure

1. Log in to the target host as root.
2. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
3. Ensure that there is sufficient disk space on the host to contain both the compressed NetWorker software package and the fully uncompressed files.
4. Create a backup copy of the `rpc.org` configuration file:

```
cp /etc/rpc /etc/rpc.org
```

5. At the system prompt, type:

```
swinstall &
```

Note

If you use the character interface, do not include the & symbol.

6. Press **Enter**.
7. On the **Specify Source** window, provide the location of the NetWorker installation files:
 - a. In the **Source Depot Type** field, press **Enter** and select **Local Directory**.
 - b. In the **Source Host Name** field, ensure that the hostname of the target host is selected.
 - c. In the **Source Depot Path** field, type the full path of the `NetWorker.pkg` file.
For example:
`/tmp/hpux11_ia64/NetWorker.pkg`
8. Click **OK**.
9. On the **SD Install - Software Selection** window, select and mark the software packages required for the installation type.
10. Press **Enter**.
11. On the **Actions** menu, click **Install**.
12. Verify the status of the install analysis.
 - To review the log file and verify that the `swinstall` program did not encounter errors, click **Logfile**.
 - Correct any problems before you continue the installation.
13. To continue with the installation, click **OK**.
14. To review the log file for error or warning messages generated during installation, click **Logfile**.
15. When the installation completes, click **Done**.
16. Exit `swinstall`.

Solaris: Installing the NetWorker client, server, and storage node packages

Follow this procedure to install the client, storage node and server software packages as well as optional packages. For example, you can install the man pages and language packs.

This table lists the NetWorker daemons for each of the software components.

Table 9 NetWorker daemons

NetWorker packages	NetWorker daemons
NetWorker server	nsrd, nsrexecd, nsrindexd, nsrmmdbd, nsrmmmd, nsrjobd, nsrmmgd, nsrlcpd, nsrlogd, nsrsnmd, nsrcpd
NetWorker client	nsrexecd, nsrpsd
NetWorker storage node	nsrexecd, nsrmmmd, nsrlcpd, nsrsnmd
NetWorker Management Console server	gstd, httpd, dbsrv12, gstsnmpttrapd (optional)

Use the following procedure to install the client, storage node, server software packages and the optional packages. For example, the man pages and language packs.

Procedure

1. Log in to the target host as root.
2. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
3. Ensure that there is sufficient disk space on the host to contain both the compressed NetWorker software package and the fully uncompressed files.
4. Create a backup copy of the `rpc.org` configuration file:

```
cp /etc/rpc /etc/rpc.org
```

5. Display the list of available installation packages:

```
pkgadd -d path_to_install_files
```

The following packages are available:

```
1 LGTOclnt      NetWorker Client
2 LGTOfr       NetWorker French Language Pack
3 LGTOja       NetWorker Japanese Language Pack
4 LGTOko       NetWorker Korean Language Pack
5 LGTOlicm     NetWorker License Manager
6 LGTOman      NetWorker Man Pages
7 LGTOmc       NetWorker Management Console
8 LGTOnode     NetWorker Storage Node
9 LGTOserv     NetWorker Server
10 LGTOzh      NetWorker Chinese Language Pack
Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:
```

6. Specify the package numbers that are required for the installation type.

NOTICE

When installing the NetWorker server and storage node software, the package order is important.

For example:

- For a NetWorker Client installation, type: **1**
- For a NetWorker Storage node installation, type: **1, 8**
- For a NetWorker server installation, type: **1, 8, 9**

Optional packages including the language packs and the man pages are specified in the **Select package** prompt by adding the associated package number after the minimum packages required for the installation type.

For example:

To install the man pages during a NetWorker server install, type: **1, 8, 9, 6**

7. When prompted to change the data directory, choose one of the following:
 - Accept the default directory.
 - Specify the directory.
8. The installation prompts you to specify the NetWorker server that can access the host. To update the list:
 - a. Type **y**.
 - b. Specify the shortname and FDQN for each NetWorker server, one per line, that requires access to the NetWorker host. The first entry in this file becomes the default NetWorker server.

When all of the NetWorker servers are specified, press **Enter** without specifying a NetWorker server name, to complete the process.

For example:

```
Enter a NetWorker server hostname [no more]: mynwserver
Enter a NetWorker server hostname [no more]: mynwserver.emc.com
Enter a NetWorker server hostname [no more]:
```

NOTICE

When no servers are specified, any NetWorker server can back up or perform a directed recovery to the host.

9. After the client package installation completes, additional packages are installed automatically.

It is not necessary to start the daemons after each package install:

 - If the installation type is a NetWorker server, then start the daemons when prompted during the LGTOserv package installation.
 - If the installation type is a NetWorker storage, then start the daemons when prompted during the LGTONode package installation.
10. During a NetWorker server upgrade only, stop the NetWorker daemons and start the daemons again. For example:

```
nsr_shutdown
/etc/init.d/networker start
```

11. To confirm that the NetWorker daemons started successfully, type:

```
ps -ef | grep nsr
```

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:

- a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.
5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:
 - On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
4. Rename the `Config.xml.template` file to the following:


```
Config.xml
```
5. Start the NetWorker daemons.

Updating and configuring the Console server software

Perform these steps to update and configure the console server software, if previously installed.

Getting Ready to install the Console server software

Perform this step when the Console server is also the NetWorker server.

Procedure

1. Ensure that the `httpd`, `gstd`, and `dbsrv9` processes are not running.
 - If `gstd` is running, then remove the Console server software.
 - If the `httpd` and `dbsrv9` processes are running and you removed the Console software, then use the `kill -TERM` to stop the processes.

Note

Do not use the `kill -9` command to stop the `dbsrv9` process.

2. Ensure that you have installed the NetWorker software.

The appropriate NetWorker installation guide describes how to install the NetWorker software.

Installing the NetWorker Console software

Follow these procedures to install the NetWorker Console software.
The procedures differ for AIX and Solaris.

AIX: Installing the Console server software

This section describes how to install the Console server software.

Procedure

1. Log in to the target host as root.
2. Rename the `.toc` file in the directory that contains the NetWorker software packages.
3. If you installed NetWorker client software on the host:

- Confirm that the NetWorker Remote Exec daemon, `nsrexecd`, is started:

```
ps -ef | grep nsr
```

- If the `nsrexecd` daemon is not started, type:

```
/etc/rc.nsr
```

4. Use the `installp` program to install the Console server software from the system prompt:

```
installp -a -d /dir_pathname LGTONw.clntrte LGTONmc.rte  
[packages]...
```

where:

- `/dir_pathname` is the complete pathname of the directory that contains the installation software.

For example, if you extracted the NetWorker software packages to the `/software` directory, the `dir_pathname` is `/software/aixpower`.

- `[packages]...` is a list of the optional software packages.

For example, to install the Console server software with the French language pack and the NetWorker client software package, type:

```
installp -a -d /software/aixpower LGTONw.clntrte LGTONmc.rte  
LGTONw.fr.rte
```

5. Specify the `LGTONw.clntrte` only if you did not previously install the NetWorker client package.
6. Confirm that the required package installation completed successfully:

```
lslpp -L all | grep -i lgto*
```

Solaris: Installing the NetWorker Console server software

Perform these steps as root to install the NetWorker Console software.

Procedure

1. For Solaris 10 and later, set the environment variable `NONABI_SCRIPTS` to `TRUE`:

```
NONABI_SCRIPTS=TRUE  
export NONABI_SCRIPTS
```

2. If the NetWorker client software is installed on the host:

- Confirm that the `nsrexecd` daemon is running:

```
ps -ef | grep nsr
```

- If the `nsrexecd` daemon is not running, type:

```
/etc/init.d/networker start
```

3. Navigate to the directory that contains the extracted Console server package and display the list of available NetWorker packages:

```
pkgadd -d path_to_install_files
```

The following packages are available:

```
1 LGTOclnt      NetWorker Client
2 LGTOfr       NetWorker French Language Pack
3 LGTOja       NetWorker Japanese Language Pack
4 LGTOko       NetWorker Korean Language Pack
5 LGTOlicm     NetWorker License Manager
6 LGTOman      NetWorker Man Pages
7 LGTONmc     NetWorker Management Console
8 LGTONode     NetWorker Storage Node
9 LGTOserv     NetWorker Server
10 LGTOzh      NetWorker Chinese Language Pack
Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:
```

4. At the **Select packages** prompt:

- If the NetWorker client software was not previously installed, type: **1, 7**.
- If the NetWorker client software is installed, type **7**.

5. Specify the directory to install the LGTONmc package.

For example:

```
/opt/LGTONmc
```

6. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server.

For example, use the default user/group.

```
[nobody/nobody]
```

7. For the web server port number, use the either of the following:

- The default port number (**9000**).
- A custom port number.

8. For the Console server, use the either of the following:

- The default port number (**9001**).
- A custom port number .

NOTICE

Valid port numbers are between **1024** and **49151**. Do *not* use port numbers that are already in use. For example, the Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**.

9. Specify the directory to use for the LGTONmc database. For example:

```
/opt/LGTONmc/lgto_gstdb
```

10. If the installation process detects an existing database, type **y** to retain the existing database when prompted.

11. If the installation process detects a NetWorker 7.6.x Console server database:

- a. To proceed with the installation and Console server database conversion, type **y**.

- b. Specify the location to store the database backup file. For example:

If the conversion fails, the following error message appears:

```
/opt/LGTONmc/lgto_gstdb
Install failed to upgrade the database <full path and database
name>.
Check the upgrade log <full path and log name file> for
details.
Please, fix any environment related errors mentioned in the log
and then run the script <full path to gstdbupgrade.sh> manually
to upgrade the database after the install is complete.
```

12. Specify the location of the NetWorker binaries. For example:

```
/usr/sbin
```

13. When prompted to start the Console server daemons:

- If the database conversion succeeds, type **y**.
- If the database conversion encountered errors, type **n**.

14. To proceed with the installation of the Console server package, type **y**.

15. Update the **MANPATH** variable for the Console server man pages.

For example:

```
MANPATH=$MANPATH:/opt/LGTONmc/man
export MANPATH
```

Configuring the Console server software

Use the `nmc_config` command to configure the Console server software program.

Procedure

1. Start the configuration script:

```
/opt/lgtonmc/bin/nmc_config
```

2. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server. For example, use the default user/group:

```
[nobody/nobody]
```

3. For the web server port number, use the default port number (**9000**) or use a custom port number. Valid port numbers are between **1024** and **49151**.
4. For the Console server, use the default port number (**9001**) or use a custom port number. Valid port numbers are between **1024** and **49151**.

Note

Do not use port numbers that are already in use. For example: The Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**

-
5. Specify the directory to use for the lgtonmc database. For example, `/opt/lgtonmc/lgto_gstdb`.
6. If the installation process detects an existing database, then type **y** to retain the existing database.
7. If the installation process detects a NetWorker 7.6.x Console server database:
- a. To continue with the installation and Console server database conversion, type **y**.
 - b. Specify the location to store the database backup file, for example: `/opt/lgtonmc/lgto_gstdb`.

If the conversion fails, then a message similar to the following appears:

```
Install failed to upgrade the database <full path and database
name>. Check the upgrade log <full path and log name file> for
details.
Please, fix any environment related errors mentioned in the log
and then run the script <full path to gstdbupgrade.sh>
manually to upgrade the database after the install is complete.
```

8. Specify the location of the NetWorker binaries. For example:

```
/usr/sbin
```

9. When prompted to start the Console server daemons:

- If the database conversion is successful, type **y**.
- If the database conversion encountered errors, type **n**.

10. To continue with the installation of the Console server package, type **y**.

11. Update the **MANPATH** variable for the Console server man pages.

For example:

```
MANPATH=$MANPATH:/opt/lgtonmc/man
export MANPATH
```

Reconfigure LDAP

When the Console server uses Lightweight Directory Access Protocol (LDAP) authentication, attempts to log in to the NMC server with the LDAP account after upgrading will succeed, but the LDAP account will not have NetWorker Server Administration privileges.

Use the following procedure to resolve this issue and reconfigure LDAP authentication:

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/cst`
 - Windows: `NMC_installation_directory\gst\cst`
2. Move the following files to a temporary location:
 - `Config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`, if present
3. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
4. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

 - a. Set the Environment Variable **GST_RESET_PW** to a value of 1.
 - b. Start the **EMC GST** service.
 - c. Use a browser to connect to the Console server.
 - d. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.

5. Reconfigure the Console server to use LDAP authentication. The section *An external authentication authority* in the *NetWorker Administration Guide* describes how to reconfigure LDAP authentication.
6. If set, delete the **GST_RESET_PW** environment variable. This step prevents a password reset at each Console server login attempt.

CHAPTER 6

Updating NetWorker for Windows from 8.0.x or 8.1.x

This chapter describes how to update the NetWorker software for Windows and includes the following sections:

- ◆ [Roadmap for updating NetWorker on Windows](#)..... 60
- ◆ [Updating the NetWorker software](#)..... 60
- ◆ [Updating and configuring the Console server software](#)..... 62

Roadmap for updating NetWorker on Windows

Use the following procedures to update and configure the NetWorker software.

- ◆ [Updating the NetWorker software on page 60](#)
- ◆ [Updating and configuring the Console server software on page 62](#)

Updating the NetWorker software

Follow these procedures to update the NetWorker software, which includes the client, server, and storage node.

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

Updating the NetWorker software

You can use the `setup.exe` command to update the NetWorker client, server, storage node and Console server software without first removing the previous version of the software.

Procedure

1. Log in to the target host with a user that has administrator privileges.
2. For NetWorker 7.6.5 only, stop the NetWorker PowerSnap service.
3. For NMDA and NMM clients only, remove the NetWorker module software.
4. In the directory that contains the extracted NetWorker software, run `setup.exe` in the `networkr` subdirectory.
5. On the **Choose Setup Language** window, select a language and click **OK**.
6. On the **Welcome to NetWorker Update** window, click **Next**.
7. On the **Ready to update** window, click **Update**.
8. On the **NetWorker server selection** window, specify the NetWorker servers that will have access to back up the client and then click **Next**.
Use **Update list** to browse for available servers, or specify a server name in the **Enter a server name** field, and then click **Add**.
9. For the Console server only:
 - a. On the **Welcome to NetWorker Management Console Upgrade** window, click **Next**.
 - b. On the **Product Configuration** window, click **Next**.

- c. On the **Ready to upgrade the Program** window, click **Upgrade**.

10. Click **Finish**.

11. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to
the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.

5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:
 - On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
4. Rename the `Config.xml.template` file to the following:
`Config.xml`
5. Start the NetWorker daemons.

Updating and configuring the Console server software

Perform these steps to update and configure previously installed Console server software.

Reconfigure LDAP

When the Console server uses Lightweight Directory Access Protocol (LDAP) authentication, attempts to log in to the NMC server with the LDAP account after upgrading will succeed, but the LDAP account will not have NetWorker Server Administration privileges.

Use the following procedure to resolve this issue and reconfigure LDAP authentication:

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/cst`
 - Windows: `NMC_installation_directory\gst\cst`
2. Move the following files to a temporary location:
 - `Config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`, if present

3. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
4. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

- a. Set the Environment Variable **GST_RESET_PW** to a value of 1.
 - b. Start the **EMC GST** service.
 - c. Use a browser to connect to the Console server.
 - d. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.
5. Reconfigure the Console server to use LDAP authentication. The section *An external authentication authority* in the *NetWorker Administration Guide* describes how to reconfigure LDAP authentication.
 6. If set, delete the **GST_RESET_PW** environment variable. This step prevents a password reset at each Console server login attempt.

PART 3

Updating NetWorker from Release 7.6.x

The updating procedures to the supported NetWorker operating system are unique. Refer to the appropriate operating system chapter to update the NetWorker software.

This section contains the following chapters:

[Chapter 7, "Updating from NetWorker 7.6.x for Linux"](#)

[Chapter 8, "Updating from NetWorker 7.6.x for OS-X"](#)

[Chapter 9, "Updating from NetWorker 7.6.x for UNIX"](#)

[Chapter 10, "Updating from NetWorker 7.6.x for Windows"](#)

CHAPTER 7

Updating from NetWorker 7.6.x for Linux

This chapter includes the following sections:

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- ◆ [Updating NetWorker on Asianux, CentOS, OEL, RedFlag, RHEL, and SuSE](#)..... 68
- ◆ [Updating the NetWorker client software on Debian and Ubuntu](#).....81
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Roadmap for updating NetWorker on Linux

When updating the NetWorker software from 7.6.x, some Linux operating systems allow you to update the NetWorker software without removing the previous version. For Debian and Ubuntu you must remove the previous version of the NetWorker software, then install the newer version.

Note

After you update the NetWorker server, restart the NetWorker services.

The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file. The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Note

Update each NetWorker storage node before you update the NetWorker server.

Depending on the flavour of the Linux OS you are updating from, select and follow the procedures outlined in one the following scenarios:

- ◆ [Updating and configuring the Console server software on page 68](#)
- ◆ [Updating the NetWorker client software on Debian and Ubuntu on page 81](#)
- ◆ [Updating the NetWorker client software on Fedora on page 82](#)

Updating NetWorker on Asianux, CentOS, OEL, RedFlag, RHEL, and SuSE

Updating the NetWorker software requires updating the server, storage node, and client and then configuring the Console server, if used.

Updating the NetWorker software

Follow these procedures to update the NetWorker software including the client, server, and storage node.

Considerations for updating the NetWorker software

Before updating from NetWorker 7.6.x, consider the following.

- ◆ When updating the NetWorker software from 7.6.x, some Linux operating systems and the Windows operating system allow you to update the NetWorker software without removing the previous version.
- ◆ Update each NetWorker storage node before you update the NetWorker server.
- ◆ After you update the NetWorker server, you must restart the NetWorker services.
- ◆ The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file.

- ◆ The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

RHEL Linux only, enabling SELinux

Use this procedure to enable SELinux. NetWorker 8.1 and later supports SELinux. However, NetWorker 7.6 SP3 and earlier did not support Linux hosts with SELinux enabled.

- ◆ On RHEL 5, perform these steps:
 1. Run `system-config-securitylevel`.
 2. In the window that appears, select the **SELinux** tab.
 3. Select **Enable SELinux** and restart the system.
 4. Use the `getenforce` command to confirm the status of SELinux.
- ◆ On RHEL 6, perform these steps:
 1. Ensure that the operating system contains these packages:
 - `selinux-policy-targeted-3.7.19`
 - `policycoreutils-gui-2.0.83`
 - `selinux-policy-3.7.19`
 2. Use the `sestatus` command to determine the state of SELinux:
For example:


```
/usr/sbin/sestatus
SELinux status:
disabled
SELinuxfs mount:                /selinux
Current mode:                    enforcing
Mode from config file:          enforcing
```
 3. When the SELinux status value is disabled:
 - a. In the `/usr/bin` directory, open the SELinux program and configure the SELinux status:


```
system-config-selinux
```
 - b. Change the SELinux status to Enabled.
 - c. Restart the system.
 4. Use the `getenforce` command to confirm the status of SELinux.

Backing up the configuration files

The NetWorker software installation process overwrites the existing NetWorker startup script files. Back up the configuration files before you install the NetWorker software.

Procedure

1. Log in to the target host as root.
2. Create a backup copy of the original files. For example:

```
cp original_file backup_file
```

This table lists the names and locations of the configuration files for each operating system.

Table 10 Configuration files on UNIX

Operating system	Original files
AIX	/etc/inittab /etc/rpc /etc/rc.nsr
HP-UX	/sbin/init.d/networker
Linux	/etc/init.d/networker /etc/rc3.d/S95networker /etc/rc5.d/S95networker /etc/rc0.d/K05networker
Solaris	/etc/init.d/networker

Determining the NetWorker version on the storage nodes

Before you update the NetWorker server software, perform these steps to determine the NetWorker version on the storage node. The most recent NetWorker server disables NetWorker 7.6.x and earlier storage nodes.

Procedure

1. Update each NetWorker storage node.
2. Ensure that each NetWorker storage node in the datazone runs the latest NetWorker software.
3. Use the nsradmin program as root on UNIX or as administrator on Windows to determine the NetWorker version installed on the storage nodes in a datazone:

- a. From a command prompt, type:

```
nsradmin
```

- b. Set the attribute type to nsr storage node:

```
nsradmin> . type: nsr storage node
```

- c. Display the hostname of the storage node and the NetWorker software version:

```
nsradmin> show name;version
```

- d. Display a list of every storage node in the datazone and the corresponding version of the NetWorker software:

```
nsradmin> print
```

- e. Close the nsradmin program:

```
nsradmin> quit
```

For example:

```
nsradmin> . type: nsr storage node
Current query set
nsradmin> show name;version
nsradmin> print
      name: mystoragenode.domain.com;
      version: 7.6.3;
nsradmin> quit
```

Updating the NetWorker software

You can use the `rpm -U` command to update the NetWorker client, server, storage node, and Console server software without first removing the previous version of the software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software. The NetWorker module software includes the NetWorker Module for Database Applications and the NetWorker PowerSnap module software.

The appropriate module installation guide describes how to uninstall the module software.

2. Use the `rpm -qa | grep lgto` command to display the list of installed NetWorker packages.
3. From the directory that contains the latest version of extracted NetWorker software packages, type:

```
rpm -Uvh package [package]...
```

where *package [package]...* is a list of the software package required for the installation type.

4. Specify optional packages such as language packs and man pages in `rpm` command after the required packages for the installation type.

This table provides a list of the software packages required for each installation type.

Table 11 List of NetWorker packages to update by installation type

Installation type	Packages
Client software	lgtocInt-nw*.rpm
Storage node software	lgtocInt-nw*.rpm lgtonode*.rpm
Server software	lgtocInt-nw*.rpm lgtonode*.rpm lgtoserv*.rpm
Console server	lgtocInt-nw*.rpm lgtonmc*.rpm
Man pages	lgtoman*.rpm
Simplified Chinese language support	lgtozh*.rpm
French language support	lgtofr*.rpm
Japanese language support	lgtoja*.rpm

Table 11 List of NetWorker packages to update by installation type (continued)

Installation type	Packages
Korean language support	lgtoko*.rpm

5. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
6. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

NetWorker server only, updating the Clone Storage Node

When you update the NetWorker server software to NetWorker 8.1 and later, the NetWorker software automatically creates a new Clone storage node attribute for each

existing Storage Node resource. The value in this attribute determines which storage node to use when writing clone data.

In the NetWorker 7.6.x and earlier software, the Clone storage node attribute was present in each NetWorker client resource. After a NetWorker server software update, the Clone storage node attribute is still present in each client resource, but the attribute is read-only. The NetWorker 8.1 server and later does not use this attribute to determine which storage node to use when the writing clone data for the client.

By default, the Clone storage node attribute for each storage node resource does not contain any values. If required, after updating the NetWorker server software, modify the Clone Storage Node attribute for each storage node. The section *Directing clones to a special storage node* in the *NetWorker Administration Guide* provides more information.

Retaining startup script customizations

Use this procedure to add startup script customizations made in previous versions of the NetWorker software, to the new `nsrrc` file.

NetWorker 8.0 and later introduces support for a new environment variable file. This file, `nsrrc`, is sourced before starting the `nsrexecd` and `nsrd` processes. Subsequent NetWorker software updates do not overwrite this new file.

Follow this procedure to add environment variables that were previously defined in the NetWorker startup files to this new file.

Procedure

1. Review the configuration files for a list of defined environment variables.

NOTICE

Do not overwrite the new startup files with the contents of the `.orig` files. Add the old customizations to the new environment variable file.

This table provides a list of the names and locations of the configuration files on each operating system.

Table 12 Configuration files on UNIX

Operating system	Original files
AIX	/etc/inittab /etc/rpc /etc/rc.nsr
HP-UX	/sbin/init.d/networker
Linux	/etc/init.d/networker /etc/rc3.d/S95networker /etc/rc5.d/S95networker /etc/rc0.d/K05networker
Solaris	/etc/init.d/networker

2. Create a Bourne shell script file called `nsrrc` in the `/nsr` directory.
3. Add the required environment variables and the `export` command to the `nsrrc` file.

For example:

```
ENV_VAR_NAME=value  
export ENV_VAR_NAME
```

4. Save the file.

5. Stop the NetWorker daemons:

```
nsr_shutdown
```

6. Start the NetWorker daemons:

- On Solaris and Linux, type:

```
/etc/init.d/networker start
```

- On AIX, type:

```
/etc/rc.nsr
```

- On HP-UX, type:

```
/sbin/init.d/networker start
```

Optional, converting VCB client backups to VADP

The NetWorker 7.6 SP2 software and later supports a backup and recovery of VMware clients that uses the vStorage APIs for Data Protection (VADP) program. The NetWorker 7.6 SP2 and earlier software uses the VMware Consolidated Backups (VCB) program to protect VMware clients.

If you update the NetWorker server and the VM Proxy server from a version before NetWorker 7.6 SP2, use the `nsrvadpserv_tool` to convert virtual clients from VCB to VADP backups. The *NetWorker VMware Integration Guide* provides more information.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to  
the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`

- On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
 4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.
 5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:
 - On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
4. Rename the `Config.xml.template` file to the following:


```
Config.xml
```
5. Start the NetWorker daemons.

Updating and configuring the Console server software

Perform these steps to update and configure previously installed Console server software.

Reviewing the Console server requirements

When you update the Console server software, the installation process automatically converts the SQLAnywhere database to a newer version.

A migration utility performs the conversion process:

- ◆ On Linux and UNIX: `gstdbupgrade.sh`
- ◆ On Windows: `gstdbupgrade.exe`

During the database conversion process, the migration utility:

- ◆ Automatically records the progress of the conversion in the `gstdbupgrade.log`.
- ◆ Displays the progress of the database conversion process to the console.

The conversion of a Console server database:

- ◆ Requires the that file system that contains the Console server database directory has available space that is equal to double the size of the current database.
- ◆ Can take several hours.
For example, it takes approximately 3 hours to migrate a 4.5 GB database on a dual core system with 16 GB RAM.
- ◆ Can be I/O and CPU intensive.
Avoid performing other resource intensive processes during a Console server database conversion.

The Console server software does not support the following previously supported operating systems:

- ◆ HP-UX ia64
- ◆ Windows 2003, 2003 SP1, 2003 R2, Windows 32-bit
- ◆ AIX 5.2, AIX 5.3
- ◆ Solaris 9, Solaris x86

If the Console server runs on one of these operating systems, you cannot update the Console server to the latest version. Perform one of the following tasks:

- ◆ Install a new Console server in the datazone on a supported operating system. To provide historical reports, keep the old Console server at the previous NetWorker version.
- ◆ Install a new Console server in the datazone on a supported operating system and move the Console server database and configuration files to the new Console server.
- ◆ Update the operating system to a supported version before updating the Console server software.

Optional, moving the Console server files

If you replaced the Console server in the datazone, move the NMC database and configuration files to the new Console server before installing the Console server software.

Procedure

1. On the current Console server, stop the `gstd` process on Linux or UNIX or the `gstd` service on Windows:
 - On AIX, type: `/etc/rc.gst stop`
 - On Linux and Solaris, type: `/etc/init.d/gst stop`
 - On HP-UX, type: `/sbin/init.d/gst stop`
 - On Windows: Stop the EMC GST service
2. Ensure the `httpd`, `gstd`, and `dbsrv9` processes are not running
 - Use the `kill -TERM` to stop the processes.
 - Do not use the `kill -9` command to stop the `dbsrv9` process.
3. Copy the contents of the Console server database directory from the current Console server to a new directory on the new Console server.

The Console server database directory defaults to the following locations:

- AIX, HP-UX, and Linux: `/opt/lgtonmc/lgto_gstb`
- Solaris: `/opt/LGTONmc/lgto_gstb`

- Windows: `installation_dir\Management\lgto_gstb`

Note

The `lgto_gstdb` and `lgto_gst.log` files are binary files and `gstd_db.conf` is an ASCII file.

Updating the NetWorker software

You can use the `rpm -U` command to update the NetWorker client, server, storage node, and Console server software without first removing the previous version of the software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software. The NetWorker module software includes the NetWorker Module for Database Applications and the NetWorker PowerSnap module software.

The appropriate module installation guide describes how to uninstall the module software.

2. Use the `rpm -qa | grep lgto` command to display the list of installed NetWorker packages.
3. From the directory that contains the latest version of extracted NetWorker software packages, type:

```
rpm -Uvh package [package]...
```

where *package [package]...* is a list of the software package required for the installation type.

4. Specify optional packages such as language packs and man pages in `rpm` command after the required packages for the installation type.

This table provides a list of the software packages required for each installation type.

Table 13 List of NetWorker packages to update by installation type

Installation type	Packages
Client software	lgtocInt-nw*.rpm
Storage node software	lgtocInt-nw*.rpm lgtonode*.rpm
Server software	lgtocInt-nw*.rpm lgtonode*.rpm lgtoserv*.rpm
Console server	lgtocInt-nw*.rpm lgtonmc*.rpm
Man pages	lgtoman*.rpm
Simplified Chinese language support	lgtzh*.rpm
French language support	lgtofr*.rpm
Japanese language support	lgtaja*.rpm
Korean language support	lgtoko*.rpm

5. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.

- c. Start the NetWorker daemons.
6. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Reviewing the Console server database conversion status

This section describes how to determine the status of the Console server database conversion and how to attempt another database conversion if the conversion fails.

To confirm that the conversion is successful:

- ◆ Review the `gstd_db.conf` file, located in the following directory by default:
 - Windows: `NMC_installation_directory\Management\lgto_gstdb`
 - AIX and Linux: `/opt/lgtonmc/lgto_gstdb`
 - Solaris: `/opt/LGTONmc/lgto_gstdb`
- ◆ Search for the following line that denotes a successful database conversion:
`db_format_12=yes`

When the Console server database conversion fails, a message similar to the following appears:

```
Install failed to upgrade the database <full path>. Check the
install
log <full path> for details. Please fix any environment related
errors
mentioned in the log and then run the script <full path to script>
manually to upgrade the database after the install is complete.
```

If you see this message, perform the following procedure.

Procedure

1. Review the `gstdbupgrade.log` file and correct the errors.

The `gstdbupgrade.log` appears in the following directories, by default:

- Solaris: `/opt/LGTONmc/logs`
 - AIX and Linux: `/opt/lgtonmc/logs`
 - Windows: `NMC_installation_directory\Management\GST\logs`
2. Start the database conversion manually:
 - On Linux and UNIX, the Console server software installation completes when a database conversion fails. Type the following command to start the database conversion:

```
gstdbupgrade.sh -p NMC_Database_dir -o log_file_directory -b
Backup_NMC_database_dir
```

where:

- `gstdbupgrade.sh` appears in the `/opt/lgtonmc/sybase/bin` directory on AIX and Linux by default .
- `gstdbupgrade.sh` appears in the `/opt/LGTONmc/sybase/bin` directory on Solaris by default.
- `NMC_database_dir` is the location of the Console server database. On AIX and Linux the directory is `/opt/lgtonmc/lgto_gstdb`. On Solaris the directory is `/opt/LGTONmc/lgto_gstdb`.
- `-o log_file_directory` is optional. Use this option to direct the database conversion log file to an alternate location.
- `-b Backup_NMC_database_dir` is optional. Use this option to specify an alternate location or path for the backup copy of the original NMC database. By default, the conversion process stores the backup copy in the same location as the original database.
- On Windows, the installation process prompts you to continue or cancel the installation when the conversion fails. After you correct the errors in the `gstdbupgrade.log` file, try to convert the database in one of the following ways:
 - If you cancelled the installation of the NetWorker and Console server software then install the software again to convert the Console server database.
 - If you completed the installation of the NetWorker and Console server software then run `gstdbupgrade.exe` located in `NMC_installation_directory\Management\GST\sybase\bin` to manually convert the database.

Configuring the Console server software

Use the `nmc_config` command to configure the Console server software program.

Procedure

1. Start the configuration script:


```
/opt/lgtonmc/bin/nmc_config
```
2. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server. For example, use the default user/group:


```
[nobody/nobody]
```
3. For the web server port number, use the either of the following:
 - The default port number (**9000**).
 - A custom port number.

Note

Valid port numbers are between **1024** and **49151**.

4. For the Console server, use one of the following:
 - The default port number (**9001**)
 - A custom port number. Valid port numbers are between **1024** and **49151**.

Note

Do *not* use port numbers that are already in use. For example, the Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**.

5. Specify the directory to use for the lgtonmc database. For example, `/opt/lgtonmc/lgto_gstdb`.
6. If the installation process detects an existing database, then type **y** to retain the existing database.
7. If the installation process detects a NetWorker 7.6.x Console server database:
 - a. To continue with the installation and Console server database conversion, type **y**.
 - b. Specify the location to store the database backup file. For example: `/opt/lgtonmc/lgto_gstdb`.

If the conversion fails, then a message similar to the following appears:

```
Install failed to upgrade the database <full path and database name>. Check the upgrade log <full path and log name file> for details.
Please, fix any environment related errors mentioned in the log and then run the script <full path to gstdbupgrade.sh> manually to upgrade the database after the install is complete.
```

8. Specify the location of the NetWorker binaries. For example:


```
/usr/sbin
```
9. When prompted to start the Console server daemons:
 - If the database conversion is successful, type **y**.
 - If the database conversion encountered errors, type **n**.
10. To continue with the installation of the Console server package, type **y**.
11. Update the **MANPATH** variable for the Console server man pages. For example:


```
MANPATH=$MANPATH:/opt/lgtonmc/man
export MANPATH
```
12. If there is no plan to update or reinstall the NetWorker software, use the following command to remove the NetWorker configuration files:


```
dpkg-P lgtocln
```

Reconfiguring LDAP authentication

Use this procedure after you update a Console server that uses LDAP authentication.

When the Console server uses LDAP authentication, attempts to log in to the NMC server after an update might fail with the error:

```
Problem contacting server Servername: Connection refused:connect
```

The EMC GST daemon may also stop.

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/management/logs`
 - Windows: `NMC_installation_directory\management\logs`
2. Render the `gstd.raw` log file and save the output to a text file:


```
nsr_render_log -pathmey gstd.raw 1>output.txt 2>&1
```

3. Review the `output.txt` file. If you see the following error, reconfigure LDAP authentication to correct the issue:

```
acm: External directory library initialization failed
```

To reconfigure LDAP, on the Console server perform these steps:

- a. Access the `cst` folder. The location of the folder differs for Linux, UNIX, and Windows:
 - On Linux and UNIX: `NMC_installation_directory\gst\cst`
 - On Windows: `NMC_installation_directory/cst`
- b. Move the following files from the `cst` folder to a temporary location:
 - `config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`
- c. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
- d. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

 - a. Set the Environment Variable `GST_RESET_PW` to a value of 1.
 - b. Start the EMC GST service.
 - c. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.
- e. Reconfigure the Console server to use LDAP authentication. The *NetWorker Security Configuration Guide* describes how to reconfigure LDAP authentication.
- f. If set, delete the `GST_RESET_PW` environment variable. This step prevents a password reset at each Console server login attempt.

Updating the NetWorker client software on Debian and Ubuntu

Updating the NetWorker client software requires uninstalling and installing the NetWorker software.

Considerations for updating the NetWorker software

Before updating from NetWorker 7.6.x, consider the following.

- ◆ When updating the NetWorker software from 7.6.x, some Linux operating systems and the Windows operating system allow you to update the NetWorker software without removing the previous version.
- ◆ Update each NetWorker storage node before you update the NetWorker server.
- ◆ After you update the NetWorker server, you must restart the NetWorker services.
- ◆ The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file.

- ◆ The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Remove the `/nsr/tmp` directory.

Installing the NetWorker software

Use the following procedure to install the NetWorker software.

Procedure

1. Install the latest NetWorker software on the target host. The appropriate NetWorker installation guide describes how to install the NetWorker software.
2. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker Module software. The appropriate module install guide describes how to install the module software packages.
3. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
4. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

5. Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Updating the NetWorker client software on Fedora

Use the following procedure to update the NetWorker software.

Considerations for updating the NetWorker software

Before updating from NetWorker 7.6.x, consider the following.

- ◆ When updating the NetWorker software from 7.6.x, some Linux operating systems and the Windows operating system allow you to update the NetWorker software without removing the previous version.

- ◆ Update each NetWorker storage node before you update the NetWorker server.
- ◆ After you update the NetWorker server, you must restart the NetWorker services.
- ◆ The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file.
- ◆ The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Installing the NetWorker client packages

Use the following procedure to install the NetWorker software on the Fedora operating system. You must perform additional steps to resolve package dependencies issues.

This table lists the available NetWorker software packages.

Table 14 List of NetWorker software packages

Installation type:	Packages:
Client software	lgtocln*.rpm
Man pages	lgtoman*.rpm
Simplified Chinese language support	lgtozh*.rpm
French language support	lgtofr*.rpm
Japanese language support	lgtolja*.rpm
Korean language support	lgtoko*.rpm

Procedure

1. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
2. Before you install the NetWorker software, manually install the missing package dependencies, with the exception of `libcap.so.1`.
 - a. Use the `yum` command to identify missing dependencies.

For example:

```
# yum localinstall lgtocln*.rpm
Packages skipped because of dependency problems:
  compat-libstdc++-33-3.2.3-68.1.x86_64 from fedora
  glibc-2.14.90-24.fc16.9.i686 from updates
  ksh-20120801-1.fc16.x86_64 from updates
  libXp-1.0.0-16.fc15.x86_64 from fedora
  nss-softokn-freebl-3.13.5-1.fc16.i686 from updates
```

The `yum` command does not successfully install the NetWorker software.

- b. Use the `yum` command to manually install the missing package dependencies.

For example:

```
yum install compat-libstdc++-33 ksh libXp
glibc-2.14.90-24.fc16.9.i686
```

When you specify the `glib` package, use the full package name to ensure the correct `glib` package installs and not the `glibc-2.14.90-24.fc16.9.x86_64` package.

3. Use the `rpm` command to confirm that you resolved all missing package dependencies, with the exception of `libcap.so.1`. For example:

```
# rpm -ivh lgtocln*.rpm
error: Failed dependencies:
libcap.so.1 is needed by lgtocln-8.1-1.i686
```

4. Use the `rpm` command with the `--nodeps` option to install the NetWorker software and ignore the `libcap.so.1` dependency:

```
rpm -ivh --nodeps package [package]...
```

where *package [package]...* is a list of the software package required for the installation type.

For example, to install the man pages during a NetWorker client install, type:

```
rpm -ivh --nodeps lgtocln*.rpm lgtoman*.rpm
```

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

CHAPTER 8

Updating from NetWorker 7.6.x for OS-X

This chapter describes how to update the NetWorker software on OS-X and includes the following sections:

- ◆ [Roadmap for updating NetWorker client software on OS-X](#)..... 86
- ◆ [Uninstalling the previous version of NetWorker](#)..... 86
- ◆ [Installing the NetWorker client from the Mac Console](#)..... 86
- ◆ [Authorize the NetWorker Software](#)..... 86

Roadmap for updating NetWorker client software on OS-X

Updating the NetWorker client software requires uninstalling and then installing the NetWorker software.

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker client from the Mac Console

Use the following procedure to install the NetWorker client software from the Mac Console.

Procedure

1. Download the NetWorker software.
2. Double-click **NetWorker.dmg** file.
This mounts the NetWorker software on a NetWorker volume.
3. Double-click **NetWorker.pkg** on the NetWorker volume to launch the NetWorker software.
4. In the **Welcome to the NetWorker Client Installer** window, click **Continue**.
5. In the **End User License and Basic Maintenance Agreement** window, click **Continue**.
6. Click **Agree** to agree to the terms of the software license agreement.
7. Click **Install** to install the NetWorker client on the default volume.
Optionally, click **Change Install Location...** and select another volume.
8. Click **Close**.

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:

- a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

CHAPTER 9

Updating from NetWorker 7.6.x for UNIX

This chapter includes the following sections:

- ◆ [Roadmap for updating NetWorker on UNIX](#)..... 90
- ◆ [Updating the NetWorker software](#)..... 90
- ◆ [Updating and configuring the Console server software](#)..... 100

Roadmap for updating NetWorker on UNIX

Updating the NetWorker software for AIX, HP-UX, and Solaris requires updating the NetWorker software and then configuring the Console server, if used.

The following procedures are outlined in this section:

- ◆ [Updating the NetWorker software on page 90](#)
- ◆ [Updating and configuring the Console server software on page 100](#)

Updating the NetWorker software

Follow these procedures to update the NetWorker software including the client, server, and storage node.

Considerations for updating the NetWorker software

Before updating from NetWorker 7.6.x, consider the following.

- ◆ When updating the NetWorker software from 7.6.x, some Linux operating systems and the Windows operating system allow you to update the NetWorker software without removing the previous version.
- ◆ Update each NetWorker storage node before you update the NetWorker server.
- ◆ After you update the NetWorker server, you must restart the NetWorker services.
- ◆ The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file.
- ◆ The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Backing up the configuration files

The NetWorker software installation process overwrites the existing NetWorker startup script files. Back up the configuration files before you install the NetWorker software.

Procedure

1. Log in to the target host as root.
2. Create a backup copy of the original files. For example:

```
cp original_file backup_file
```

This table lists the names and locations of the configuration files for each operating system.

Table 15 Configuration files on UNIX

Operating system	Original files
AIX	/etc/inittab /etc/rpc /etc/rc.nsr

Table 15 Configuration files on UNIX (continued)

Operating system	Original files
HP-UX	/sbin/init.d/networker
Linux	/etc/init.d/networker /etc/rc3.d/S95networker /etc/rc5.d/S95networker /etc/rc0.d/K05networker
Solaris	/etc/init.d/networker

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

Determining the NetWorker version on the storage nodes

Before you update the NetWorker server software, perform these steps to determine the NetWorker version on the storage node. The most recent NetWorker server disables NetWorker 7.6.x and earlier storage nodes.

Procedure

1. Update each NetWorker storage node.
2. Ensure that each NetWorker storage node in the datazone runs the latest NetWorker software.
3. Use the `nsradmin` program as root on UNIX or as administrator on Windows to determine the NetWorker version installed on the storage nodes in a datazone:
 - a. From a command prompt, type:

```
nsradmin
```
 - b. Set the attribute type to nsr storage node:

```
nsradmin> . type: nsr storage node
```
 - c. Display the hostname of the storage node and the NetWorker software version:

```
nsradmin> show name;version
```
 - d. Display a list of every storage node in the datazone and the corresponding version of the NetWorker software:

```
nsradmin> print
```
 - e. Close the `nsradmin` program:

```
nsradmin> quit
```

For example:

```
nsradmin> . type: nsr storage node
Current query set
nsradmin> show name;version
nsradmin> print
          name: mystoragenode.domain.com;
          version: 7.6.3;
nsradmin> quit
```

Uninstalling the previous version of NetWorker

Use the following procedure to uninstall the NetWorker software.

Procedure

1. Before you remove the NetWorker software, remove the NetWorker module software including the NetWorker Module for Databases and Applications and the NetWorker PowerSnap module. The appropriate module installation guide describes how to uninstall the module software.
2. Uninstall NetWorker. The appropriate NetWorker installation guide describes how to uninstall the NetWorker software.
3. Delete the `/nsr/tmp` directory.

Installing the NetWorker software

Follow these procedures to install the NetWorker client, storage node, and server software.

The procedures differ for AIX, HP-UX, and Solaris.

AIX: Installing the NetWorker client, server, storage node software

Use the procedure to install the client, the storage node, and the server software and optional software such as the man pages and language packs.

NOTICE

The NetWorker software ships in a 32-bit version. Install this version on both the 32-bit and the 64-bit versions of the AIX operating system.

This table lists the software packages required for each installation type.

Table 16 List of NetWorker packages required for each installation type

Installation type:	Packages:
Client software	LGTONw.clnt.rte
Storage Node software	LGTONw.clnt.rte LGTONw.node.rte
Server software	LGTONw.clnt.rte LGTONw.node.rte LGTONw.serv.rte
Man pages	LGTONw.man.rte
Simplified Chinese language support	LGTONw.zh.rte
French language support	LGTONw.fr.rte

Table 16 List of NetWorker packages required for each installation type (continued)

Installation type:	Packages:
Japanese language support	LGTONw.ja.rte
Korean language support	LGTONw.ko.rte

Follow these steps to install the NetWorker client, server, and storage node software.

Procedure

1. Log in to the target host as root.
2. Create a backup copy of the operating system configuration files:

```
cp /etc/rpc /etc/rpc.orig
cp /etc/inittab /etc/inittab.orig
```

3. Use the **installp** program to install the NetWorker software from the system prompt.

For example:

```
installp -a -d /dir_pathname package [package]...
```

where:

- */dir_pathname* is the complete pathname of the directory that contains the installation software.
For example, if you extract the NetWorker software packages to the */software* directory, the *dir_pathname* is */software/aixpower*.
- *package [package]...* is a list of the software package required for the installation type.

For example, to install the NetWorker server software, the man pages and the Japanese language pack, type:

```
installp -a -d /nw_packages/aixpower LGTONw.clnt.rte
LGTONw.node.rte LGTONw.serv.rte LGTONw.man.rte LGTONw.ja.rte
```

4. Confirm that the required packages are successfully installed for each installation type:

```
lslpp -L all | grep -i lgto*
```

HP-UX: Installing the NetWorker client, server, and storage node software

Use *swinstall* to install the client, storage node, server software packages, and optional packages such as the man pages and language packs on HP-UX 11.x or HP-UX 11i platforms on IPF.

The *swinstall* utility uses the character mode or the *System Administration Manager (SAM)* utility. The character mode *swinstall* screens contain the same information as the *SAM* utility. The same choices are made with both formats.

This table lists the required NetWorker software packages for each NetWorker component.

Table 17 HP-UX software packages

To install the:	Select these packages:
Client software	NWr-Client
Storage node software	NWr-Client

Table 17 HP-UX software packages (continued)

To install the:	Select these packages:
	NWr-Node
Server software	NWr-Client NWr-Node NWr-Server
Man pages	NWr-Man
French language support	NWr-FR
Japanese language support	NWr-JA
Korean language support	NWr-KO
Simplified Chinese language support	NWr-ZH

Follow these steps to install the NetWorker client, server, and storage node software

Procedure

1. Log in to the target host as root.
2. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
3. Ensure that there is sufficient disk space on the host to contain both the compressed NetWorker software package and the fully uncompressed files.
4. Create a backup copy of the `rpc.org` configuration file:

```
cp /etc/rpc /etc/rpc.org
```

5. At the system prompt, type:

```
swinstall &
```

Note

If you use the character interface, do not include the `&` symbol.

6. Press **Enter**.
7. On the **Specify Source** window, provide the location of the NetWorker installation files:
 - a. In the **Source Depot Type** field, press **Enter** and select **Local Directory**.
 - b. In the **Source Host Name** field, ensure that the hostname of the target host is selected.
 - c. In the **Source Depot Path** field, type the full path of the `NetWorker.pkg` file.
For example:
`/tmp/hpux11_ia64/NetWorker.pkg`
8. Click **OK**.
9. On the **SD Install - Software Selection** window, select and mark the software packages required for the installation type.
10. Press **Enter**.
11. On the **Actions** menu, click **Install**.

12. Verify the status of the install analysis.

- To review the log file and verify that the `swinstall` program did not encounter errors, click **Logfile**.
- Correct any problems before you continue the installation.

13. To continue with the installation, click **OK**.

14. To review the log file for error or warning messages generated during installation, click **Logfile**.

15. When the installation completes, click **Done**.

16. Exit `swinstall`.

Solaris: Installing the NetWorker client, server, and storage node packages

Follow this procedure to install the client, storage node and server software packages as well as optional packages. For example, you can install the man pages and language packs.

This table lists the NetWorker daemons for each of the software components.

Table 18 NetWorker daemons

NetWorker packages	NetWorker daemons
NetWorker server	<code>nsrd</code> , <code>nsrexecd</code> , <code>nsrindexd</code> , <code>nsrmmdbd</code> , <code>nsrmmmd</code> , <code>nsrjobd</code> , <code>nsrmmgd</code> , <code>nsrlcpd</code> , <code>nsrlogd</code> , <code>nsrsnmd</code> , <code>nsrcpd</code>
NetWorker client	<code>nsrexecd</code> , <code>nsrpsd</code>
NetWorker storage node	<code>nsrexecd</code> , <code>nsrmmmd</code> , <code>nsrlcpd</code> , <code>nsrsnmd</code>
NetWorker Management Console server	<code>gstd</code> , <code>httpd</code> , <code>dsrv12</code> , <code>gstsnmpttrapd</code> (optional)

Use the following procedure to install the client, storage node, server software packages and the optional packages. For example, the man pages and language packs.

Procedure

1. Log in to the target host as root.
2. Download the NetWorker software package from the EMC Online Support Site and extract the packages to a temporary location on the target host.
3. Ensure that there is sufficient disk space on the host to contain both the compressed NetWorker software package and the fully uncompressed files.
4. Create a backup copy of the `rpc.org` configuration file:

```
cp /etc/rpc /etc/rpc.org
```

5. Display the list of available installation packages:

```
pkgadd -d path_to_install_files
```

The following packages are available:

```
1 LGTOclnt      NetWorker Client
2 LGTOfr       NetWorker French Language Pack
3 LGTOja       NetWorker Japanese Language Pack
4 LGTOko       NetWorker Korean Language Pack
5 LGTOlicm     NetWorker License Manager
6 LGTOman      NetWorker Man Pages
```

```

7 LGTONmc      NetWorker Management Console
8 LGTONode     NetWorker Storage Node
9 LGTOserv     NetWorker Server
10 LGTOzh      NetWorker Chinese Language Pack
Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?,??,q]:

```

6. Specify the package numbers that are required for the installation type.

NOTICE

When installing the NetWorker server and storage node software, the package order is important.

For example:

- For a NetWorker Client installation, type: **1**
- For a NetWorker Storage node installation, type: **1, 8**
- For a NetWorker server installation, type: **1, 8, 9**

Optional packages including the language packs and the man pages are specified in the **Select package** prompt by adding the associated package number after the minimum packages required for the installation type.

For example:

To install the man pages during a NetWorker server install, type: **1, 8, 9, 6**

7. When prompted to change the data directory, choose one of the following:
 - Accept the default directory.
 - Specify the directory.
8. The installation prompts you to specify the NetWorker server that can access the host. To update the list:
 - a. Type **y**.
 - b. Specify the shortname and FDQN for each NetWorker server, one per line, that requires access to the NetWorker host. The first entry in this file becomes the default NetWorker server.

When all of the NetWorker servers are specified, press **Enter** without specifying a NetWorker server name, to complete the process.

For example:

```

Enter a NetWorker server hostname [no more]: mynwserver
Enter a NetWorker server hostname [no more]: mynwserver.emc.com
Enter a NetWorker server hostname [no more]:

```

NOTICE

When no servers are specified, any NetWorker server can back up or perform a directed recovery to the host.

9. After the client package installation completes, additional packages are installed automatically.

It is not necessary to start the daemons after each package install:

- If the installation type is a NetWorker server, then start the daemons when prompted during the LGTOserv package installation.
- If the installation type is a NetWorker storage, then start the daemons when prompted during the LGTONode package installation.

10. During a NetWorker server upgrade only, stop the NetWorker daemons and start the daemons again. For example:

```
nsr_shutdown
/etc/init.d/networker start
```

11. To confirm that the NetWorker daemons started successfully, type:

```
ps -ef | grep nsr
```

Authorize the NetWorker Software

Use the following procedure to update the NetWorker software.

Procedure

1. If you removed the NetWorker module software before the NetWorker software update, reinstall the NetWorker module software. The appropriate module installation guide describes how to install the module software packages.
2. After you update the NetWorker software, EMC recommends that you:
 - a. Stop the NetWorker daemons on the NetWorker host.
 - b. Delete the `/nsr/tmp` directory.
 - c. Start the NetWorker daemons.
3. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

NOTICE

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Retaining startup script customizations

Use this procedure to add startup script customizations made in previous versions of the NetWorker software, to the new `nsrrc` file.

NetWorker 8.0 and later introduces support for a new environment variable file. This file, `nsrrc`, is sourced before starting the `nsrexecd` and `nsrd` processes. Subsequent NetWorker software updates do not overwrite this new file.

Follow this procedure to add environment variables that were previously defined in the NetWorker startup files to this new file.

Procedure

1. Review the configuration files for a list of defined environment variables.

NOTICE

Do not overwrite the new startup files with the contents of the `.orig` files. Add the old customizations to the new environment variable file.

This table provides a list of the names and locations of the configuration files on each operating system.

Table 19 Configuration files on UNIX

Operating system	Original files
AIX	/etc/inittab /etc/rpc /etc/rc.nsr
HP-UX	/sbin/init.d/networker
Linux	/etc/init.d/networker /etc/rc3.d/S95networker /etc/rc5.d/S95networker /etc/rc0.d/K05networker
Solaris	/etc/init.d/networker

2. Create a Bourne shell script file called `nsrrc` in the `/nsr` directory.
3. Add the required environment variables and the `export` command to the `nsrrc` file.

For example:

```
ENV_VAR_NAME=value
export ENV_VAR_NAME
```

4. Save the file.
5. Stop the NetWorker daemons:

```
nsr_shutdown
```

6. Start the NetWorker daemons:

- On Solaris and Linux, type:
`/etc/init.d/networker start`
- On AIX, type:
`/etc/rc.nsr`
- On HP-UX, type:
`/sbin/init.d/networker start`

NetWorker server only, updating the Clone Storage Node

When you update the NetWorker server software to NetWorker 8.1 and later, the NetWorker software automatically creates a new Clone storage node attribute for each existing Storage Node resource. The value in this attribute determines which storage node to use when writing clone data.

In the NetWorker 7.6.x and earlier software, the Clone storage node attribute was present in each NetWorker client resource. After a NetWorker server software update, the Clone storage node attribute is still present in each client resource, but the attribute is read-only. The NetWorker 8.1 server and later does not use this attribute to determine which storage node to use when the writing clone data for the client.

By default, the Clone storage node attribute for each storage node resource does not contain any values. If required, after updating the NetWorker server software, modify the Clone Storage Node attribute for each storage node. The section *Directing clones to a special storage node* in the *NetWorker Administration Guide* provides more information.

Optional, converting VCB client backups to VADP

The NetWorker 7.6 SP2 software and later supports a backup and recovery of VMware clients that uses the vStorage APIs for Data Protection (VADP) program. The NetWorker 7.6 SP2 and earlier software uses the VMware Consolidated Backups (VCB) program to protect VMware clients.

If you update the NetWorker server and the VM Proxy server from a version before NetWorker 7.6 SP2, use the `nsrvadpserv_tool` to convert virtual clients from VCB to VADP backups. The *NetWorker VMware Integration Guide* provides more information.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to
the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.
5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:
 - On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
4. Rename the `Config.xml.template` file to the following:
`Config.xml`
5. Start the NetWorker daemons.

Updating and configuring the Console server software

Perform these steps to update and configure previously installed Console server software.

Reviewing the Console server requirements

When you update the Console server software, the installation process automatically converts the SQLAnywhere database to a newer version.

A migration utility performs the conversion process:

- ◆ On Linux and UNIX: `gstdbupgrade.sh`
- ◆ On Windows: `gstdbupgrade.exe`

During the database conversion process, the migration utility:

- ◆ Automatically records the progress of the conversion in the `gstdbupgrade.log`.
- ◆ Displays the progress of the database conversion process to the console.

The conversion of a Console server database:

- ◆ Requires the that file system that contains the Console server database directory has available space that is equal to double the size of the current database.
- ◆ Can take several hours.
For example, it takes approximately 3 hours to migrate a 4.5 GB database on a dual core system with 16 GB RAM.
- ◆ Can be I/O and CPU intensive.
Avoid performing other resource intensive processes during a Console server database conversion.

The Console server software does not support the following previously supported operating systems:

- ◆ HP-UX ia64
- ◆ Windows 2003, 2003 SP1, 2003 R2, Windows 32-bit
- ◆ AIX 5.2, AIX 5.3
- ◆ Solaris 9, Solaris x86

If the Console server runs on one of these operating systems, you cannot update the Console server to the latest version. Perform one of the following tasks:

- ◆ Install a new Console server in the datazone on a supported operating system. To provide historical reports, keep the old Console server at the previous NetWorker version.
- ◆ Install a new Console server in the datazone on a supported operating system and move the Console server database and configuration files to the new Console server.
- ◆ Update the operating system to a supported version before updating the Console server software.

Optional, moving the Console server files

If you replaced the Console server in the datazone, move the NMC database and configuration files to the new Console server before installing the Console server software.

Procedure

1. On the current Console server, stop the `gstd` process on Linux or UNIX or the `gstd` service on Windows:
 - On AIX, type: `/etc/rc.gst stop`
 - On Linux and Solaris, type: `/etc/init.d/gst stop`
 - On HP-UX, type: `/sbin/init.d/gst stop`
 - On Windows: Stop the EMC GST service
2. Ensure the `httpd`, `gstd`, and `dbsrv9` processes are not running
 - Use the `kill -TERM` to stop the processes.
 - Do not use the `kill -9` command to stop the `dbsrv9` process.
3. Copy the contents of the Console server database directory from the current Console server to a new directory on the new Console server.

The Console server database directory defaults to the following locations:

- AIX, HP-UX, and Linux: `/opt/lgtonmc/lgto_gstb`
- Solaris: `/opt/LGTONmc/lgto_gstb`
- Windows: `installation_dir\Management\lgto_gstb`

Note

The `lgto_gstb` and `lgto_gst.log` files are binary files and `gstd_db.conf` is an ASCII file.

Install the Console server software

On Linux and UNIX, when the Console server is also the NetWorker server you must ensure that the `httpd`, `gstd`, and `dbsrv9` processes are not running and then install the NetWorker software.

Procedure

1. Ensure that the `httpd`, `gstd`, and `dbsrv9` processes are not running.
 - If `gstd` is running, then remove the Console server software.
 - If the `httpd` and `dbsrv9` processes are running and you removed the Console software, then use the `kill -TERM` to stop the processes. Do not use the `kill -9` command to stop the `dbsrv9` process.

Installing the NetWorker Console software

Follow these procedures to install the NetWorker Console software.

The procedures differ for AIX and Solaris.

AIX: Installing the Console server software

This section describes how to install the Console server software.

Procedure

1. Log in to the target host as root.
2. Rename the `.toc` file in the directory that contains the NetWorker software packages.
3. If you installed NetWorker client software on the host:

- Confirm that the NetWorker Remote Exec daemon, `nsrexecd`, is started:

```
ps -ef | grep nsr
```

- If the `nsrexecd` daemon is not started, type:

```
/etc/rc.nsr
```

4. Use the `installp` program to install the Console server software from the system prompt:

```
installp -a -d /dir_pathname LGTONw.clnr.rte LGTONmc.rte  
[packages]...
```

where:

- `/dir_pathname` is the complete pathname of the directory that contains the installation software.

For example, if you extracted the NetWorker software packages to the `/software` directory, the `dir_pathname` is `/software/aixpower`.

- `[packages]...` is a list of the optional software packages.

For example, to install the Console server software with the French language pack and the NetWorker client software package, type:

```
installp -a -d /software/aixpower LGTONw.clnr.rte LGTONmc.rte  
LGTONw.fr.rte
```

5. Specify the `LGTONw.clnr.rte` only if you did not previously install the NetWorker client package.
6. Confirm that the required package installation completed successfully:

```
lslpp -L all | grep -i lgto*
```

Solaris: Installing the NetWorker Console server software

Perform these steps as root to install the NetWorker Console software.

Procedure

1. For Solaris 10 and later, set the environment variable **NONABI_SCRIPTS** to **TRUE**:

```
NONABI_SCRIPTS=TRUE
export NONABI_SCRIPTS
```

2. If the NetWorker client software is installed on the host:

- Confirm that the `nsrexecd` daemon is running:

```
ps -ef | grep nsr
```

- If the `nsrexecd` daemon is not running, type:

```
/etc/init.d/networker start
```

3. Navigate to the directory that contains the extracted Console server package and display the list of available NetWorker packages:

```
pkgadd -d path_to_install_files
```

The following packages are available:

```
1 LGTOclnt      NetWorker Client
2 LGTOfr       NetWorker French Language Pack
3 LGTOja       NetWorker Japanese Language Pack
4 LGTOko       NetWorker Korean Language Pack
5 LGTOlicm     NetWorker License Manager
6 LGTOman      NetWorker Man Pages
7 LGTONmc      NetWorker Management Console
8 LGTONode     NetWorker Storage Node
9 LGTOserv     NetWorker Server
10 LGTOzh      NetWorker Chinese Language Pack
```

Select package(s) you wish to process (or 'all' to process all packages). (default: all) [?,??,q]:

4. At the **Select packages** prompt:

- If the NetWorker client software was not previously installed, type: **1, 7**.
- If the NetWorker client software is installed, type **7**.

5. Specify the directory to install the `LGTONmc` package.

For example:

```
/opt/LGTONmc
```

6. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server.

For example, use the default user/group.

```
[nobody/nobody]
```

7. For the web server port number, use the either of the following:

- The default port number (**9000**).
- A custom port number.

8. For the Console server, use the either of the following:

- The default port number (**9001**).
- A custom port number .

NOTICE

Valid port numbers are between **1024** and **49151**. Do *not* use port numbers that are already in use. For example, the Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**.

9. Specify the directory to use for the LGTONmc database. For example:

```
/opt/LGTONmc/lgto_gstdb
```

10. If the installation process detects an existing database, type **y** to retain the existing database when prompted.

11. If the installation process detects a NetWorker 7.6.x Console server database:

- a. To proceed with the installation and Console server database conversion, type **y**.
- b. Specify the location to store the database backup file. For example:

If the conversion fails, the following error message appears:

```
/opt/LGTONmc/lgto_gstdb
Install failed to upgrade the database <full path and database
name>.
Check the upgrade log <full path and log name file> for
details.
Please, fix any environment related errors mentioned in the log
and then run the script <full path to gstdbupgrade.sh> manually
to upgrade the database after the install is complete.
```

12. Specify the location of the NetWorker binaries. For example:

```
/usr/sbin
```

13. When prompted to start the Console server daemons:

- If the database conversion succeeds, type **y**.
- If the database conversion encountered errors, type **n**.

14. To proceed with the installation of the Console server package, type **y**.

15. Update the **MANPATH** variable for the Console server man pages.

For example:

```
MANPATH=$MANPATH:/opt/LGTONmc/man
export MANPATH
```

Reviewing the Console server database conversion status

This section describes how to determine the status of the Console server database conversion and how to attempt another database conversion if the conversion fails.

To confirm that the conversion is successful:

- ◆ Review the `gstd_db.conf` file, located in the following directory by default:
 - Windows: `NMC_installation_directory\Management\lgto_gstdb`
 - AIX and Linux: `/opt/lgtonmc/lgto_gstdb`
 - Solaris: `/opt/LGTONmc/lgto_gstdb`
- ◆ Search for the following line that denotes a successful database conversion:


```
db_format_12=yes
```

When the Console server database conversion fails, a message similar to the following appears:

```
Install failed to upgrade the database <full path>. Check the
install
log <full path> for details. Please fix any environment related
errors
mentioned in the log and then run the script <full path to script>
manually to upgrade the database after the install is complete.
```

If you see this message, perform the following procedure.

Procedure

1. Review the `gstdbupgrade.log` file and correct the errors.

The `gstdbupgrade.log` appears in the following directories, by default:

- Solaris: `/opt/LGTONmc/logs`
- AIX and Linux: `/opt/lgtonmc/logs`
- Windows: `NMC_installation_directory\Management\GST\logs`

2. Start the database conversion manually:

- On Linux and UNIX, the Console server software installation completes when a database conversion fails. Type the following command to start the database conversion:

```
gstdbupgrade.sh -p NMC_Database_dir -o log_file_directory -b
Backup_NMC_database_dir
```

where:

- `gstdbupgrade.sh` appears in the `/opt/lgtonmc/sybase/bin` directory on AIX and Linux by default.
- `gstdbupgrade.sh` appears in the `/opt/LGTONmc/sybase/bin` directory on Solaris by default.
- `NMC_database_dir` is the location of the Console server database. On AIX and Linux the directory is `/opt/lgtonmc/lgto_gstdb`. On Solaris the directory is `/opt/LGTONmc/lgto_gstdb`.
- `-o log_file_directory` is optional. Use this option to direct the database conversion log file to an alternate location.
- `-b Backup_NMC_database_dir` is optional. Use this option to specify an alternate location or path for the backup copy of the original NMC database. By default, the conversion process stores the backup copy in the same location as the original database.
- On Windows, the installation process prompts you to continue or cancel the installation when the conversion fails. After you correct the errors in the `gstdbupgrade.log` file, try to convert the database in one of the following ways:
 - If you cancelled the installation of the NetWorker and Console server software then install the software again to convert the Console server database.
 - If you completed the installation of the NetWorker and Console server software then run `gstdbupgrade.exe` located in `NMC_installation_directory\Management\GST\sybase\bin` to manually convert the database.

Configuring the Console server software

Use the `nmc_config` command to configure the Console server software program.

Procedure

1. Start the configuration script:
`/opt/lgtonmc/bin/nmc_config`
2. Specify a non-root user/group with limited privileges. The Console server uses this user/group to run the web server. For example, use the default user/group:
`[nobody/nobody]`
3. For the web server port number, use the default port number (**9000**) or use a custom port number. Valid port numbers are between **1024** and **49151**.
4. For the Console server, use the default port number (**9001**) or use a custom port number. Valid port numbers are between **1024** and **49151**.

Note

Do not use port numbers that are already in use. For example: The Console server uses port **2638** for TDS protocol communications with the Console database. The preferred port for EMC Data Protection Advisor product is **9002**

5. Specify the directory to use for the lgtonmc database. For example, `/opt/lgtonmc/lgto_gstdb`.
6. If the installation process detects an existing database, then type **y** to retain the existing database.
7. If the installation process detects a NetWorker 7.6.x Console server database:
 - a. To continue with the installation and Console server database conversion, type **y**.
 - b. Specify the location to store the database backup file, for example: `/opt/lgtonmc/lgto_gstdb`.

If the conversion fails, then a message similar to the following appears:

```
Install failed to upgrade the database <full path and database name>. Check the upgrade log <full path and log name file> for details.
Please, fix any environment related errors mentioned in the log and then run the script <full path to gstdbupgrade.sh> manually to upgrade the database after the install is complete.
```

8. Specify the location of the NetWorker binaries. For example:
`/usr/sbin`
9. When prompted to start the Console server daemons:
 - If the database conversion is successful, type **y**.
 - If the database conversion encountered errors, type **n**.
10. To continue with the installation of the Console server package, type **y**.
11. Update the **MANPATH** variable for the Console server man pages.

For example:

```
MANPATH=$MANPATH:/opt/lgtonmc/man
export MANPATH
```

Reconfiguring LDAP authentication

Use this procedure after you update a Console server that uses LDAP authentication.

When the Console server uses LDAP authentication, attempts to log in to the NMC server after an update might fail with the error:

```
Problem contacting server Servername: Connection refused:connect
```

The EMC GST daemon may also stop.

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/management/logs`
 - Windows: `NMC_installation_directory\management\logs`

2. Render the `gstd.raw` log file and save the output to a text file:

```
nsr_render_log -pathmey gstd.raw 1>output.txt 2>&1
```

3. Review the `output.txt` file. If you see the following error, reconfigure LDAP authentication to correct the issue:

```
acm: External directory library initialization failed
```

To reconfigure LDAP, on the Console server perform these steps:

- a. Access the `cst` folder. The location of the folder differs for Linux, UNIX, and Windows:
 - On Linux and UNIX: `NMC_installation_directory/gst/cst`
 - On Windows: `NMC_installation_directory/cst`
- b. Move the following files from the `cst` folder to a temporary location:
 - `config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`
- c. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
- d. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

 - a. Set the Environment Variable `GST_RESET_PW` to a value of 1.
 - b. Start the EMC GST service.
 - c. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.
- e. Reconfigure the Console server to use LDAP authentication. The *NetWorker Security Configuration Guide* describes how to reconfigure LDAP authentication.
- f. If set, delete the `GST_RESET_PW` environment variable. This step prevents a password reset at each Console server login attempt.

CHAPTER 10

Updating from NetWorker 7.6.x for Windows

This chapter includes the following sections:

- ◆ [Roadmap for updating the NetWorker software on Windows](#)..... 110
- ◆ [Updating the NetWorker software](#)..... 110
- ◆ [Updating and configuring the Console server software](#)..... 114

Roadmap for updating the NetWorker software on Windows

Updating the NetWorker software requires updating the NetWorker software and configuring the Console server, if used.

Follow these procedures to update the software:

- ◆ [Updating the NetWorker software on page 110](#)
- ◆ [Updating and configuring the Console server software on page 114](#)

Updating the NetWorker software

Follow these procedures to update the NetWorker software, which includes the client, server, and storage node.

Considerations for updating the NetWorker software

Before updating from NetWorker 7.6.x, consider the following.

- ◆ When updating the NetWorker software from 7.6.x, some Linux operating systems and the Windows operating system allow you to update the NetWorker software without removing the previous version.
- ◆ Update each NetWorker storage node before you update the NetWorker server.
- ◆ After you update the NetWorker server, you must restart the NetWorker services.
- ◆ The NetWorker 7.6.x and earlier installation process made modifications to `syslog.conf` file on UNIX hosts. The uninstall process removes entries made to this file. Before you remove the NetWorker software, back up the `syslog.conf` file.
- ◆ The NetWorker 8.1 and later installation process does not modify the `syslog.conf` file.

Backing up the LDAP configuration

Before you update the NetWorker server, backup the `cst` folder to retain configuration information.

Procedure

1. Connect to the NetWorker server and stop the NetWorker services.
2. Create a backup copy of the of the following directory. The directory differs for Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`

Determining the NetWorker version on the storage nodes

Before you update the NetWorker server software, perform these steps to determine the NetWorker version on the storage node. The most recent NetWorker server disables NetWorker 7.6.x and earlier storage nodes.

Procedure

1. Update each NetWorker storage node.

2. Ensure that each NetWorker storage node in the datazone runs the latest NetWorker software.
3. Use the nsradmin program as root on UNIX or as administrator on Windows to determine the NetWorker version installed on the storage nodes in a datazone:
 - a. From a command prompt, type:


```
nsradmin
```
 - b. Set the attribute type to nsr storage node:


```
nsradmin> . type: nsr storage node
```
 - c. Display the hostname of the storage node and the NetWorker software version:


```
nsradmin> show name;version
```
 - d. Display a list of every storage node in the datazone and the corresponding version of the NetWorker software:


```
nsradmin> print
```
 - e. Close the nsradmin program:


```
nsradmin> quit
```

For example:

```
nsradmin> . type: nsr storage node
Current query set
nsradmin> show name;version
nsradmin> print
          name: mystoragenode.domain.com;
          version: 7.6.3;
nsradmin> quit
```

Updating the NetWorker software

You can use the `setup.exe` command to update the NetWorker client, server, storage node and Console server software without first removing the previous version of the software.

Procedure

1. Log in to the target host with a user that has administrator privileges.
2. In the directory that contains the extracted NetWorker software, run `setup.exe` in the `networkr` subdirectory.
3. On the **Choose Setup Language** window, select a language and click **OK**.
4. On the **Welcome to NetWorker Installation** window, click **Next**.
5. On the **Ready to update** window, click **Update**.
6. For the Console server only:
 - a. On the **Welcome to NetWorker Management Console Upgrade** window, click **Next**.
 - b. On the **Database Migration Information** window, click **Next**.
 - Optionally, click **Change** and select a new directory in which to save a copy of the Console server database.
 - Click **Next**.
7. Review the information in the **Product Configuration Summary** window, and click **Next**.
8. In the **Ready to upgrade the Program** window, click **Upgrade**.

If the database conversion fails, then a message similar to the following appears:

```
Database upgrade failed. Please see C:\Program Files
(x86)\Legato\Management\GST\logs\gstdbupgrade.log for details. You
can continue finishing installation, then convert the database
manually, or exit installation now. Do you want to continue with
the
installation?
```

- If you select **Yes**, the NetWorker and Console server software installation continues.
 - If you select **No**, the NetWorker and Console server software installation fails. The software is rolled back to the previous version of the NetWorker and Console server software.
9. On the **NetWorker Management Console Setup Completed** window:
 - a. Clear the following checkbox: **Launch the console client in the default browser immediately after exiting the InstallShield Wizard**.
 - b. Click **Next**.
 10. If you removed the NetWorker module software before you updated the NetWorker software, reinstall the NetWorker Module software. The appropriate module install guide describes how to install the module software packages.
 11. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

Note

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

NetWorker server only, updating the Clone Storage Node

When you update the NetWorker server software to NetWorker 8.1 and later, the NetWorker software automatically creates a new Clone storage node attribute for each existing Storage Node resource. The value in this attribute determines which storage node to use when writing clone data.

In the NetWorker 7.6.x and earlier software, the Clone storage node attribute was present in each NetWorker client resource. After a NetWorker server software update, the Clone storage node attribute is still present in each client resource, but the attribute is read-only. The NetWorker 8.1 server and later does not use this attribute to determine which storage node to use when the writing clone data for the client.

By default, the Clone storage node attribute for each storage node resource does not contain any values. If required, after updating the NetWorker server software, modify the Clone Storage Node attribute for each storage node. The section *Directing clones to a special storage node* in the *NetWorker Administration Guide* provides more information.

Optional, converting VCB client backups to VADP

The NetWorker 7.6 SP2 software and later supports a backup and recovery of VMware clients that uses the vStorage APIs for Data Protection (VADP) program. The NetWorker

7.6 SP2 and earlier software uses the VMware Consolidated Backups (VCB) program to protect VMware clients.

If you update the NetWorker server and the VM Proxy server from a version before NetWorker 7.6 SP2, use the `nsrvadpserv_tool` to convert virtual clients from VCB to VADP backups. The *NetWorker VMware Integration Guide* provides more information.

Restoring LDAP configuration

After the NetWorker server software upgrade completes, you can use LDAP authentication to connect to the Console server and NetWorker server, but you cannot access NetWorker server resources and manage the NetWorker server.

When you attempt to redistribute the LDAP configuration, you will see the following error message:

```
Permission denied. Errors encountered while adding new authorities to the config file
```

When the NetWorker server daemon starts, the following error message appears in the `daemon.raw` file:

```
RAP critical csp configuration service not initialized
```

To resolve this issue, you can perform either of the following tasks:

- ◆ Restore a backup copy of the LDAP configuration file.
- ◆ Reset the LDAP authentication configuration.

Restoring the LDAP configuration

After you update a NetWorker server that uses LDAP authentication, restore the authentication configuration.

Procedure

1. Stop the NetWorker services on the NetWorker server.
2. Rename the `Config.xml` file. The file is located in different locations on Linux, UNIX, and Windows:
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
3. From the backup directory of the `cst` folder, copy the `Config.xml` file to the following directories on the NetWorker server.
 - On a Linux or UNIX server: `NetWorker_install_dir/cst`
 - On a Windows server: `NetWorker_install_dir\nsr\cst`
4. Confirm that the `upgrade_cst.tag` file exists in the directory. If the file does not exist, create an empty file.
5. Start the NetWorker services on the NetWorker server.

Resetting the LDAP configuration

After you update the NetWorker server, you can reset the LDAP configuration if you do not have a backup of the `cst` folder. Perform this task from the NetWorker server.

Procedure

1. Stop the NetWorker daemons.
2. Access the `cst` folder. The location of the folder differs for Linux, UNIX and Windows:

- On Linux or UNIX: `NetWorker_install_dir/cst`
 - On Windows: `NetWorker_install_dir\nsr\cst`
3. From the `cst` folder, delete the following files:
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.clb.bak.FCD`
 - `csp.clb.FCD`
 - `Config.xml`
 4. Rename the `Config.xml.template` file to the following:
`Config.xml`
 5. Start the NetWorker daemons.

Updating and configuring the Console server software

Perform these steps to update and configure previously installed Console server software.

Reviewing the Console server requirements

When you update the Console server software, the installation process automatically converts the SQLAnywhere database to a newer version.

A migration utility performs the conversion process:

- ◆ On Linux and UNIX: `gstdbupgrade.sh`
- ◆ On Windows: `gstdbupgrade.exe`

During the database conversion process, the migration utility:

- ◆ Automatically records the progress of the conversion in the `gstdbupgrade.log`.
- ◆ Displays the progress of the database conversion process to the console.

The conversion of a Console server database:

- ◆ Requires the that file system that contains the Console server database directory has available space that is equal to double the size of the current database.
- ◆ Can take several hours.
For example, it takes approximately 3 hours to migrate a 4.5 GB database on a dual core system with 16 GB RAM.
- ◆ Can be I/O and CPU intensive.
Avoid performing other resource intensive processes during a Console server database conversion.

The Console server software does not support the following previously supported operating systems:

- ◆ HP-UX ia64
- ◆ Windows 2003, 2003 SP1, 2003 R2, Windows 32-bit
- ◆ AIX 5.2, AIX 5.3
- ◆ Solaris 9, Solaris x86

If the Console server runs on one of these operating systems, you cannot update the Console server to the latest version. Perform one of the following tasks:

- ◆ Install a new Console server in the datazone on a supported operating system. To provide historical reports, keep the old Console server at the previous NetWorker version.
- ◆ Install a new Console server in the datazone on a supported operating system and move the Console server database and configuration files to the new Console server.
- ◆ Update the operating system to a supported version before updating the Console server software.

Optional, moving the Console server files

If you replaced the Console server in the datazone, move the NMC database and configuration files to the new Console server before installing the Console server software.

Procedure

1. On the current Console server, stop the `gstd` process on Linux or UNIX or the `gstd` service on Windows:
 - On AIX, type: `/etc/rc.gst stop`
 - On Linux and Solaris, type: `/etc/init.d/gst stop`
 - On HP-UX, type: `/sbin/init.d/gst stop`
 - On Windows: Stop the EMC GST service
2. Ensure the `httpd`, `gstd`, and `dbsrv9` processes are not running
 - Use the `kill -TERM` to stop the processes.
 - Do not use the `kill -9` command to stop the `dbsrv9` process.
3. Copy the contents of the Console server database directory from the current Console server to a new directory on the new Console server.

The Console server database directory defaults to the following locations:

- AIX, HP-UX, and Linux: `/opt/lgtonmc/lgto_gstb`
- Solaris: `/opt/LGTONmc/lgto_gstb`
- Windows: `installation_dir\Management\lgto_gstb`

Note

The `lgto_gstdb` and `lgto_gst.log` files are binary files and `gstd_db.conf` is an ASCII file.

Updating the NetWorker and Console software

You can use the `setup.exe` command to update the NetWorker client, server, storage node, and Console server software without first removing the previous version of the software.

Procedure

1. Log in to the target host with a user that has administrator privileges.
2. For NetWorker 7.6.5 only, stop the NetWorker PowerSnap service.

3. In the directory that contains the extracted NetWorker software, run setup.exe in the networker subdirectory.
4. On the **Choose Setup Language** window, select a language and click **OK**.
5. On the **Welcome to NetWorker > Installation** window, click **Next**.
6. On the **Ready to update** window, click **Update**.
7. For Console server only:
 - a. On the **Welcome to NetWorker Management Console Upgrade** window, click **Next**.
 - b. On the **Database Migration Information** window:
 - Optionally, click **Change** and select a new directory in which to save a copy of the NMC server database.
 - Click **Next**.
8. Review the information in the **Product Configuration Summary** window and then click **Next**.
9. On the **Ready to upgrade the Program** window, click **Upgrade**.

If the database conversion fails, then a message similar to the following appears:

```
Database upgrade failed. Please see C:\Program Files (x86)\Legato
\Management\GST\logs\gstdbupgrade.log for details. You can
continue finishing installation, then convert the database
manually, or exit installation now. Do you want to continue with
the installation?
```

- If you select **Yes**, the NetWorker and Console server software installation continues.
 - If you select **No**, the NetWorker and Console server software installation fails. The software is rolled back to the previous version of the NetWorker and Console server software.
10. On the **NetWorker Management Console Setup Completed** window:
 - a. Clear the **Launch the console client in the default browser immediately after exiting the InstallShield Wizard** checkbox.
 - b. Click **Finish**.
 11. On the **NetWorker setup complete** window, click **OK** to complete the install.

Note

If you removed the NetWorker module software before you updated the NetWorker software, you must reinstall the NetWorker Module software. The appropriate module installation guide describes how to install the module software packages.

12. Authorize the NetWorker server.

The NetWorker software adds a required update enabler code to the NetWorker server configuration. You cannot delete this enabler code. The update enabler code expires 45 days after the NetWorker server update, unless you use capacity-based licensing.

Contact EMC Licensing within 45 days of upgrading the NetWorker server to permanently authorize the update enabler. The *NetWorker Licensing Guide* describes how to authorize an update enabler and how to use the capacity-based license model.

Note

If the update enabler expires or you do not apply the authorization code, the NetWorker software will not function at the new release level.

Reviewing the Console server database conversion status

This section describes how to determine the status of the Console server database conversion and how to attempt another database conversion if the conversion fails.

To confirm that the conversion is successful:

- ◆ Review the `gstdb.conf` file, located in the following directory by default:
 - Windows: `NMC_installation_directory\Management\lgto_gstdb`
 - AIX and Linux: `/opt/lgtonmc/lgto_gstdb`
 - Solaris: `/opt/LGTONmc/lgto_gstdb`
- ◆ Search for the following line that denotes a successful database conversion:
`db_format_12=yes`

When the Console server database conversion fails, a message similar to the following appears:

```
Install failed to upgrade the database <full path>. Check the
install
log <full path> for details. Please fix any environment related
errors
mentioned in the log and then run the script <full path to script>
manually to upgrade the database after the install is complete.
```

If you see this message, perform the following procedure.

Procedure

1. Review the `gstdbupgrade.log` file and correct the errors.

The `gstdbupgrade.log` appears in the following directories, by default:

- Solaris: `/opt/LGTONmc/logs`
 - AIX and Linux: `/opt/lgtonmc/logs`
 - Windows: `NMC_installation_directory\Management\GST\logs`
2. Start the database conversion manually:
 - On Linux and UNIX, the Console server software installation completes when a database conversion fails. Type the following command to start the database conversion:

```
gstdbupgrade.sh -p NMC_Database_dir -o log_file_directory -b
Backup_NMC_database_dir
```

where:

- `gstdbupgrade.sh` appears in the `/opt/lgtonmc/sybase/bin` directory on AIX and Linux by default.
- `gstdbupgrade.sh` appears in the `/opt/LGTONmc/sybase/bin` directory on Solaris by default.
- `NMC_database_dir` is the location of the Console server database. On AIX and Linux the directory is `/opt/lgtonmc/lgto_gstdb`. On Solaris the directory is `/opt/LGTONmc/lgto_gstdb`.

- `-o log_file_directory` is optional. Use this option to direct the database conversion log file to an alternate location.
- `-b Backup_NMC_database_dir` is optional. Use this option to specify an alternate location or path for the backup copy of the original NMC database. By default, the conversion process stores the backup copy in the same location as the original database.
- On Windows, the installation process prompts you to continue or cancel the installation when the conversion fails. After you correct the errors in the `gstdbupgrade.log` file, try to convert the database in one of the following ways:
 - If you cancelled the installation of the NetWorker and Console server software then install the software again to convert the Console server database.
 - If you completed the installation of the NetWorker and Console server software then run `gstdbupgrade.exe` located in `NMC_installation_directory\Management\GST\sybasa\bin` to manually convert the database.

Reconfiguring LDAP authentication

Use this procedure after you update a Console server that uses LDAP authentication.

When the Console server uses LDAP authentication, attempts to log in to the NMC server after an update might fail with the error:

```
Problem contacting server Servername: Connection refused:connect
```

The EMC GST daemon may also stop.

Procedure

1. From a command prompt change to the following directory:
 - Linux and UNIX: `NMC_installation_directory/management/logs`
 - Windows: `NMC_installation_directory\management\logs`
2. Render the `gstd.raw` log file and save the output to a text file:


```
nsr_render_log -pathmey gstd.raw 1>output.txt 2>&1
```
3. Review the `output.txt` file. If you see the following error, reconfigure LDAP authentication to correct the issue:

```
acm: External directory library initialization failed
```

To reconfigure LDAP, on the Console server perform these steps:

- a. Access the `cst` folder. The location of the folder differs for Linux, UNIX, and Windows:
 - On Linux and UNIX: `NMC_installation_directory\gst\cst`
 - On Windows: `NMC_installation_directory/cst`
- b. Move the following files from the `cst` folder to a temporary location:
 - `config.xml`
 - `csp.clb`
 - `csp.clb.bak`
 - `csp.cred`
 - `upgrade_cst.tag`

- c. Rename the `Config.xml.template` file to `Config.xml`. The Console server starts in native authentication mode.
- d. Log in with the NMC Administrator user and the password that you defined before you configured NMC to use LDAP.

If you do not remember this password:

- a. Set the Environment Variable `GST_RESET_PW` to a value of 1.
- b. Start the EMC GST service.
- c. Log in to the Console server with the administrator username and the password administrator. If prompted, create a new password for the administrator user.
- e. Reconfigure the Console server to use LDAP authentication. The *NetWorker Security Configuration Guide* describes how to reconfigure LDAP authentication.
- f. If set, delete the `GST_RESET_PW` environment variable. This step prevents a password reset at each Console server login attempt.

PART 4

Updating Methods and Downgrading NetWorker

Refer to the following chapters to update the NetWorker software by using the Client Push feature, update from a 32-bit version of the NetWorker software to a 64-bit version, or downgrade the NetWorker software.

This section contains the following chapters:

[Chapter 11, "Updating NetWorker Clients by using the Client Push Feature"](#)

[Chapter 12, "Updating from a Different Bit Version of NetWorker"](#)

[Chapter 13, "Downgrade to a Previous NetWorker Release"](#)

CHAPTER 11

Updating NetWorker Clients by using the Client Push Feature

This chapter includes the following sections:

- ◆ [Client Push requirements](#)..... 124
- ◆ [Updating NetWorker using Client Push](#)..... 124
- ◆ [Troubleshooting a Client Push operation](#)..... 134

Client Push requirements

Before you use Client Push, ensure that the datazone satisfies the Client Push requirements.

Note

You cannot use Client Push to update a clustered host, an NMM 2.4.x or earlier client, a NetWorker server, an EMC License Manager server, a Console server, a PowerSnap client, or an OS-X client.

This table summarizes the Client Push datazone requirements.

Table 20 NetWorker Client Push requirements

NetWorker server and target host environment	Client Push requirements
NetWorker server and target host configuration	<ul style="list-style-type: none"> The nsrexecd process must run on the target host. At least one client instance exists on the NetWorker server.
Supported NetWorker products on the target host	<ul style="list-style-type: none"> 7.3 and later client 7.3 and later storage node 7.3 and later language packs 7.3 and later man pages NetWorker Module for Databases and Applications (NMDA) NetWorker Module for Microsoft 3.0 in a non-clustered environment
NetWorker server on Windows Server 2008	The Administrator and SYSTEM users require write access to the temp folders defined by the TEMP and TMP environment variables. Software updates, additions to the repository, and inventory operations require write access.
Supported operating systems on the NetWorker server	<ul style="list-style-type: none"> Linux x86-64 HP-UX IA-64 IBM AIX MS Windows x86-64 Solaris SPARC, AMD64

Updating NetWorker using Client Push

Use the software distribution feature, Client Push, to update the NetWorker and module software on NetWorker hosts in the datazone from the NetWorker server.

By using this feature, you do not need to log in to each host and manually uninstall the old NetWorker software version and install the new NetWorker software version.

Preparing the Media Kit Location

During a Client Push operation, the NetWorker server obtains the source NetWorker software packages from the software repository, located on the NetWorker server, and then the process pushes the software to the target host.

The Media Kit Location contains the source NetWorker software packages used to update the NetWorker target hosts. You can specify a Media Kit Location that is a NetWorker software DVD or a directory that contains the extracted software packages. Ensure that the path to the Media Kit Location does not contain spaces or the following special characters:) (, ' .

If you place multiple versions of the NetWorker software in the Media Kit Location, create separate subdirectories for each version to avoid overwriting files and directories. Each extracted package for each NetWorker version has an identical directory structure and the same filenames.

There are two different scenarios to consider when preparing the software repository to update the NetWorker software by using Client Push:

- ◆ The NetWorker server is the same operating system as the target hosts
- ◆ The NetWorker server and target host operating systems differ

The NetWorker server is the same operating system as the target hosts

When the target hosts are the same operating system as the server, extract each software packages to the Media Kit Location. The Media Kit Location must reside on a file system that is local to the NetWorker server.

The NetWorker server and target host operating systems differ

When the operating system of the target hosts differs from the NetWorker server, for example, when a Windows NetWorker server updates a UNIX client, you must configure a proxy host to store the cross platform packages.

The Proxy Media Kit Location is the directory on the proxy host that contains the cross platform software packages.

Follow these guidelines when configuring a proxy host:

- ◆ Use the same platform as the cross platform packages.
For example, if the NetWorker server is a Linux host, use a Windows proxy host to update Windows x86, Windows x64, and Windows ia64 clients.
- ◆ Install the NetWorker 7.6 or later client software.
- ◆ Create a client instance for the host on the NetWorker server.
- ◆ Create a media kit location that resides on a local file system and uses a path that does not contain spaces.
- ◆ The Proxy Media Kit Location should be locally available on the proxy host.
- ◆ Ensure that the NetWorker packages in the Proxy Media Kit Location are the same version as the packages in the Media Kit Location on the NetWorker server.
When the packages differ, the update process indicates that the client software will be updated to the version that is in the NetWorker server Media Kit Location. However, the client is updated to the version in the Proxy Media Kit location.

Preparing the Proxy Media Location

Use this procedure to prepare the Proxy Media Location.

Procedure

1. On the NetWorker server, extract each compressed software package into the Media Kit Location.
2. On the proxy host:
 - a. Create a directory for the Proxy Media Kit Location.
 - b. Extract a copy of the cross platform software packages to the Proxy Media Kit Location.

For example, when a Linux NetWorker server updates Windows x86, Windows x64, and Windows ia64 NetWorker clients, you must extract the Windows x86, Windows x64, and Windows ia64 packages to the Proxy Media Kit location.

Preparing the software repository

Before you can use Client Push to update the NetWorker software, you must add the information about the NetWorker packages from the Media Kit Location into the Client Push software repository database.

You can use the Software Administration Wizard GUI or the `nsrpush` program to prepare the software repository database.

Adding software to the repository by using the Software Administration Wizard

Use the Software Administration Wizard in NMC to add software to the Client Push software repository.

Procedure

1. Login to the NMC console with a user that is both an NMC administrator and a member of the **Application administrators** user group on the NetWorker server.
2. Connect to the NetWorker server in NMC.
3. In the **Configuration** menu, select **Software Administration Wizard**.
4. On the **Welcome to the Software Administration Wizard** window, click **Next**.
5. On the **Select Operation** window:
 - a. Select **Add or remove products from my software repository**.
 - b. Click **Next**.
6. On the **Software Repository Operations** window:
 - a. Select **Add software products to the repository**.
 - b. Click **Next**.
7. On the **Create Software Repository** window:
 - a. Click **Yes**.
 - b. Click **Next**.
8. If this is the first time you are creating the repository, specify the Repository location, and click **Next**.

The default location differs on Windows and UNIX:

- Windows: `NetWorker_install_dir\repository`
 - UNIX: `/nsr/repository`
9. On the **Select platform type** window:
 - a. Select the platform type of the software to add to the repository.
 - b. Click **Next**.
 10. On the **Add software products to repository** window:
 - a. Click **Yes**.
 - b. Click **Next**.
 11. On the **Media Kit Location** window:
 - a. Specify the path to the **Media Kit location**.
 - b. Click **Next**.
 12. The **Select Products** window contains a list of detected software packages in the repository:
 - a. Select the products to add to the repository.
 - b. Click **Next**.

NOTICE

[Troubleshooting a Client Push operation on page 134](#) provides more information if you do not see all of the products in the Media Kit Location or you see duplicate packages.

13. If you selected cross platform products, then the **Host and Media Kit Location** window appears.
 - a. Specify the name of the Proxy host and the location of extracted software packages on the proxy.
 - b. Ensure the cross-platform path that you specify includes the subdirectory that contains the metafile.

For example, if the directory on the proxy client that contains the metafiles is `C:\media\win_x64`, specify this complete path.
 - c. Click **Next**.

NOTICE

Once started, you cannot cancel the add software to the repository operation.

14. In the **Message** window, click **OK**.

NOTICE

If a `usam` error appears, then review the `nsrccd.raw` for error messages.

15. Confirm that the wizard added the software to the repository. The default location differs on Windows and UNIX:
 - Windows: `NetWorker_install_dir\repository`
 - UNIX: `/nsr/repository`

Adding software to the repository by using the nsrpush program

Log in to the NetWorker server with the root user on UNIX or the administrator user on Windows, and use the **nsrpush** program to add software to the software repository database.

Procedure

1. Review the list of extracted products in the media kit location. The command to view the Windows and UNIX products differ:

- For UNIX software products, type:
`nsrpush -L -U -m media_kit_location`

- For Windows software products, type:
`nsrpush -L -W -m media_kit_location`

2. Use the **nsrpush** command to add packages, one at time, to the repository:

```
nsrpush -a -p Product_Name -v version -P platform -R repo_location
-U|-W -m media_kit_location -c cross_platform_client -C
cross_platform_media_kit_location
```

where:

- *Product_Name* is the name of the product:
 - NetWorker
 - NetWorker Module for Microsoft
 - NetWorker Module for Databases and Applications

Note

Product names are case sensitive.

- *version* is the version of the software product, for example: **8.1**.
- *platform* is the operating system platform of the package, for example: **win_x64** or **win_x86**.
- **-Rrepo_location** specifies the path to the repository. Specify this option when you add software to the repository for the first time. The default location differs on Linux, UNIX, and Windows:
 - On Linux and UNIX: `/nsr/repository`.
 - On Windows: `NetWorker_install_dir\repository`
- **-U** specifies a NetWorker server on UNIX and **-W** specifies a NetWorker server on Windows. Use the appropriate option for the NetWorker server.
- **-m media_kit_location** is the path to the media kit. Use this option if you are not adding cross platform packages.
- **-c cross_platform_client** specifies the hostname of the proxy host. Use this option only when you add cross platform packages.
- **-Ccross_platform_media_kit_location** specifies the location of the proxy media kit location. Use this option only when you add cross platform packages.

Note

Once started, you cannot cancel the add software to the repository operation.

Adding a 64-bit Solaris package to the repository on Windows

Use this procedure to add the 64-bit Solaris package to a repository on a Windows NetWorker server host.

Add the 64-bit Solaris package to a repository on a Windows NetWorker server host, under the following scenario:

- ◆ The Media Kit Location is `D:\temp\downloads`.
- ◆ The Proxy Media Kit Location on the cross-platform host `solaris_host` is `/tmp/prod`.

Type the following command:

```
nsrpush -a -p NetWorker -v 8.1 -P solaris_64 -U -m "D:\temp\downloads"
-c "solaris_host" -C /tmp/prod
```

Adding a 64-bit Windows package to the repository on UNIX

Use this procedure to add the 64-bit Windows package to the repository to a NetWorker server on UNIX.

Add the 64-bit Windows package to the repository to a NetWorker server on UNIX under the following scenario.

- ◆ The media kit location is `/tmp/prod`.
- ◆ The Proxy Media Kit Location on the cross-platform host `windows_host` is `D:\temp\downloads`.

Type the following command:

```
nsrpush -a -p NetWorker -v 8.1 -P solaris_64 -W -m /tmp/prod -c
"windows_host" -C "D:\temp\downloads"
```

Inventorying the target hosts for installed products

Before you can update the NetWorker software on a host, you must inventory the host to determine the installed versions of NetWorker software.

Use the **Software Configuration Wizard** or the `nsrpush` program to inventory target hosts.

Inventorying installed products by using the Software Administration Wizard

Use the Software Administration Wizard in NMC to generate an inventory of NetWorker software installed on the target hosts.

Procedure

1. Start the **Software Administration Wizard** and click **Next**.
2. In the **Select Operation** window:
 - a. Select **Discover the currently installed software products on my NetWorker clients**.
 - b. Click **Next**.
A list of the clients configured on the NetWorker server appears.
3. In the **Select Clients for Inventory** window, select the required clients, and click **Next**.

NOTICE

The inventory of a client is valid at the time when you last ran the inventory operation. To ensure that the Wizard has the most current software inventory for a client, reinventory clients whose status is Yes in the Already Invented column.

4. In the **Client Inventory Started** window, accept the default option, **Yes**.
5. Click **Next** to monitor the inventory operation.

The **Monitor Activity** window appears and provides the status of the inventory job in the top table and the status of each client inventory operation in the bottom window for the selected inventory job. When the inventory job contains many clients, the job might take awhile to complete.

NOTICE

Do not use **Back** button until the inventory job completes.

If the inventory operation fails, perform one of the following:

- Review the `nsrccd.raw` file on the NetWorker server.
- select the failed operation and click **Retry** client job to re-attempt the inventory.

6. Click **Finish**.

Inventorying installed products by using nsrpush

Use the `nsrpush` command to generate an inventory of the NetWorker software installed on the target hosts.

NOTICE

You must add at least one package to the software repository before you can run an inventory operation.

To inventory hosts configured on the NetWorker server:

1. Type the following command:

```
nsrpush -i -all|hostname...
```

where `-all` queries inventories every NetWorker client and `hostname` specifies the name of a host to inventory.

2. Separate multiple hostnames with spaces.

Updating all hosts on the NetWorker server

Once a NetWorker host is in the Client Push inventory, use Client Push to update the host with software that resides in the Client Push software repository database.

For Windows hosts that support BBB, Client Push installs the BBB drivers. The *NetWorker Administration Guide* describes how to enable and configure BBB backups.

You can use the Software Administration Wizard or the `nsrpush` program to update NetWorker products on target hosts based on the following scenarios.

- ◆ [Updating NetWorker products on a user specified host by using the NMC on page 131](#)
 - ◆ [Updating NetWorker products on a user specified host by using the nsrpush command on page 132](#)
 - ◆ [Updating NetWorker products on all hosts in a datazone that use a particular NetWorker product on page 133](#)
-

Note

To update NetWorker Module for Microsoft clients, you can only use NMC.

Updating NetWorker products on a user specified host by using the NMC

You can use the Software Administration Wizard in NMC to update the NetWorker software on certain hosts in a datazone.

Procedure

1. Start the Software Administration Wizard and click **Next**.
2. Select **Upgrade the software on my NetWorker clients**, and click **Next**.
3. Select the option **By Client, will upgrade on the clients that you select**, and click **Next**.
4. Select the appropriate hosts, and click **Next**.

Note

The wizard only displays hosts that the Client Push feature supports.

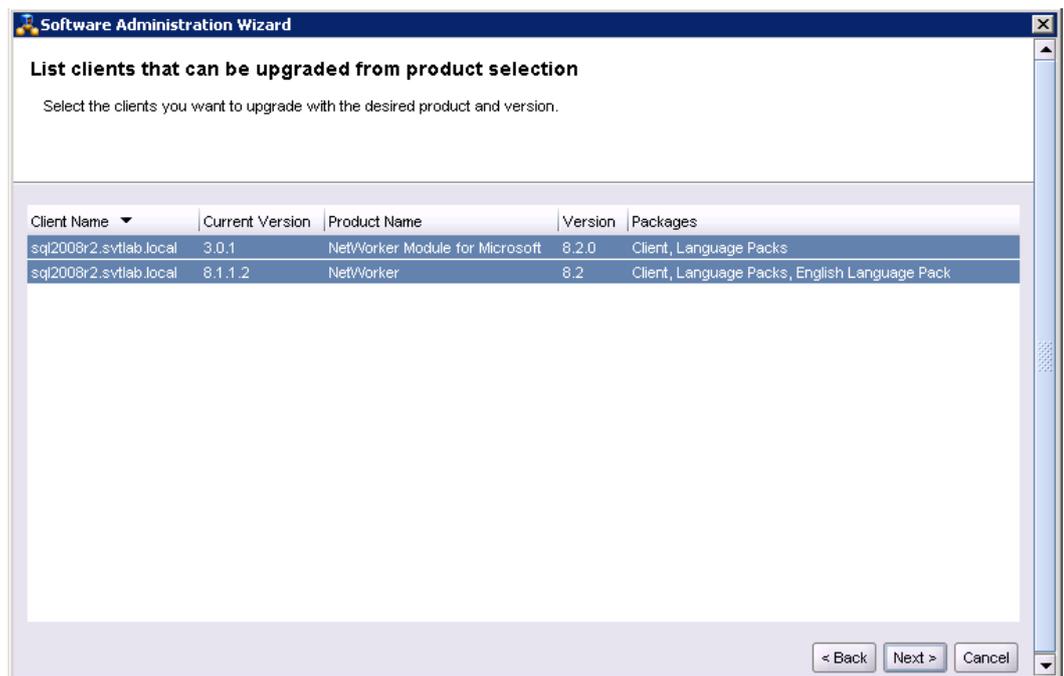
5. A list of hosts and installed products appears. Select the hosts and products, and click **Next**. For example, select NetWorker and NMDA. When you update a client that also has the NMDA or NMM software installed, you must select and update both products at the same time. To select multiple products, hold the **Ctrl** key while you select a product.

NOTICE

If the wizard displays multiple versions of the same NetWorker product, then only select one version. When you select multiple versions of a product for the same client, the wizard only updates the client to the last version that you select.

The following figure provides an example of the product selection screen for an NMM client.

Figure 1 Product selection for an NMM client



6. The **Monitor Activity** window appears and provides the status of upgrade job in the top table and the status of each client upgrade operation in the bottom window, for

the selected upgrade job. When the upgrade job contains many clients, the job might take awhile to complete.

NOTICE

Do not use **Back** button until the upgrade job completes.

If the update operation fails, perform one of the following steps:

- Review the `nsrccd.raw` file on the NetWorker server.
- Select the failed operation then click **Retry client job** to reattempt the update.

7. Click **Finish**.

Updating NetWorker products on a user specified host by using the `nsrpush` command

Log in to the NetWorker server with the root user on UNIX or the administrator user on Windows and use the `nsrpush` command to update all inventoried hosts or selected hosts of the NetWorker server.

Procedure

- ◆ To query a host for a list of installed NetWorker products, type:

```
nsrpush -s -all|hostname...
```

Where `-all` queries each inventoried client and `hostname` specifies the name of a host to query. Separate multiple hostnames with spaces.

- ◆ To update all hosts in a datazone with the exception of certain hosts, add the clients to the exclude list. Separate multiple hostnames with spaces. For example, type:

```
nsrpush -e hostname...
```

Where `hostname` is the name of the host to exclude from the update process.

Note

To remove clients from the exclude list, type `nsrpush -x hostname...`

- ◆ To update the NetWorker software, type: `nsrpush -u -p product -v version -Tp directory -To timeout -all|hostname...`

where:

- `product` is the name of the product to update:
 - NetWorker
 - NetWorker Module for Databases and Applications
-

Note

Product names are case sensitive

- `version` is the version of the product in the repository.
- `-Tp path` is optional and allows you to specify an alternate existing location with sufficient disk space, to store temporary installation files on the target host. When you specify multiple clients, you must specify the path in the same order. The default location is `C:\windows\temp` on Windows and `/tmp` on Linux and UNIX.

Note

When the path does not exist on the target host NetWorker copies the temporary files to `C:\` on a Windows host and `/` on a Linux and UNIX host.

- ◆ `-To timeout` is optional and allows you to define how long to attempt the update operation on a client before cancelling the operation.

When you specify multiple clients, you must specify the timeout values in the same order. The default timeout value is different for each operating system:

- Solaris, Linux, and Windows—600 seconds
 - AIX—200 seconds
 - HP UNIX—400 seconds
- ◆ `-all` updates all inventoried clients that are not in the exclude list and `hostname` is the name of the host to update. Separate multiple hostnames with spaces.

Example 1 Updating Two Clients

To update two client hosts, `client1.emc.com` and `client2.emc.com` to the latest version of NetWorker, type the following command:

```
nsrpush -u -p NetWorker -v 8.1 client1.emc.com client2.emc.com
```

If the update operation fails, review one of the following files for error messages:

- ◆ `nsrccd.raw` file on the NetWorker server
- ◆ `nw_install.server_name.log` file in the `tmp` directory on the target host

Updating NetWorker products on all hosts in a datazone that use a particular NetWorker product

You can update the software packages on all hosts that match a user specified product and version.

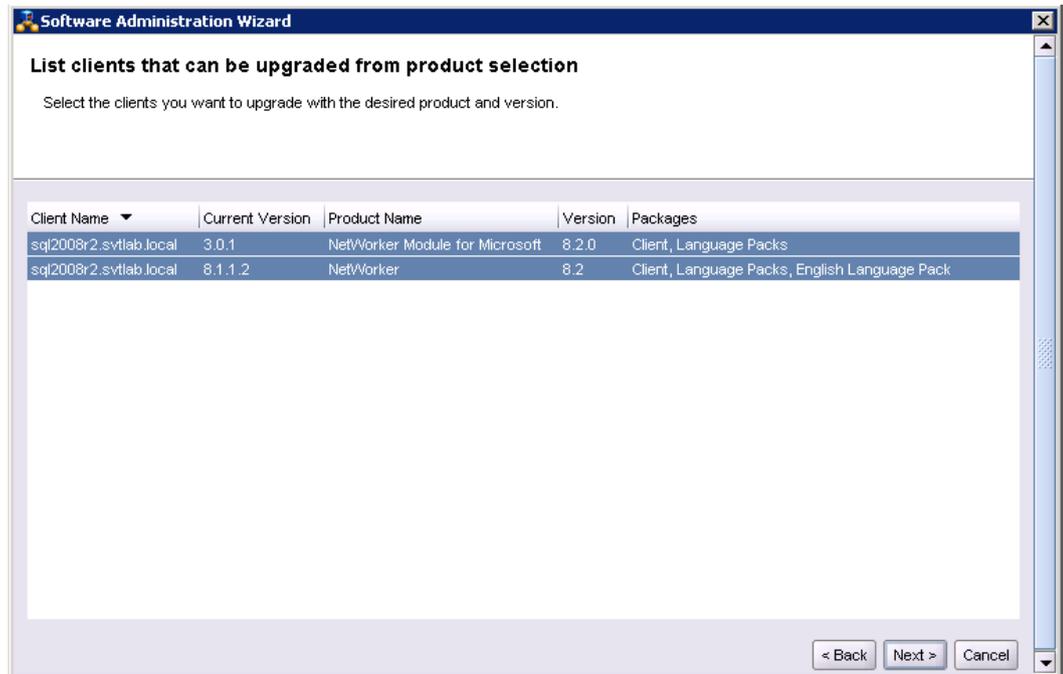
Procedure

1. Start the **Software Administration Wizard**, click **Next**.
2. Select **Upgrade the software on my NetWorker clients**, and click **Next**.
3. Select the option **By Product and Version, will upgrade all clients to a new software version**, and click **Next**.
4. Select one or more products that you want to update on the clients. For example, select NetWorker and NMDA. When you update a client that also has the NMDA or NMM software installed, you must select and update both products at the same time. To select multiple products, hold the **Ctrl** key while you select a product.

Note

If the wizard displays multiple versions of the same product, then only select one version. When you select multiple versions of a product for the same client, the wizard only updates the client to the last version that you select.

The following figure provides an example of the product selection screen for an NMM client.

Figure 2 Product selection for an NMM client

5. Click **Next**. A list of clients and products appear, one client and product per line. Only clients with a software version that is earlier than the version selected in the **Select Products to upgrade** window appear.
6. Select one or more of the client/product combinations to update, and click **Next**.
7. In the **Monitor Activity** window:
 - a. Review the status of the upgrade operation.
 - b. Click **Finish**.

Note

If the update operation fails, review to the `nsrcpd.raw` file on the NetWorker server or `nw_install.server_name.log` in the `tmp` directory on the target host for error messages.

- c. Select the failed operation and click **Retry client job** to reattempt the update.

Troubleshooting a Client Push operation

This section provides resolutions to common Client Push issues.

No available products were found for the selected client(s) in the software repository

This error message appears during an update operation in the following scenarios.

- ◆ When the software repository does not contain any software packages.
- ◆ When the required software is not in the software repository.
- ◆ When the version in selected client is more recent than the product version in the repository.

To resolve this issue, add software packages to the repository. The following sections provide more information:

- ◆ [Adding software to the repository by using the Software Administration Wizard on page 126](#) describes how to add the software from the **Software Configuration Wizard**.
- ◆ [Adding software to the repository by using nsrpush on page 128](#) describes how to use `nsrpush` to add the software to the repository.

Ran inventory scripts on client *hostname* but could not process the data

This error message appears during an inventory operation of a client that uses when NMM 2.4.x or earlier. Client Push supports updates of NMM 3.0 and later clients only.

To resolve this issue, update the client using standard updating procedures.

Client *hostname* is in the excluded clients list

This message appears during an inventory or update operation when you specify the `-all` option or a hostname for a client that is in the Client Push exclude list.

To resolve this issue:

1. Determine which clients are in the exclude list:

```
nsrpush -d
```

2. Remove clients from the exclude list:

```
nsrpush -e hostname...
```

Remote error running the tmp space check command on client

This message appears when you specify the `-Tp` option to update the software, but `nsrpush` has encountered an error accessing the specified path.

To resolve this issue, ensure that the:

- ◆ Path exists on the target host.

NOTICE

When the path does not exist, `nsrpush` copies the temporary files to `C:\` on Windows and in the root NetWorker installation directory on UNIX. For example, `/usr` on Linux.

- ◆ Filesystem that contains the path has sufficient disk space to store the temporary installation files.

Select Products window does not contain all products

When adding software to the repository using the Software Configuration wizard, if the **Select Product** window does not contain all products in the Media Kit Location, then review the Client Push log file, `nsrcpd.raw` on the NetWorker server for error messages.

- ◆ On Linux or UNIX, the `/nsr/logs` directory contains the `nsrcpd.raw` file.
- ◆ On Windows, the `C:\Program Files\EMC NetWorker\nsr\logs` directory contains the `nsrcpd.raw` file.

Select Products window contains duplicate packages

When adding software to the repository, if you specify a Media Kit Location that contains multiple copies of the same NetWorker package, then the package appears twice in the **Select Products** window.

To avoid this issue, ensure the Media Kit Location contains only one copy of a NetWorker package.

NOTICE

When you select both copies, only one copy is added to the repository.

CHAPTER 12

Updating from a Different Bit Version of NetWorker

This chapter includes the following sections:

- ◆ [Updating from a different bit version of NetWorker \(32-bit, 64-bit\).....138](#)

Updating from a different bit version of NetWorker (32-bit, 64-bit)

Follow these instructions to update a 32-bit installation of the NetWorker software to a 64-bit version of the NetWorker software.

64-bit NetWorker storage node or client host

When a 64-bit NetWorker storage node or client host has the 32-bit version of NetWorker installed, you can update to NetWorker software to the 64-bit version.

Use the appropriate operating system sections of this guide to remove the 32-bit version of the NetWorker software and install the 64-bit version of the NetWorker software.

64-bit NetWorker server on Windows

When a 64-bit NetWorker server on Windows has the 32-bit version of NetWorker installed, you can update the NetWorker software to the 64-bit version.

Use the appropriate operating system sections of this guide to remove the 32-bit version of the NetWorker software and install the 64-bit version of the NetWorker software.

64-bit NetWorker server on UNIX

When 64-bit NetWorker server on UNIX has the 32-bit version of the NetWorker software installed, you cannot update to the 64-bit version of the NetWorker software.

EMC Professional Services or a certified EMC partner must perform this update.

CHAPTER 13

Downgrade to a Previous NetWorker Release

The procedure to downgrade the NetWorker 8.1 software differs depending on the installation type.

This chapter contains the following sections:

- ◆ [Downgrading Roadmap](#)..... 140
- ◆ [Downgrading a NetWorker server to NetWorker 8.0.x or later](#)..... 140
- ◆ [Downgrading a NetWorker server to NetWorker 7.6.x or earlier](#)..... 141
- ◆ [Downgrading a NetWorker storage node or client](#)..... 144
- ◆ [Downgrading the Console server](#)..... 145

Downgrading Roadmap

Perform the procedures outlined in one the following scenarios to revert back to previous version of NetWorker software.

- ◆ [Downgrading a NetWorker server to NetWorker 8.0.x or later on page 140](#)
- ◆ [Downgrading a NetWorker server to NetWorker 7.6.x or earlier on page 141](#)
- ◆ [Downgrading a NetWorker storage node or client on page 144](#)
- ◆ [Downgrading the Console server on page 145](#)

Downgrading a NetWorker server to NetWorker 8.0.x or later

Perform this procedure to revert the NetWorker server to NetWorker 8.0.x or later.

Procedure

1. Uninstall the NetWorker software. Refer to the appropriate version of the *NetWorker Installation Guide*.
2. This step only applies to a Windows host where the NetWorker 8.2 DA version is currently installed, or was installed prior to upgrading to NetWorker 8.2 GA.

For Windows only, remove the `librpcomp.dll` registry entry.

For example, the following downgrade scenarios require that you remove the `librcomp.dll` registry entry on Windows NetWorker server:

- Downgrading an 8.2 (DA version) NetWorker server.
- Downgrading an 8.2 (GA version) NetWorker server that was previously running the DA version of the 8.1 software.

To remove the `librcomp.dll` registry entry:

- a. Start the `regedt32.exe` program.
- b. Navigate to the following registry setting:
`HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Windows\CurrentVersion\SharedDLLs`

- c. Delete the following key:

```
C:\Program Files\EMC NetWorker\nsr\bin\librpcomp.dll
```

Note

If you do not remove the registry key after you install the previous version of the NetWorker software, the `nsrsnmd` process fails to start and the following error message appears in the `daemon.raw` file:

```
Unable to send the version information: Daemon versions for 'nsrsnmd version' and 'nsrmmmd version' are not updated in NSRLA.
```

3. Delete the NetWorker `tmp` directory. The location of the NetWorker `tmp` directory differs for Linux, UNIX, and Windows:
 - On Windows:
 - `C:\Program Files\Legato\nsr\tmp`

– C:\Program Files\EMC NetWorker\nsr\tmp

- On Linux and UNIX: /nsr/tmp

4. Install the NetWorker software. Refer to the appropriate version of the *NetWorker Installation Guide*.

Note

If you used the PowerSnap module with NetWorker 8.0.x and later, then you must also install the PowerSnap module software.

Downgrading a NetWorker server to NetWorker 7.6.x or earlier

Follow these steps to revert the NetWorker server to the point-in-time immediately before a latest NetWorker version software update from 7.6.x or earlier.

Procedure

1. Uninstall the NetWorker software, refer to the appropriate version of the NetWorker Installation Guide.

NOTICE

If the NetWorker host is also the Console server, the Console server database must return to a point-in-time before the NetWorker software update. Refer to the procedures to downgrade the Console server.

2. This step only applies to a Windows host where the NetWorker 8.2 DA version is currently installed, or was installed prior to upgrading to NetWorker 8.2 GA.

For Windows only, remove the `librcomp.dll` registry entry.

For example, the following downgrade scenarios require that you remove the `librcomp.dll` registry entry on Windows NetWorker server:

- Downgrading an 8.2 (DA version) NetWorker server.
- Downgrading an 8.2 (GA version) NetWorker server that was previously running the DA version of the 8.2 software.

To remove the `librcomp.dll` registry entry:

- a. Start the **regedt32.exe** program.

- b. Navigate to the following registry setting:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Windows
\CurrentVersion\SharedDLLs
```

- c. Delete the following key:

```
C:\Program Files\EMC NetWorker\nsr\bin\librcomp.dll
```

Note

If you do not remove the registry key after you install the previous version of the NetWorker software, the `nsrsnmd` process fails to start and the following error message appears in the `daemon.raw` file:

```
Unable to send the version information: Daemon versions for 'nsrsnmd
version' and 'nsrmmmd version' are not updated in NSRLA.
```

3. Delete the NetWorker `tmp` directory. The location of the NetWorker `tmp` directory differs for Linux, Unix and Windows:
 - On Windows:
 - `C:\Program Files\Legato\nsr\tmp`
 - `C:\Program Files\EMC NetWorker\nsr\tmp`
 - On Linux and UNIX: `/nsr/tmp`
4. Restore previous NetWorker version resources files. During the update, the NetWorker server update created a backup copy of the previous NetWorker version resource files. To restore the previous NetWorker version resource files:
 - a. Rename the current resource database directories. For example:
 - On Linux and UNIX, type: `mv /nsr/res/nsrdb /nsr/res/nsrdb.old`
`mv /nsr/res/nsrladb /nsr/res/nsrladb.old`
 - On Windows, rename:
`C:\Program Files\Legato\nsr\res\nsrdb` to `C:\Program Files\Legato\nsr\res\nsrdb.old`

`C:\Program Files\Legato\nsr\res\nsrladb` to `C:\Program Files\Legato\nsr\res\nsrladb.old`
 - b. Rename the previous NetWorker version resource database directories. The database directories differ for UNIX and Windows.
 - On Linux and UNIX, type:
`mv /nsr/res/nsrdb.p80 /nsr/res/nsrdb` `mv /nsr/res/nsrladb.p80 /nsr/res/nsrladb`
 - On Windows, rename:
`C:\Program Files\Legato\nsr\res\nsrdb.p80` to `C:\Program Files\Legato\nsr\res\nsrladb`

`C:\Program Files\Legato\nsr\res\nsrladb.p80` to `C:\Program Files\Legato\nsr\res\nsrladb`
 - c. Optionally, rename the current `servers` file and restore the previous NetWorker version `servers` file. For example:
 - On Linux and UNIX, type:
`mv /nsr/res/servers /nsr/res/servers.old`
`mv /nsr/res/servers.p80 /nsr/res/servers`
 - On Windows, rename:
`C:\Program Files\Legato\nsr\res\servers` to
`C:\Program Files\Legato\nsr\res\servers.old`
`C:\Program Files\Legato\nsr\res\servers.p80` to
`C:\Program Files\Legato\nsr\res\servers`
5. Install the previous version of the NetWorker server software. The *NetWorker Installation Guide* describes how to install the NetWorker software and the pre-installation considerations.

Note

If you used the PowerSnap module with NetWorker 8.0.x, then you must also install the PowerSnap module software.

6. For Linux and UNIX only, retain start-up script customizations. The NetWorker 7.6.x software does not load the `/nsr/nsrrc` file before starting the `nsrexecd` and `nsrd` daemons.

The NetWorker startup files for each operating system, include the following.

Table 21 NetWorker startup script files

Operating system	Startup files
AIX	<code>/etc/rc.nsr</code>
HP-UX	<code>/sbin/init.d/networker</code>
Linux	<code>/etc/init.d/networker</code>
Solaris	<code>/etc/init.d/networker</code>

7. For Linux and UNIX only, if you defined environment variables in the startup file, perform one of the following tasks to retain start-up script customizations.
 - Restore backup copies of the start-up script files.

Before updating the NetWorker software to the latest version, create a backup copy of the NetWorker start-up script files. Use these files to replace the current start-up script files.

 - a. Create a backup copy of the current version of the NetWorker start-up script file.
 - b. Rename the NetWorker 7.6.x copy of the startup script file to the appropriate file name.
 - c. Stop, then start the NetWorker daemons.
 - Modify the start-up script files and add the environment variables defined in the `/nsr/nsrrc` file if a copy of the original previous NetWorker version start-up script files does not exist.
 - a. Edit the start-up script file for the operating system.
 - b. Before this line: `echo 'starting NetWorker daemons:' > /dev/console`, add the required environment variables, including the `export` command:


```
ENV_VAR_NAME=value
export ENV_VAR_NAME
```
 - c. Stop, then start the NetWorker daemons.
8. Use the `scanner -i` command to re-create media database entries for the read-only device of each AFTD and Data Domain device.

The UNIX man page and the *NetWorker Command Reference Guide* describe how to use the `scanner` command.

Downgrading a NetWorker storage node or client

Perform the following tasks outlined in this section to downgrade the NetWorker software.

NOTICE

The latest version of NetWorker server does not support NetWorker 7.6.x storage nodes. Downgrade the NetWorker server before downgrading any storage nodes in the data zone.

Procedure

1. Uninstall the NetWorker software. For instructions to uninstall the NetWorker software, refer to the appropriate version of the *NetWorker Installation Guide*.
2. Remove any NetWorker module software, including the NetWorker Module for Microsoft Applications and the NetWorker Module for Database Applications, on the host before removing the NetWorker and Console server software. The appropriate module installation guide describes how to remove the module software.

NOTICE

If the NetWorker host is also the Console server, the Console server database must return to a point-in-time before the latest NetWorker software update. Refer to the procedures to downgrade the Console server.

3. Delete the NetWorker `tmp` directory. The location of the NetWorker `tmp` directory differs for Windows and Linux and UNIX:
 - On Windows: `C:\Program Files\Legato\nsr\tmp` or `C:\Program Files\EMC NetWorker\nsr\tmp`
 - On Linux and UNIX: `/nsr/tmp`
4. Install the previous version of the NetWorker and Console server software. The *NetWorker Installation Guide* provides detailed information.
5. For Linux and UNIX only, if you defined environment variables in the startup file, perform one of the following tasks to retain start-up script customizations.
 - Restore backup copies of the start-up script files.

Before updating the NetWorker software to the latest version, create a backup copy of the NetWorker start-up script files. Use these files to replace the current start-up script files.

 - a. Create a backup copy of the current version of the NetWorker start-up script file.
 - b. Rename the previous version of the NetWorker copy of the startup script file to the appropriate file name.
 - c. Stop, then start the NetWorker daemons.
 - Modify the start-up script files and add the environment variables defined in `/nsr/nsrrc` file if a copy of the original previous NetWorker version start-up script files does not exist.
 - a. Edit the start-up script file for the operating system.

- b. Before this line: `echo 'starting NetWorker daemons:' > /dev/console`, add the required environment variables, including the `export` command:

```
ENV_VAR_NAME=value
export ENV_VAR_NAME
```

- c. Stop, then start the NetWorker daemons.

Downgrading the Console server

Follow these steps to revert the Console server to the point-in-time immediately before the latest NetWorker software update.

Procedure

1. Uninstall the NetWorker and Console server software. For instructions to uninstall the NetWorker software, refer to the appropriate version of the NetWorker Installation Guide.
2. Remove any NetWorker module software including NetWorker Module for Microsoft Applications and NetWorker Module for Database Applications on the host before removing the NetWorker and Console server software. The appropriate module installation guide describes how to remove the module software.
3. Install the previous version of the NetWorker and Console server software. The *NetWorker Installation Guide* provides detailed information.

During the installation process, when prompted:

- To retain or overwrite the existing Console server database, you must overwrite the existing database.
 - To remove the existing database on UNIX, type: **y**.
4. Restore the Console server database to a point-in-time before the Console server update in one of the following ways:
 - Restore the database conversion backup files. Before the Console server database conversion, the update process created a backup copy of the previous NetWorker version Console server database files. Use the backup copy of the Console server database files to restore the Console server to the point-in-time before the update:

- a. Stop the EMC `gstd` daemon.
- b. In the Console server database directory, rename the following current Console server database files:

```
lgto_gst.db to lgto_gst.db.old
gstd_db.conf to gstd_db.conf.old
lgto_gst.log to lgto_gst.log.old
```

By default, the location of the Console database directory is:

- For Windows: `C:\Program Files\EMC`
- For AIX and Linux: `NetWorker\Management\lgto_gstdbopt\lgtonmc\lgto_gstdb`
- For Solaris: `/opt/LGTONmc\lgto_gstdb`

- c. Rename the following Console server database backup files in the Console database directory:

```
gstd_db_bk.conf to gstd_db.conf
lgto_gst_bk.db to lgto_gst.db
lgto_gst_bk.log to lgto_gst.log
```

- d. Start the EMC `gstd` daemon.

- Recover the Console server database from a backup:
 - a. Stop the EMC gstd daemon.
 - b. From a command prompt on the Console server, type:

```
recoverpsm -s NetWorker_server -t date -f
```

where:

- *NetWorker_server* specifies the name of the NetWorker server that performed the Console server database backup.
- *date* specifies a date when you backed up the Console server before the upgrade.

Note

When you do not stop the EMC gstd daemon before the recover, the `recoverpsm` command fails with an error message similar to the following:

```
recoverpsm: FAILED 08001[Sybase][ODBC Driver][SQL Anywhere]Database  
name not unique -77
```

-
- c. Start the EMC gstd daemon.
5. Before connecting to the Console server, on each Console client perform these steps:
 - a. Delete the existing Console desktop shortcut that you used to connect to the Console server.
 - b. Clear the Java cache.