



EMC® NetWorker®

Licensing Process Guide

**SECOND EDITION
P/N 300-007-566**

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For the most up-to-date listing of EMC product names, see EMC Corporation Trademarks on EMC.com.

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Preface

Chapter 1 Licensing Overview

Evaluating and licensing the NetWorker software 10
 Evaluating the NetWorker software 10
 Licensing the NetWorker software 10
 NetWorker feature licensing information 10
 Best practices 11
 Troubleshooting 11
 NetWorker License Manager 11

Chapter 2 Evaluating the NetWorker Software

The evaluation process 14
 Evaluating a new installation of NetWorker software 14
 Evaluating features of an existing NetWorker installation 14
 Evaluation enabler 14
 How to apply an evaluation enabler code 15
 Update enabler 15
 Update enabler alert 16
 Base enabler 16

Chapter 3 Permanently Licensing the NetWorker Software

License process flow 18
 How to permanently license the NetWorker software 19
 Task 1: Install the NetWorker software for evaluation 19
 Task 2: Send the purchase order 19
 Task 3: Review the License Authorization Code (LAC) letter 19
 Task 4: Obtain the host ID of the NetWorker server 20
 Task 5: Activate the software license certificate 20
 Task 6: Download the NetWorker license keys from EMC Powerlink
 Licensing 21
 Task 7: Delete all expired evaluation enabler codes 22
 Task 8: Apply the license key on the NetWorker server 22

Chapter 4	Licensing Information for NetWorker Features	
	Archiving licensing	28
	Bare Metal Recovery (BMR) licensing.....	28
	Client connection licenses	28
	Cluster licensing.....	28
	Enabling the highly available NetWorker server.....	28
	Enabling cluster and virtual clients.....	29
	Backing up NetWorker Modules on cluster clients	29
	DDS licensing.....	29
	HomeBase server/agent licensing.....	30
	NDMP licensing	30
	NetWorker Module licensing	30
	NetWorker cloud licensing	30
	NetWorker storage node licensing.....	30
	Virtual environments simplified licensing	31
	Virtual Edition Client Connection license.....	31
	NetWorker Modules in virtual environments.....	31
	Virtual Tape Library licensing	32
	Applying the Virtual Client license to an existing virtual machine after upgrading from a previous release	32
	Enabling Virtual Client licensing for existing Client resources	32
	Licensing for VMware Consolidated Backup.....	32
Chapter 5	Best Practices	
	Using a licensing template.....	34
	NetWorker licenses	34
	Base enabler.....	34
	Auth code	35
Chapter 6	Troubleshooting	
	Troubleshooting.....	38
	Diagnosing licensing issues.....	38
	How to obtain NetWorker license information.....	38
	How to avoid an interruption in backups when changing the computer or network address	39
	How to query the local server	39
	How to provide feedback.....	42
	License Conformance Summary	42
	Glossary	

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

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

Audience This guide is related to, but not part of, the EMC NetWorker documentation set. It is intended for use by system administrators who are responsible for installing and licensing NetWorker software.

Readers of this document are expected to be familiar with the following topics:

- ◆ Installing NetWorker software
- ◆ NetWorker software requirements and configuration

Related documentation

Related documents and tools include:

- ◆ *EMC NetWorker Release Notes* for your current release
- ◆ *EMC NetWorker Installation Guide* for your current release
- ◆ *EMC NetWorker Administration Guide* for your current release, for information about using your current NetWorker release and its Management Console (Console).
- ◆ *EMC NetWorker License Manager Installation and Administration Guide*
- ◆ EMC Powerlink online user documentation, such as:
 - The Powerlink License Management page
 - The Powerlink Licensing portal: Powerlink Frequently Asked Questions

Conventions used in this document

EMC uses the following conventions for special notices.

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



CAUTION

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



IMPORTANT

An important notice contains information essential to operation of the software.

Typographical conventions

EMC uses the following type style conventions in this document:

Normal	Used in running (nonprocedural) text for: <ul style="list-style-type: none"> Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) Names of resources, attributes, pools, Boolean expressions, buttons, DQL statements, keywords, clauses, environment variables, filenames, functions, utilities URLs, pathnames, filenames, directory names, computer names, links, groups, service keys, file systems, notifications
Bold:	Used in running (nonprocedural) text for: <ul style="list-style-type: none"> Names of commands, daemons, options, programs, processes, services, applications, utilities, kernels, notifications, system call, man pages Used in procedures for: <ul style="list-style-type: none"> Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) What user specifically selects, clicks, presses, or types
<i>Italic:</i>	Used in all text (including procedures) for: <ul style="list-style-type: none"> Full titles of publications referenced in text Emphasis (for example a new term) Variables
Courier:	Used for: <ul style="list-style-type: none"> System output, such as an error message or script URLs, complete paths, filenames, prompts, and syntax when shown outside of running text.
Courier bold:	Used for: <ul style="list-style-type: none"> Specific user input (such as commands)
<i>Courier italic:</i>	Used in procedures for: <ul style="list-style-type: none"> Variables on command line User input variables
< >	Angle brackets enclose parameter or variable values supplied by the user
[]	Square brackets enclose optional values
	Vertical bar indicates alternate selections - the bar means “or”
{ }	Braces indicate content that you must specify (that is, x or y or z)
...	Ellipses indicate nonessential information omitted from the example

- Where to get help** EMC support, product, and licensing information can be obtained as follows.
- Product information-** For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink website (registration required) at:
- <http://Powerlink.EMC.com>
- Technical support-** For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.
- Your comments** Your suggestions will help us continue to improve the accuracy, organization, and overall quality of the user publications. Please send your opinion of this document to:
- ssgdocumentation@emc.com
- If you have issues, comments, or questions about specific information or procedures, please include the title and, if available, the part number, the revision (for example, A01), the page numbers, and any other details that will help us locate the subject you are addressing.

This chapter includes the following topics:

- ◆ Evaluating and licensing the NetWorker software 10
- ◆ NetWorker License Manager 11

Evaluating and licensing the NetWorker software

The information in this guide assumes that the EMC® NetWorker® software is installed and that all of the software and hardware requirements have been met on the computer that accesses the NetWorker Management Console interface (known as Console). These requirements are described in the NetWorker Installation Guide.

Evaluating the NetWorker software

NetWorker software and added features, such as modules, can be downloaded and evaluated for free from the website EMC Powerlink®, or the media kit. The software can be evaluated for 30 days without an enabler code or license. After that, you can obtain evaluation enablers to extend the evaluation period for an additional 45 days.

[Chapter 2, “Evaluating the NetWorker Software,”](#) provides information about evaluating the NetWorker software.

Licensing the NetWorker software

To permanently use the NetWorker software, you must license the software on the EMC Powerlink Licensing site and apply the supplied licensing key on the NetWorker server. The license key includes permanent enabler codes and corresponding authorization (auth) codes.

[Chapter 3, “Permanently Licensing the NetWorker Software,”](#) provides information about permanently licensing the NetWorker software.

NetWorker feature licensing information

[Chapter 4, “Licensing Information for NetWorker Features”](#) provides information on licensing the following NetWorker features:

- ◆ Archiving
- ◆ Bare Metal Recovery (BMR)
- ◆ Client connection
- ◆ Cluster
- ◆ DDS
- ◆ HomeBase server/agent
- ◆ NDMP
- ◆ NetWorker Application Modules
- ◆ NetWorker cloud
- ◆ NetWorker storage node
- ◆ Virtual environments

Best practices

[Chapter 5, “Best Practices”](#) provides EMC Powerlink Licensing best practices and miscellaneous tips.

Troubleshooting

[Chapter 6, “Troubleshooting”](#) provides NetWorker licensing troubleshooting information.

NetWorker License Manager

The NetWorker License Manager software provides centralized license management, which enables you to maintain all of an enterprise’s NetWorker licenses from a single computer.

With the NetWorker License Manager, you can move NetWorker software from one computer to another, or change the IP address on an existing NetWorker server without having to reauthorize the software. The NetWorker License Manager can be installed as an option during the NetWorker software installation.

The latest NetWorker License Manager Installation and Administration Guide provides more information on how to install and use the NetWorker License Manager software.

This chapter includes the following topics:

◆ The evaluation process	14
◆ Evaluation enabler	14
◆ Update enabler	15
◆ Base enabler.....	16

The evaluation process

NetWorker software and added features, such as modules, can be downloaded and evaluated for free from EMC Powerlink, the EMC website, or the media kit.

You can evaluate NetWorker software in two ways:

- ◆ [“Evaluating a new installation of NetWorker software” on page 14.](#)
- ◆ [“Evaluating features of an existing NetWorker installation” on page 14.](#)

To permanently use the NetWorker software to back up and recover data, you must license the software. [“How to permanently license the NetWorker software” on page 19](#) provides information.

Evaluating a new installation of NetWorker software

When you first install the NetWorker software, you can evaluate the software with all the modules and features for 45 days free without entering any enabler codes or licenses.

[“Evaluation enabler” on page 14](#) provides information on extending the evaluation period an additional 30 days.

Evaluating features of an existing NetWorker installation

If you are evaluating one or more NetWorker modules or features on an edition of NetWorker software that has already been installed and licensed, perform the following steps:

1. Contact your Sales Representative to obtain an Entitlement Extension and resulting evaluation enabler code.
2. On the NetWorker server, type an evaluation enabler code for each module or feature to be evaluated. [“How to apply an evaluation enabler code” on page 15](#) provides information.

Evaluation enabler

Evaluation enablers are free, and must be applied on the NetWorker server. An evaluation enabler extends the evaluation period for an additional 45 days. The evaluation enabler cannot be permanently authorized.

To obtain entitlement extensions and the resulting evaluation enablers; do one of the following:

- ◆ Contact your EMC Sales Representative.
- ◆ Refer to the media kit for EMC Information Protection and Availability Product Families.

How to apply an evaluation enabler code

To apply an evaluation enabler on the NetWorker server:

1. Start the **NetWorker Management Console** software.
2. Open the **Administration** window:
 - a. In the **Console** window, click **Enterprise**.
 - b. In the left pane, select a NetWorker server in the **Enterprise** list.
 - c. In the right pane, select the application.
 - d. From the **Enterprise** menu, click **Launch Application**. The **Administration** window is launched as a separate application.
3. From the **Administration** window, click **Configuration**.
4. In the left pane, select **Registration**.
5. From the **File** menu, select **New**.
6. In the **Enabler Code** attribute, type the enabler code.
7. (Optional) In the **Comment** attribute, type a description of the license.
8. Click **OK**.

Evaluation enabler alert

An alert message is generated 30 days before a NetWorker evaluation enabler code expires. The alert remains until the NetWorker evaluation enabler is authorized or deleted.

To view the license alert, use one of the following methods:

- ◆ From the **NetWorker Administration** window, click **Monitoring** and select the **Alert** tab.
- ◆ From the **Console** window, click **Events**.

Colour-coded icons appear with the alert message:

- ◆ A yellow icon indicates that the enabler will expire within 30 days. The message appears daily until 10 days prior to the evaluation enabler code expiration.
- ◆ A red icon indicates that the enabler will expire within 10 days. The message appears daily up to and including the day of the enabler code expiration.

By the end of the evaluation period, you must permanently license the software to continue using modules or features that you have evaluated. [“How to permanently license the NetWorker software” on page 19](#) provides information.

Update enabler

An update enabler is necessary to move from an existing major NetWorker release to a newer major NetWorker release, for example, from NetWorker 7.4 to NetWorker 7.5 or NetWorker 7.6. Update enablers are *not* required for NetWorker Service Packs.

With NetWorker 7.6 and later, if an update enabler is required, the NetWorker software automatically adds the required update enabler code to its configuration. The update enabler expires after 45 days. You must contact EMC Powerlink Licensing within 45 days to permanently authorize the update enabler.



IMPORTANT

If the auth (authorization) code for the update enabler code is not applied within 45 days, the NetWorker server software will be disabled. Entering the auth code enables the software even if the update enabler code has expired. The NetWorker 7.5 update enabler code cannot be deleted, only authorized with the auth code.

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

Update enabler alert

An alert message is generated 45 days before a NetWorker update enabler code expires. This alert remains until the NetWorker update enabler is authorized.

To view the license alert, use one of the following methods:

- ◆ From the **NetWorker Administration** window, click **Monitoring** and select the **Alert** tab.
- ◆ From the **Console** window, click **Events**.
- ◆ Type **nsrwatch** at the command line.

A red icon within the alert message indicates that the update enabler will expire within 45 days. The message appears daily up to and including the day of the update enabler code expiration.

By the end of the evaluation period, you must permanently license the software to continue using modules or features that you have evaluated. [“How to permanently license the NetWorker software” on page 19](#) provides information.

Base enabler

Each installation of NetWorker server software must be licensed with a base enabler. Only the server’s enabler is called a *base* enabler. This enabler “turns on” the software and allows the use of a particular bundle of features, such as a specified number of clients and devices. All license keys are entered and stored on the NetWorker server, which enforces the licensing.

Base enablers come in different editions that enable varying degrees of functionality. Add-on enablers allow a broader scope of features.



IMPORTANT

You cannot delete the base enabler code that enables the basic NetWorker software. The base enabler can only be upgraded or downgraded.

This chapter includes the following topics:

- ◆ License process flow 18
- ◆ How to permanently license the NetWorker software 19

License process flow

To permanently use the NetWorker software to back up and recover data, you must license the software. This licensing process is the same for all editions of the NetWorker software, and for the individual modules and features.

Figure 1 on page 18 illustrates the licensing process flow.

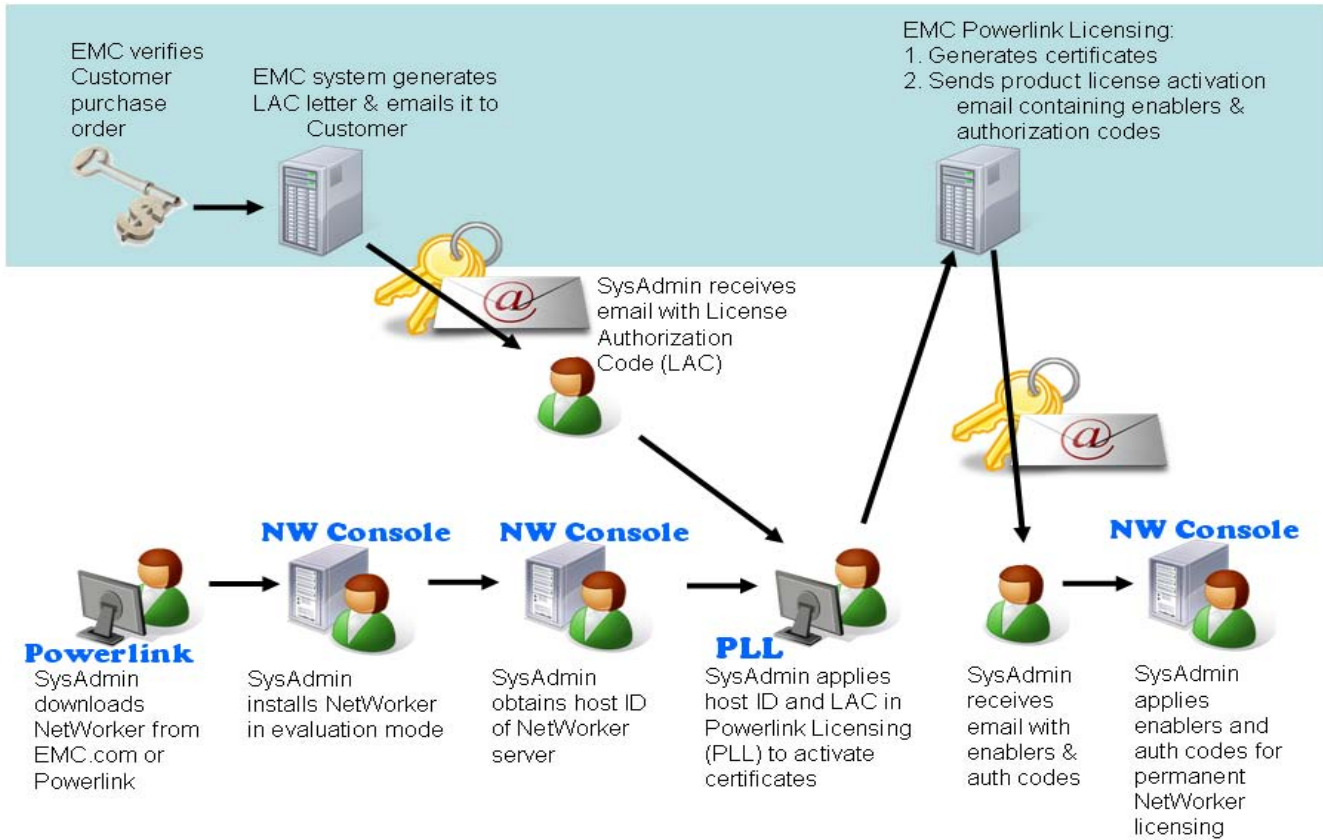


Figure 1 NetWorker license process flow

The NetWorker license process consists of the following basic steps:

1. Download and install the software for evaluation.
2. Send a purchase order for the software to EMC, which lists the requested NetWorker product, options, and modules. EMC sends a License Authorization Code (LAC) letter by e-mail in response to the valid purchase order.

Note: If no evaluation period is required, the first and second stages can be done together.

3. At the EMC Powerlink Licensing site, type the LAC and the host ID of the NetWorker server to activate the software license certificate.

EMC Powerlink Licensing confirms the license activation by e-mail, and sends a “product license activation letter” that contains the license key (permanent enabler codes and auth codes).

4. Apply the license key on the NetWorker server.

How to permanently license the NetWorker software

To license the NetWorker software, perform the following tasks:

- ◆ “Task 1: Install the NetWorker software for evaluation” on page 19
- ◆ “Task 2: Send the purchase order” on page 19
- ◆ “Task 3: Review the License Authorization Code (LAC) letter” on page 19
- ◆ “Task 4: Obtain the host ID of the NetWorker server” on page 20
- ◆ “Task 5: Activate the software license certificate” on page 20
- ◆ “Task 6: Download the NetWorker license keys from EMC Powerlink Licensing”
- ◆ “Task 7: Delete all expired evaluation enabler codes” on page 22
- ◆ “Task 8: Apply the license key on the NetWorker server” on page 22

Task 1: Install the NetWorker software for evaluation

Install the NetWorker software according to the instructions in the appropriate NetWorker Installation Guide.

Task 2: Send the purchase order

Send to EMC the customer purchase order list of NetWorker product models to be purchased. The purchase can include a variety of products, such as a NetWorker server, client packages, storage node packages, database modules, and deduplication.

Task 3: Review the License Authorization Code (LAC) letter

Upon receipt of a valid purchase order, EMC sends a License Authorization Code (LAC) letter by e-mail to the specified customer contact. The information in the LAC letter is used to activate the software license certificate. The NetWorker server’s host ID is also required for the activation.

Review the LAC letter, which contains the following:

- ◆ A LAC to be used to activate the license keys for the products. License key consists of permanent enabler codes and auth codes.
- ◆ Instructions for activating the software and obtaining the license keys.
- ◆ Software download instructions, in case the NetWorker software has not yet been downloaded in evaluation mode.
- ◆ A list of the NetWorker products ordered, along with their SKU numbers.
- ◆ Contacts for licensing and support information.



IMPORTANT

Do not confuse a LAC with an auth code. LACs are used in EMC Powerlink Licensing to obtain and activate the license key. A LAC enables you to obtain an auth code, but it is the *combined* application of permanent enabler and auth codes in NetWorker software that permanently licenses it.

Task 4: Obtain the host ID of the NetWorker server

The following steps should be performed by the customer, preferably a NetWorker system administrator.

To find the host ID of the NetWorker server:

1. On the NetWorker server, start the NetWorker Management Console (Console).
2. Select **NetWorker Administration**.
3. In the **Administration interface**, click **Configuration**.
4. Right-click **Registrations** in the navigation tree.
5. Right-click the NetWorker evaluation license (or any NetWorker license) in the **Registrations** area of the screen. The **Properties** window appears.
6. Note the host ID number.

Task 5: Activate the software license certificate

The following step should be performed by the customer, preferably a NetWorker system administrator.

To create and activate the software license certificate:

1. Go to the EMC Powerlink website (registration required) at:
<http://Powerlink.EMC.com>.
Once there, if you do not have an account, follow the New Member Registration steps.
2. Log in with your username and password.
3. Navigate to **Support > Software Downloads and Licensing > License Management**.
4. Locate and click **NetWorker**. The **EMC Powerlink Licensing** page appears.
5. In the **LAC(s)** field, type the LAC number found in your LAC letter.
6. In the **Machine Name** field, type the name of the machine where you activate your licenses.

Note: Machine names must be unique for each parent company.

7. In the **Locking ID** field, type the NetWorker server host ID number that you obtained in [“Task 4: Obtain the host ID of the NetWorker server”](#) on page 20.
8. Click **Activate**.

Product license activation letter

EMC e-mails the product license activation letter after the software license certificate has been activated in EMC Powerlink Licensing.

The letter contains the following:

- ◆ A list of the purchased products, their part numbers, quantities, and version levels
- ◆ The certificate ID number
- ◆ The LAC

- ◆ The NetWorker host ID
- ◆ The license key, that consists of permanent enablers and auth codes.
Once applied jointly in the NetWorker Console interface, these codes permanently license the NetWorker software.
- ◆ Contacts for licensing and support information

Task 6: Download the NetWorker license keys from EMC Powerlink Licensing

You can install the license key on a local NetWorker server, a remote NetWorker server, or a License Manager system.

To download the license key from EMC Powerlink:

1. Go to the EMC Powerlink website (registration required) at:
<http://Powerlink.EMC.com>
2. Select **Support > Software Downloads and Licensing > License Management**, and then select **NetWorker** from **Licensing D-Q** and follow the instructions for your product.

The **EMC Powerlink Licensing Home** page appears.

Note: If the LAC number has not yet been entered, activated, and associated with the host ID, follow the instructions in the e-mail received from EMC Powerlink Licensing before proceeding with the next step.

3. On the **EMC Powerlink Licensing Home** page, select **Download Enabler Codes**.
The **Search for Downloading Enabler Codes** page appears.
4. In the **%HostID** attribute, type the NetWorker server host ID number that you obtained in [“Task 4: Obtain the host ID of the NetWorker server”](#) on page 20.
5. Click **Search**.

The **Search for Downloading Enabler Codes** page appears, displaying the list of hosts that match the criteria.

6. Select the host ID that matches the criteria.

The **Download** page appears.

7. Click **Download Enablers** and perform the following:
 - a. Click **Download CSV** and save the file.
 - The **CSV** file contains the enabler codes and the information related to them, including part descriptions, part numbers, and auth codes.
 - You can import this file into Excel and search and sort the contents:
 - Format: <host ID>.csv
 - Example: df010b3f.csv
 - b. Click **Download nsradmin** and save the file.
 - Format: <host ID><date>.nsradmin
 - Example: df010b3f_20080814.nsradmin

- c. Click **Download ReadMe** and save the file.

The **ReadMe** file describes the process and how to use **nsradmin** to load the enablers.

- Format: ReadMe_<host ID>_<date>.txt
- Example: ReadMe_df010b3f_20080814.txt

These files can be downloaded at any time from Powerlink.

Note: As additional licenses are added to a host profile, these new licenses will be included in future downloads.

Task 7: Delete all expired evaluation enabler codes

All expired evaluation enablers must be deleted before the license key is applied on the NetWorker server to permanently license the software. An evaluation enabler extends the evaluation period for an additional 45 days. The evaluation enabler cannot be permanently authorized.

Note: You can delete an evaluation enabler code at any time, whether or not it has been permanently authorized. The license is *not* removed when the software is uninstalled.

To delete an enabler code:

1. From the **Administration** window, click **Configuration**.
2. Click **Registrations**.
3. Right-click the enabler code to be deleted, then select **Delete**.
4. Click **Yes** to confirm the deletion.



IMPORTANT

You cannot delete the base enabler code that enables the basic NetWorker software. The base enabler can only be upgraded or downgraded.

Task 8: Apply the license key on the NetWorker server



IMPORTANT

Even if you have installed evaluation enablers that have not yet expired, in order to license the NetWorker software permanently you must apply the license key. The license key is provided in the product license activation letter.

The final step in the licensing process is to apply the license key on the NetWorker server. The license key consists of permanent enablers and auth codes.

To import and apply the NetWorker license key from EMC Powerlink Licensing directly to a NetWorker server or a License Manager system:

1. Ensure that you have the following permissions on the NetWorker server. The permissions differ for Windows, Linux, and UNIX:
 - Windows: administrator
 - UNIX and Linux: root
2. Identify the location where the files were downloaded.

- Run the following **nsradmin** command from the directory where the `source_file` is located. The **nsradmin** command can be run from any NetWorker client, storage node, or server.

- To install the NetWorker license keys on a local NetWorker server, type:
`nsradmin -i source_file > output_file`
- To install the NetWorker license keys on a remote NetWorker server, type:
`nsradmin -i source_file -s server_name > output_file`
- To install the NetWorker license keys on a License Manager system, type:
`nsradmin -i source_file -s server_name -p 390115 > output_file`

- Open and review the `out_file` for success or failure messages to ensure that the NetWorker licenses have been properly installed.

- Success entry message in the output file.

If the first attempt to load a license was successful, an entry similar to the following appears in the output file:

```
C:\PROGRA~1\Legato\nsr\bin\std>nsradmin -i infile
created resource id 25.0.0.20.96.108.23.72.137.69.168.135(1)
Current query set
updated resource id 25.0.0.20.96.108.23.72.137.69.168.135(2)
```

- Failed entry message in the output file.

If a license load failed, entries similar to the following might appear.

- This entry in the output file indicates that the license already exists in NetWorker and can be ignored:

```
C:\PROGRA~1\Legato\nsr\bin\std>nsradmin -i infile
create failed: A license enabler already exists with enabler
code xxxxxx-xxxxxx-xxxxxx
Current query set
updated resource id 25.0.0.20.96.108.23.72.137.69.168.135(3)
```

Note: If the **nsradmin** command has previously been run on a host, failure messages might be generated for NetWorker licenses that already exist.

- This entry in the output file indicates that the NetWorker server processes are not running on the system. To work around this issue, start the NetWorker processes on the NetWorker server:

```
C:\PROGRA~1\Legato\nsr\bin\std>nsradmin -i infile pasb-tomp
39078:nsradmin: RPC error: Program not registered (severity 4,
number 15)
```

Manually enter the license key on a NetWorker server or a License Manager system



IMPORTANT

Automatically importing and installing the NetWorker permanent enablers and authorization codes from EMC Powerlink Licensing is the recommended way to obtain and install NetWorker permanent enablers and authorization codes. Do not perform these steps unless you cannot import and install automatically.

To enter the license keys on a NetWorker server or a License Manager system:

1. Start the **NetWorker Management Console** software.
2. Open the **Administration** window:
 - a. In the **Console** window, click **Enterprise**.
 - b. In the left pane, click a NetWorker server in the **Enterprise** list.
 - c. In the right pane, click the application.
 - d. From the **Enterprise** menu, select **Launch Application**. The **Administration** window is launched as a separate application.
3. In the **Administration** window, click **Configuration**.
4. In the left pane, select **Registrations**.
5. From the **File** menu, select **New**. The **Create Registration** dialog box appears.
6. Leave the **Identity** area blank. The name of the product to be licensed will be extracted from the enabler and displayed in the **Registrations** area.



IMPORTANT

Apply the permanent *base* enabler (for the NetWorker server) and its auth code last, after having applied all other permanent enablers. Once a base enabler is applied, any device that does not yet have its auth code applied might be disabled, and would have to be reenabled manually.

7. In the **Configuration** area of the **Create Registration** window, enter the enabler code for the product to be licensed. The enabler code can be found in the product license activation letter. It is an 18-character or 24-character alphanumeric code.

Note:

A 24-character enabler signifies a bulk enabler intended for installation only on a NetWorker License Manager server. When entering the enabler for the NetWorker server, consider entering “Base Enabler” in the **Comment** field of either the **Create Registration** or **Properties** window.

8. Click **OK** to apply the enabler and leave the **Create Registration** window.
9. Select and right-click the product in the **Registrations** area. The **Properties** window appears.

The **Configuration** area of the window now displays the following information:

- Enabler code number
 - Product name
 - Enable code expiration date
10. In the **Auth code** field, type the corresponding auth code. You can find the auth code in the product license activation letter. It is a unique 8-character alphanumeric code.

The auth code is node-locked, which means that it can only be applied to a specific host and host ID. It can also be used only with the specific enabler code with which it was associated in the product activation letter. Do not confuse the auth code with the License Authorization Code (LAC).

Note: The product is now listed in the **Registrations** area. The enabler expiration date appears in the **Expiration date** column. This date is 45 days after the date on which the enabler was entered.

11. Click **OK**. The new license is added and appears in the right pane. If the authorization process is successful, the expiration date for the license displays:

Authorized - No expiration date.

In the **Registrations** area of the screen, the **Expiration date** column entry for the product has changed and now says "Authorized - No expiration date." If the authorization is not verified in this way, contact the <http://Powerlink.EMC.com> website for detailed instructions.

12. To add any additional enabler codes and auth codes, repeat [step 1](#) to [step 11](#) .

This chapter includes the following topics:

◆ Archiving licensing	28
◆ Bare Metal Recovery (BMR) licensing	28
◆ Client connection licenses	28
◆ Cluster licensing	28
◆ DDS licensing	29
◆ HomeBase server/agent licensing	30
◆ NDMP licensing	30
◆ NetWorker Module licensing	30
◆ NetWorker cloud licensing	30
◆ NetWorker storage node licensing	30
◆ Virtual environments simplified licensing	31

The licensing information in this chapter applies to NetWorker release 7.6. *The EMC Software Price Guide: Open Storage Software* provides detailed licensing information.

Archiving licensing

The archive feature must be purchased and licensed separately from other NetWorker software components.

Before licensing and using the NetWorker archive feature, ensure that you have a device, either a stand-alone device or in an autochanger or silo, connected to a NetWorker server or storage node. If you are cloning archives, you must have at least two devices available.

Bare Metal Recovery (BMR) licensing

Connection with a HomeBase server is enabled during the set up of the NetWorker server. This connection enables the delivery of profile data from the NetWorker client to the HomeBase server.

Note: A HomeBase agent license batch code is required to enable the client to generate profiles and send them to the HomeBase server. Contact your EMC HomeBase representative for licensing information.

Client connection licenses

Every computer to be backed up in a NetWorker datazone requires a client connection license, even the NetWorker server. The client connection license may be one of the licenses that is supplied with the base enabler or purchased separately. An NDMP data server requires a special type of client connection license.

Note: EMC ClientPak[®] enablers are no longer required. Client licensing is now based solely on the client connection enablers.

Cluster licensing

This section discusses NetWorker cluster licensing.

Note: Cluster client connection enablers are no longer required. Cluster client licensing is now based solely on the client connection enablers. However, existing cluster client connection licenses will still be honored. Each physical node of the cluster requires a client license. Virtual clients of a cluster do not require their own license.

Enabling the highly available NetWorker server

A client connection license is required for each physical node in the cluster on which you intend to run the highly available NetWorker server.

In addition, a storage node that is configured locally, that is, a storage node that uses a hostname that matches the physical hostname of the node that is running the NetWorker virtual server, does *not* require a separate storage node enabler.

For example, on a node in a cluster with the physical hostname Node A, a remote device defined as `rd=NodeA:/dev/tape1` would not require a separate storage node enabler while the NetWorker virtual server was running on Node A. An example of this configuration is provided in the NetWorker Installation Guide.

Enabling cluster and virtual clients

NetWorker client licensing differentiates between stand-alone computers and computers that participate in a cluster. The licenses are bound to physical nodes. Therefore, once a client connection license is allocated, any virtual clients that are running on that physical node can be backed up.

Backing up NetWorker Modules on cluster clients

The following two scenarios apply to NetWorker Modules in cluster environments:

Scenario One

To back up a NetWorker Module:

- ◆ From the *virtual* client, an application module license is required for the virtual client.
- ◆ From the *physical* host, an application module license is required for the physical client computer.

For example, physical nodes A and B are clustered and run a database. Virtual node C runs on this cluster and provides access to the database. If node C is the only way the database is backed up, one database application module license is required. If the physical node also backs up the database, a second database application module is required. Of course, client connection licenses are required for both of the physical nodes.

Scenario Two

For active-passive clusters which are made up of physical hosts, for example clusters in which one host is active and the other host is used for failover one Module license is required per virtual hostname.

For example, four Solaris physical hosts making up three active-passive DB2 clusters require three NMDB2 Unix licenses.

DDS licensing

To enable DDS, one license is required for each drive that is to be shared. Once a drive is licensed as shared, any number of storage nodes can share it. DDS licensing is independent of library and storage node licensing.

HomeBase server/agent licensing

The HomeBase server/agent have a separate licensing scheme and require separate enablers. More information on HomeBase licensing is provided in the following documentation:

- ◆ EMC HomeBase Server Installation and Configuration Guide
- ◆ EMC HomeBase Agent Installation and Configuration Guide

NDMP licensing

The NetWorker NDMP interface is an optional feature that must be licensed separately from the NetWorker base product according to a tiered licensing structure.

The following apply to NDMP licensing:

- ◆ One NDMP Client Connection license is required for each NDMP host.
- ◆ For NAS arrays, where each host in the array shares one license, you can specify the user-defined array name in the NDMP array name attribute of the Client resource.
- ◆ When the NetWorker NDMP interface is not used, a storage node license is required to use the NetWorker storage node software with NDMP.
- ◆ Additionally, a file type device is supported for NDMP operations, which can also be used as a bootstrap device. A DiskBackup license is required for the file type device.

NetWorker Module licensing

NetWorker Modules are licensed on the basis of one enabler per database type host.

For example, to back up the Oracle database on two hosts, two NetWorker Module for Oracle enablers are required, even if the two hosts are backed up by the same server. However, if multiple Oracle instances are running on a single NetWorker client, only one NetWorker Module for Oracle enabler is required.

NetWorker cloud licensing

A NetWorker cloud backup option license enables you to add an unlimited number of cloud backup devices.

NetWorker storage node licensing

The following apply to storage node licensing:

- ◆ Each storage node requires a storage node license, in addition to its client connection license.
- ◆ A storage node which allows backup only of local data is licensed separately as a dedicated storage node.
- ◆ Devices such as files or jukeboxes require device enablers, regardless of whether they are on the server, storage node, or dedicated storage node.

Note: If the NetWorker storage node software is disabled (if the NetWorker server is disabled or the storage node enabler is expired), you will not be able to recover backed-up data by using the storage node. To recover that data, the remote volume must be moved to a local drive connected to the server, and the recovery performed from there.

Virtual environments simplified licensing

NetWorker introduces a simplified licensing model for virtualized environments. The *EMC Software Compatibility Guide* provides a detailed list of supported server virtualization environments.

Two new attributes have been added to the General tab of the Client resource to identify the client as a virtual client:

- ◆ **Virtual client.** Set the attribute to **Yes** by selecting the Virtual Client attribute checkbox if the client is a virtual client.
- ◆ **Physical host.** If the client is a virtual client, set the attribute to the hostname of the primary/initial physical machine that is hosting the virtual client.

Virtual Edition Client Connection license

A new license type, Virtual Edition Client Connection, works with all server virtualization environments supported by the NetWorker software.

The Physical host identified in the Virtual Client Hostname attribute will consume one Virtual Edition Client Connection license, regardless of how many virtual clients are running on that host. If a virtual machine is licensed on one physical host and then migrates to another physical host, the new physical host requires its own Virtual Client Connection license. The hostname does not need to be fully-qualified, and must be less than 64 bytes. All clients sharing the same physical host must use an identical name. Do not mix name formats such as short, FQDN or IP address.

To free a Virtual Client Connection license that has been assigned to a physical host, all references to the physical host must be removed, by doing one of the following:

- ◆ Changing the virtual client and/or physical hostname attribute in the Client resources for all virtual clients that reference the physical host.
- ◆ Deleting all Client resources for virtual clients that reference the physical host.

NetWorker Modules in virtual environments

When NetWorker Module software is running natively on one or more virtual machines, one module license per module type will be consumed per physical host, regardless of the number of virtual clients associated with that physical host. The physical host itself will also require a Virtual Edition Client Connection license. Every physical machine that might host virtual clients with modules should be licensed in this way.

One license is required for each application type (Microsoft SQL, Exchange, and SharePoint, Oracle, and SAP) used within all of the virtual machines on a single physical server. There are no changes to model codes for NetWorker Modules, so use existing codes and license enablers.

Virtual Tape Library licensing

A Virtual Tape Library Frame license must be purchased for each physical hardware frame that supports VTLs. If the Virtual Jukebox attribute is set to Yes during configuration, but a Virtual Tape Library license does not exist, the configuration will succeed but subsequent library operations will fail.

Applying the Virtual Client license to an existing virtual machine after upgrading from a previous release

The Virtual Edition Client Connection (VCC) license is not automatically applied to an existing virtual machine after upgrading to NetWorker 7.6. As a result, the virtual machine uses one standard client license for the preexisting virtual client instead of using the virtual client license.

To take advantage of the Virtual Edition Client Connection licensing policies and free up the use of the standard client license, select the Virtual Client attribute checkbox for this Client resource, and specify the physical host.

Enabling Virtual Client licensing for existing Client resources

After upgrading from a release prior to NetWorker release 7.4 Service Pack 3, to enable the use of the virtual client license:

1. Edit the existing client by right-clicking the client in the in the **Configuration** screen of the **Administration** window and selecting **Properties**.
2. Select the **Virtual client** option.
3. For the **Physical host** attribute, enter the hostname of the physical machine hosting the virtual client.

The hostname does not need to be fully-qualified, and must be less than 64 bytes.

Licensing for VMware Consolidated Backup

When VMware Consolidate Backup (VCB) is being used, each proxy backup host will consume one standard Client Connection license, regardless of how many virtual clients are configured to backup via the proxy backup host.

This chapter includes the following topics:

- ◆ Using a licensing template..... 34
- ◆ NetWorker licenses 34
- ◆ Base enabler..... 34
- ◆ Auth code 35

Using a licensing template

When determining which licenses are required, try using a template, which can prevent “forgotten” licenses. For example:

- ◆ Start with the NetWorker server (the base license).
- ◆ Determine the desired NetWorker Server Edition.
- ◆ Calculate the client licenses.
- ◆ Calculate the dedicated storage node licenses.
- ◆ Calculate the autochanger or silo licenses.
- ◆ Calculate the Virtual Tape Library (VTL) licenses.
- ◆ Calculate the Disk Backup Option (DBO) licenses.
- ◆ Calculate any additional licenses, such as database module licenses.

A template can also help determine the *necessary* licenses for a given configuration, which does not necessarily mean that all of these licenses must be purchased, since certain licenses are included in other licenses. For example, base licenses include a certain number of client licenses.

NetWorker licenses

The following tips apply to the NetWorker licenses:

- ◆ Calculating NetWorker licenses can sometimes be difficult. For example, recent software changes might not apply yet to the current NetWorker release.
- ◆ Update numbers do not equate to NetWorker release numbers.
For example:
 - The update enabler called Update/8 updates the software to NetWorker release 7.0.
 - The update enabler called Update/9 updates the software to NetWorker release 7.3.
- ◆ Always check the current version of *EMC NetWorker Release Notes* for your installed release for possible licensing changes.

Base enabler

The following tips apply to the base enabler:

- ◆ As soon as the base enabler is entered, evaluation mode ends. Function that was available during a 30-day evaluation mode must be specifically enabled with either an evaluation or permanent enabler.
- ◆ Always enter the base enabler last.

Auth code

The following tips apply to the auth code:

- ◆ When applying an enabler from a license key (in other words, once the software is paid for and the license certificate has been activated), always apply its corresponding auth code at the same time.
- ◆ Do not use a NetWorker system as a production system unless the auth codes have been applied.
- ◆ If the host ID (NetWorker server) changes, all auth codes become invalid. There is a 15-day period during which a host transfer can be done in Powerlink. During that period, reregister and reapply the auth codes on the NetWorker server.

This chapter includes the following topics:

- ◆ Troubleshooting..... 38
- ◆ How to provide feedback..... 42
- ◆ License Conformance Summary 42

Troubleshooting

This section includes information on the following topics:

- ◆ [“Diagnosing licensing issues” on page 38](#)
- ◆ [“How to obtain NetWorker license information” on page 38](#)
- ◆ [“How to query the local server” on page 39](#)
- ◆ [“How to provide feedback” on page 42](#)

Diagnosing licensing issues

The following circumstances might cause an interruption in backups:

- ◆ A required enabler code (temporary evaluation enabler, license enabler, or authorization code) is missing. For example, a storage node enabler is missing which results in an insufficient number of licenses on the system.
- ◆ An enabler code has expired.
- ◆ An update enabler is missing.
- ◆ A new client was added, which requires an existing enabler code to be released through the deletion of an old client.
- ◆ Old enabler codes must be deleted before new enabler codes are applied. The server host ID is changed, which invalidates an existing enabler code.
- ◆ An evaluation enabler is still on the system, and must be deleted before a license enabler can be installed.
- ◆ A deduplication backup requires additional enabler codes, which include a Virtual Edition Client Connection enabler and a Deduplication enabler.
- ◆ An enabler code is entered as an authorization code, instead of as a new license enabler.
- ◆ An IP address is changed during an update, which invalidates an existing enabler code.
- ◆ A NetWorker client is migrated to a new server without obtaining a Host Transfer Affidavit.
- ◆ The server was moved to a new operating system, for example, from Solaris to Linux), which invalidates an existing enabler code.
- ◆ An enabler code, already in use by a NetWorker server, is applied to a second NetWorker server.

How to obtain NetWorker license information

To obtain license information from a NetWorker server, use the **nsrlic** command.

The following sources provide more information:

- ◆ [nsrlic man page on UNIX](#)
- ◆ [nsrlic man page information in the NetWorker Command Reference Guide](#)
- ◆ [NetWorker Administration Guide](#)

How to avoid an interruption in backups when changing the computer or network address

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

1. Obtain the host ID of the original server and the new server. The host ID appears in the server's **Registration** window. "[Task 4: Obtain the host ID of the NetWorker server](#)" on page 20 provides more information.
2. Contact EMC Powerlink Licensing to obtain and enter the new auth code on the NetWorker server.
3. Perform either of the following:
 - Configure the new NetWorker server with the new auth codes obtained from EMC Powerlink Licensing.
 - Install and configure the NetWorker License Manager software with the new auth codes obtained from EMC Powerlink Licensing.

How to query the local server

To query the local server, that is, the server where `nsrlic` is stored, type `nsrlic` at the command line.

`/usr/sbin/nsrlic` in UNIX or `networker_install_dir\bin\nsrlic` in Windows

A report is produced with various quantities and servers indicated. The following is an example report output.

Example 1

Report

```
12116:nsrlic: License Summary:
66441:nsrlic: Available: sv=12, virt=1, ndmp=0
64047:nsrlic: Borrowed: sv_borrowed=2
66442:nsrlic: Remaining: sv=7, virt=3, ndmp=0
nsrlic: Connected Clients: (4)
nsrlic: Saturn, Mars, Venus, Jupiter
nsrlic: Connected Virtual Client Physical hosts: (3)
nsrlic: esx-11 esx-38 sol-zone-jupiter
```

STANDARD CLIENT LICENSES

```
Available: 12
Used: 3
Loaned to Virtual: 2
Remaining: 7
Connected Clients
```

VIRTUAL CLIENT LICENSES

```
Available: 1
Borrowed from Server: 2
Used: 3
Remaining: 0
Connected Clients
```

NDMP CLIENT LICENSES

```
Available: 0
Used: 0
Remaining: 0
Connected Clients
```

```

SERVER/CLUSTER CLIENT TYPES
AIX: 0
Digital UNIX: 0
HP UX: 0
HP MPE: 0
Linux: 0
NetWare: 0
Network Appliance: 0
IBM DYNIX/ptx: 0
SGI: 0
Solaris: 2
SunOS: 0
UnixWare: 0
Windows NT Server: 8

```

```

WORKSTATION CLIENT TYPES
DOS: 0
Macintosh: 0
OS/2: 0
OS/2: 0
Windows 3.1x: 0
Windows 95: 0
Windows NT Workstation: 1
UX/4800: 0
Others: 0

```

```

Defined Clients          PRE-5.0 CLIENT TYPES

```

APPLICATION LICENSES

```

NetWorker Module for Microsoft SQL Server
Available: 1
Used: 1
Remaining: 0

```

```

NetWorker Module for Microsoft Exchange Server
Available: 4
Used: 3
Remaining: 1

```

```

NetWorker Module for Oracle, Unix Client/1
Available: 2
Used: 0
Remaining: 2

```

Determining the number of available client licenses

To determine the number of available client licenses, look at the "nsrlic: Remaining" line.

In the previous listing, where it indicates "sv=12", this means this particular server has 12 licenses available. Also, you can look to the STANDARD CLIENT LICENSES section and locate: "Remaining: 12." This is another indication of the number of available servers.

Querying a server

To query a specific server, type the `-s <server>` option at the command line.

```
/usr/sbin/nsrlic -s bacoor
```

where *bacoor* is the server name being queried.

Querying a server for all information

To query a specific server for all information, type the `-v <server>` option at the command line.

```
/usr/sbin/nsrlic -v bacoor
```

where `-v` is for a verbose query for bacoor.

Note: This query may be helpful in troubleshooting license issues.

A verbose report is produced with various quantities indicated.

Example 2 Verbose report

```
12116:nsrlic: License Summary:
66441:nsrlic: Available: sv=12, virt=1, ndmp=0
64047:nsrlic: Borrowed: sv_borrowed=2
66442:nsrlic: Remaining: sv=7, virt=3, ndmp=0
nsrlic: Connected Clients: (4)
nsrlic: Saturn, Mars, Venus, Jupiter
nsrlic: Connected Virtual Client Physical hosts: (3)
nsrlic: esx-11 esx-38 sol-zone-jupiter

STANDARD CLIENT LICENSES
Available: 12
Used: 3
Loaned to Virtual: 2
Remaining: 7
Connected Clients: Saturn, Mars, Venus, Jupiter

VIRTUAL CLIENT LICENSES
Available: 1
Borrowed from Server: 2
Used: 3
Remaining: 0
Connected Virtual Client Physical: esx-11, esx-38, sol-zone-jupiter

NDMP CLIENT LICENSES
Available: 0
Used: 0
Remaining: 0
Connected Clients

SERVER/CLUSTER CLIENT TYPES
AIX: 0
Digital UNIX: 0
HP UX: 0
HP MPE: 0
Linux: 0
NetWare: 0
Network Appliance: 0
IBM DYNIX/ptx: 0
SGI: 0
Solaris: 2
SunOS: 0
UnixWare: 0
Windows NT Server: 8
```

```

WORKSTATION CLIENT TYPES
DOS: 0
Macintosh: 0
OS/2: 0
OS/2: 0
Windows 3.1x: 0
Windows 95: 0
Windows NT Workstation: 1
UX/4800: 0
Others: 0

Defined Clients          PRE-5.0 CLIENT TYPES

APPLICATION LICENSES

NetWorker Module for Microsoft SQL Server
Available: 1
Used: 1
Remaining: 0
Connected Clients: SQLhost_7

NetWorker Module for Microsoft Exchange Server

Available: 4
Used: 3
Remaining: 1
Connected Clients: Exch1, Exch17, Exch18

NetWorker Module for Oracle, Unix Client/1
Available: 2
Used: 0
Remaining: 2
Connected Clients:

```

How to provide feedback

To provide feedback:

- ◆ If error messages appear in the output file or you would like to provide feedback, contact EMC Powerlink Licensing.
- ◆ If you cannot determine the reason for a failure or experience problems with updating the NetWorker license, contact EMC Powerlink Licensing. You can open a Service Request on powerlink.emc.com.

License Conformance Summary

In the course of using NetWorker software to protect enterprise data, users add clients and modules as needed. It can be helpful to see a summary report of the current license information for any given NetWorker server.

A summary report enables users to determine several things. For example:

- ◆ Which or how many products or features have been enabled
- ◆ Which or how many licenses have been purchased and authorized
- ◆ Which or how many of those licenses have been used and, conversely, how many are still available to use
- ◆ How many additional licenses might be needed
- ◆ Whether the number of licenses conforms to the number of licenses in use

From Console, a License Conformance Summary report that shows relevant information about the NetWorker related product licenses purchased or under evaluation can be run.

The information is presented in a tabular form that displays installed products, licenses that are in conformance, and which additional licenses, if any, must be obtained in order to close conformance gaps.

In addition to product and license information, the summary displays certain details about the environment and the software version that is run by the NetWorker server.

Accessing the License Conformance Summary

To display the License Conformance Summary:

1. In the main Console window, click the **Enterprise** button on the taskbar.
2. Highlight a host in the navigation tree, and then in the right pane, right-click NetWorker, and select **Launch Application**.

The **NetWorker Administration** window appears.

3. Click the **Configuration** button on the taskbar.
4. Select **Configuration > License Conformance Summary** on the toolbar.

The **License Conformance Summary** appears.

5. When finished, click **OK** or **Cancel** to exit the summary.

Note: The License Conformance Summary can also be displayed by right-clicking **Registrations** in the server's navigation tree, and selecting **License Conformance Summary**.

License Conformance Summary details

The License Conformance Summary provides the following information:

- ◆ Server and environment information:
 - **NetWorker Server:** Name of the NetWorker server.
 - **Version:** NetWorker software release and build number.
 - **Full Conformance:** Possible values are **Yes**, **No**, or, if in evaluation mode, **Eval**.
 - **Base License:** Possible values include:
 - The NetWorker edition that is installed
 - **Eval** indicates evaluation mode.
 - **Yes** or **No** indicates whether an authorization code has been applied to the license.
 - **Disabled** indications that the server has been disabled.
 - **Operating System:** Operating system installed on the NetWorker server.
 - **Report Date:** Date and time when the summary was created.
- ◆ License related information is displayed in the following columns:
 - **License:** Type of license. For example, Storage Node, Client, module name.
 - **Number Used:** How many licenses of this type have been used.
 - **Number of Licenses:** How many licenses of this type are installed and not expired on the server. While the license is in evaluation mode, the number displayed is the maximum number possible for the license type.

- **% Conformance:** Degree to which the number of licenses purchased is less than or equal to the number used. For DiskBackup Option and Virtual Tape Library, this might be blank, because more than one device can be created for each license of these license types.
- **Notes:** Additional information, specific to the license type, provided by the system. For example, the capacity of a DiskBackup license.
- ◆ A checksum (five groups of generated alphanumeric characters) is listed at the bottom of the summary if the summary contents are valid. Users may ignore this line.

When viewing the License Conformance Summary, consider the following:

- ◆ DiskBackup Option and Virtual Tape Library (VTL) Frames are the only license types for which the **Number Used** can exceed the **Number of Licenses**, because more than one device can be created for each license of this type.
- ◆ The License Conformance Summary is not available for use with the NetWorker License Manager software.
- ◆ The License Conformance Summary supports the standard Console table functions, such as **Print** and **Export**.
- ◆ A time-stamped snapshot License Conformance Summary is sent to the `/nsr/logs` directory at the start of each quarter.
- ◆ The NetWorker server updates license information only once daily, at noon. Changes made after noon will be reflected in the next day's update.
- ◆ **License Conformance** is a new attribute for the server (nsr) resource.
- ◆ **License Conformance Checksum** is a new attribute used by the system to maintain the integrity of the summary.

This glossary contains terms related to NetWorker software licensing.

A

- activation certificate** See “certificate.”
- activation letter** See “product activation letter.”
- activation key** See “key.”
- administrator** The person who installs, licenses, configures, and maintains the NetWorker software. Also called “system administrator”.
- auth code** See “authorization code.”
- authorization code** A unique, eight character alphanumeric code that unlocks the NetWorker software for permanent use. An authorization (or auth) code is node-locked, which means that it can only be applied to a specific host and host ID. It can also be used only with the specific enabler code with which it was associated in the product activation letter. Do not confuse auth code with License Authorization Code (LAC).

B

- base enabler** The enabler associated with the NetWorker server. It is also known as the server license code. The base enabler should be applied and authorized last among the initial group of licenses entered.

C

- certificate** A EMC Powerlink Licensing activation record that includes the license key, host information, and possible other product-specific information for entitlements (evaluation licenses) that have been activated at the same time. Also called an activation certificate. Activation causes a new or updated certificate to be created in EMC Powerlink Licensing. This, in turn, causes a product activation letter to be e-mailed to the customer.
- certificate ID** The identification number attached to a given certificate.
- Console server** NetWorker servers and clients are managed from NetWorker Management Console. Console also provides reporting and monitoring capabilities for all NetWorker servers and clients.

E

- enabler (or enabler code)** An 18- or 24-character alphanumeric code that allows NetWorker software to run beyond an initial 30-day evaluation period. Enablers are encoded to include licensing parameters such as feature and quantity. A temporary enabler lasts for a limited time. A permanent enabler is supplied with an associated auth code. A temporary enabler is the NetWorker code equivalent of a Powerlink entitlement.
- entitlement** In EMC Powerlink Licensing, the right to use a particular software product in order to evaluate it; an evaluation license. When an entitlement is activated, it triggers the updating of a certificate. An entitlement is the Powerlink administrative equivalent of a NetWorker temporary enabler. An entitlement becomes permanent when its license is activated.
- event** A notification of an application event, such as the impending expiration of a license enabler. This notification contains information that might require user action. It appears in the daemon log of Console.
- expiration date** The date on which any of the following expires: an evaluation copy of NetWorker software, a temporary enabler, or a permanent enabler that was not made permanent by the application of an auth code.

H

- host ID** A serial number that uniquely identifies a computer. For licensing purposes, the computer is the NetWorker server (or, for bulk licenses, the NetWorker License Manager license server).

I

- ID** A sequence of bits or characters that identifies a program, device, controller, or system.

K

- key** The combination of an enabler code and an auth code for a specific product. Also called a license key or activation key.

L

- LAC** License Authorization Code. This unique, 20-character alphanumeric code is issued for a customer to use in EMC Powerlink Licensing to obtain license keys electronically. License keys activate the entitlements (the right to use specific products) in a given purchase order. Only LACs that have been activated appear in the certificate search results in PLL. Do not confuse LAC with auth code.
- LAC letter** The License Authorization Code letter e-mailed by EMC to a customer after a purchase order for NetWorker software has been received. It contains a LAC, a list of the products ordered, their SKU numbers, and instructions on how to activate the software. Software download instructions are also included.
- LAC number** See "LAC."
- license enabler** A code that is required to run a feature or product. See "enabler (or enabler code)."

license key	In EMC Powerlink Licensing, the combination of an enabler code and an auth code for a specific product.
M	
machine ID	See “host ID.”
N	
NetWorker Management Console interface	The interface for the NetWorker server, used to configure and manage the NetWorker software.
NetWorker server	The computer that runs the NetWorker server software, which contains the base enabler and online indexes and provides backup and recovery services to the clients on the same network.
notification	A message sent to the NetWorker administrator about important NetWorker events.
P	
permanent enabler	An enabler code that has been made permanent by the application of an authorization code. See “enabler (or enabler code).” See also “authorization code.”
PLL	The EMC Powerlink Licensing portal in Powerlink. See “EMC Powerlink Licensing.”
Powerlink	An EMC application that is home to a range of tools designed to help customers get the most from their investments in EMC and from their storage environments in general. Software Downloads and Licensing is the Powerlink portal that provides access to EMC software and registration.
EMC Powerlink Licensing	The portal within the Powerlink application that allows the EMC and customers to manage certain software product licenses. NetWorker software is one of these products.
Powerlink Support	The portal within the EMC Powerlink application that allows, among other things, the downloading of NetWorker software for evaluation.
product activation letter	The letter e-mailed by EMC to a customer after the NetWorker entitlements/licenses have been activated in EMC Powerlink Licensing. This letter includes the certificate ID, the LAC number, the host ID of your NetWorker server, a list of the NetWorker products that have been purchased and activated, and the license keys to install on the NetWorker server. Once the license keys (enablers and auth codes) have been installed, the release of NetWorker software is permanently licensed. Also called the activation letter or activation certificate.
S	
server license code	See “base enabler.”
T	
temporary enabler	A code that allows operation of the software for an additional 45 days beyond the evaluation period. See “enabler (or enabler code).”

U**update enabler**

A code that updates software from one significant release to a subsequent significant release. Update enablers are not required for maintenance releases. As with other temporary enabler codes, it expires after 45 days.