



EMC® NetWorker®
Module for DB2
Version 4.0

Installation Guide
P/N 300-005-966
REV A01

EMC Corporation
Corporate Headquarters:
Hopkinton, MA 01748-9103
1-508-435-1000
www.EMC.com

Copyright © 1998 - 2009 EMC Corporation. All rights reserved.

Published June 19, 2009

EMC believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED "AS IS." EMC CORPORATION MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Use, copying, and distribution of any EMC software described in this publication requires an applicable software license.

For the most up-to-date regulatory document for your product line, go to the Technical Documentation and Advisories section on EMC Powerlink.

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

All other trademarks used herein are the property of their respective owners.

Preface

Chapter 1 Getting Started

The EMC NetWorker Module for DB2 environment..... 10

Installation requirements..... 11

 Operating system requirements..... 11

 DB2 server requirements..... 11

 NMC server requirements..... 11

 NetWorker server requirements..... 11

 NetWorker client requirements..... 12

 Cluster and DB2 DPF requirements..... 12

 NetWorker PowerSnap Module requirements..... 12

 NMDB2 requirements..... 13

 Internationalization requirements..... 13

Installation roadmap..... 13

Installation checklist..... 13

 Documents..... 14

 Installation media..... 14

 Pathnames..... 14

 License information..... 14

Updating from a previous version..... 14

Updating remotely (push installation)..... 15

Chapter 2 UNIX and Linux Installation

Installing on a single UNIX or Linux host..... 18

 Perform the preinstallation tasks on UNIX or Linux..... 18

 Install the NMDB2 software on UNIX or Linux..... 20

 Perform the postinstallation tasks on UNIX or Linux..... 24

 Enable the software..... 25

Installing on a cluster or DPF on UNIX or Linux..... 25

Uninstalling on UNIX and Linux..... 25

Chapter 3 Microsoft Windows Installation

Software installation path on Microsoft Windows..... 28

Installing on a single Microsoft Windows host..... 28

 Access the software for Microsoft Windows..... 28

 Install the NMDB2 software on Microsoft Windows..... 30

Perform the postinstallation tasks on Microsoft Windows	31
Installing on a cluster or DPF on Microsoft Windows.....	32
Maintaining the installation on Microsoft Windows	32
Run the Setup program in maintenance mode.....	32
Repair an NMDB2 installation	33
Uninstalling on Microsoft Windows	33

Chapter 4 Licensing and Enabling the Software

Software licensing	36
The evaluation process	36
Evaluating a new installation.....	36
Evaluating features on an existing installation.....	36
The licensing process	37
Client connection licenses	37
NMDB2 license	38
Using nsrlic to gather license information.....	38
Querying the local server.....	38
Querying a server.....	40
Managing licenses	41

As part of an effort to improve and enhance the performance and capabilities of its product lines, EMC periodically releases revisions of its hardware and 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 document is part of the EMC NetWorker Module for DB2 (NMDB2) documentation set. This guide is intended for use by system administrators and DB2 database administrators (DBAs) who are responsible for installing software and maintaining the DB2 server backup and recovery systems. Operators who monitor the daily backups may also find this manual useful.

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

- ◆ Oracle terminology and concepts, especially those related to Oracle database backup and recovery.
- ◆ Backup and recovery procedures on a DB2 server.
- ◆ Disaster recovery procedures on an DB2 server.
- ◆ NetWorker Management Console (NMC) browser-based user interface.

Related documentation

Documentation related to the use of this product can be found at the EMC website, <http://Powerlink.EMC.com>, including:

- ◆ The NetWorker Module for DB2 version 5.0 documentation set:
 - Administration guide
 - Installation guide
 - Release notes
 - Command reference guide
- ◆ The NetWorker documentation set:
 - Administration guide
 - Installation guide
 - Release notes
 - Command reference guide
 - Disaster recovery guide
- ◆ Other EMC documentation:
 - NetWorker PowerSnap Module documentation
 - Software compatibility guide
 - UNIX man pages

The following additional documentation might also be useful:

- ◆ DB2 Server documentation
- ◆ DB2 database backup and recovery documentation

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, functions, utilities • URLs, pathnames, filenames, directory names, computer names, filenames, 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 calls, 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 Powerlink and choose Support. On the Support page, you will see several options, including one for making a service request. Note that to open a service request, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or with 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 concerned about.

This chapter includes the following sections:

- ◆ The EMC NetWorker Module for DB2 environment 10
- ◆ Installation requirements 11
- ◆ Installation roadmap 13
- ◆ Installation checklist 13
- ◆ Updating from a previous version 14
- ◆ Updating remotely (push installation)..... 15

The EMC NetWorker Module for DB2 environment

The EMC® NetWorker® Module for DB2 (NMDB2) software works with the supported DB2 database software and NetWorker software to provide backup and restore services for DB2 data.

Table 1 on page 10 lists the software required for a simple network environment that uses the NMDB2 software for backup and recovery services.

Table 1 Typical NMDB2 backup and recovery environment

Host	Required software
NetWorker Management Console (NMC) server host	NetWorker client software and NMC software
NetWorker storage management server	NetWorker server software
Each DB2 server host	DB2 database, NetWorker client, and NMDB2 software

Figure 1 on page 10 shows network communications for a simple NMDB2 environment with separate hosts for the NMC, NetWorker, and DB2 servers.

Note: For snapshot backup and restore, the proper NetWorker PowerSnap™ module must also be installed for the primary storage device where the snapshot data resides.

The *EMC Information Protection Software Compatibility Guide* on EMC Powerlink® provides current details on supported operating systems and versions on which this version of NMDB2 software operates, as well as any supporting software that might be required to properly configure this software. For details on updates of patches required for a particular system, see the Support link of the EMC Powerlink website..

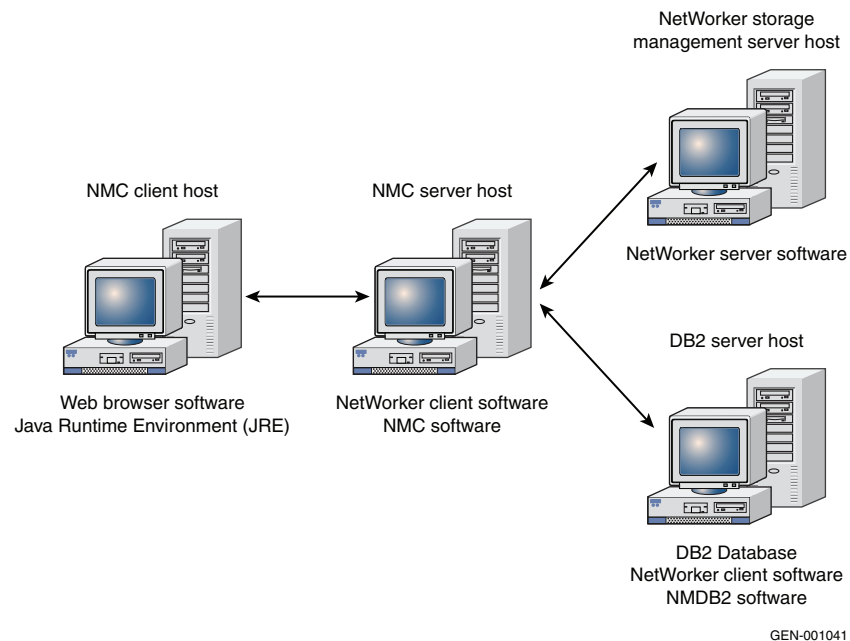


Figure 1 Network communications for a simple NMDB2 environment

Installation requirements

Ensure that the appropriate requirements for installation are met, as described in the following sections.

Operating system requirements

The NMDB2 software must be installed on a host with a supported operating system.

Note: NMDB2 does *not* support 32-bit NetWorker version 7.5 or later on a 64-bit operating system, *except* on AIX. If the 64-bit operating system is *not* AIX, then 64-bit NetWorker software must be installed.

The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides a complete list of supported operating systems.

The IBM DB2 documentation provides further details on the operating system, installation, and configuration requirements.

DB2 server requirements

A supported DB2 server version must be installed. The DB2 version must be certified to run on the operating system. The DB2 documentation provides details on the supported operating systems.

The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides details on the DB2 versions supported on specific platforms.

NMC server requirements

A supported version of NetWorker Management Console (NMC) must be installed to provide a user interface with the NetWorker software.

The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides details on the NMC versions supported on specific platforms.

NetWorker server requirements

A supported version of the NetWorker server (with all applicable service packs) must be installed on the NetWorker server host. The NetWorker server host is usually a separate host, but it can also be the NMDB2 host.

Specific NetWorker server versions may be required to support specific NMDB2 features, as described in the NMDB2 release notes.

The NetWorker server version must be certified to work with the NetWorker client version installed on the NMDB2 host, and it must be supported on the operating systems used.

The following documentation provides more information:

- ◆ The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides details on the supported server versions and operating systems.
- ◆ The NetWorker installation guide provides details on how to install the NetWorker server software.

NetWorker client requirements

If the NetWorker server is *not* installed on the NMDB2 host, then a supported version of the NetWorker client software (with all applicable service packs) must be installed on the NMDB2 host.

Note: The NetWorker client software must be installed on the NMDB2 host *before* the NMDB2 software is installed.

Specific NetWorker client versions may be required to support specific NMDB2 features, as described in the NMDB2 release notes.

If NetWorker 7.5 or later client software is installed, start the NetWorker client service *at least once* just before the NMDB2 installation. Otherwise, automatic registration of the NetWorker Client Configuration Wizard *fails*.

If the automatic wizard registration fails, the wizard may be manually registered. The following sections describe how to manually register and unregister the wizard:

- ◆ [“Perform the postinstallation tasks on UNIX or Linux” on page 24](#)
- ◆ [“Perform the postinstallation tasks on Microsoft Windows” on page 31](#)

On a Solaris system with Solaris zones, the NetWorker client software must be installed on the same zone as the NMDB2 software.

The NetWorker client version must be certified to run on the operating system used.

The following documentation provides more information:

- ◆ The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides details on the supported NetWorker client versions and operating systems.
- ◆ The NetWorker installation guide provides details on how to install the NetWorker client software.

Cluster and DB2 DPF requirements

Supported cluster software must be installed for an active or passive cluster configuration. A DB2 Database Partition Feature (DPF) configuration does not require additional software.

The following software must be installed on each cluster node or DPF partition:

- ◆ Supported NetWorker client or storage node software
- ◆ NMDB2 software

The *EMC Information Protection Software Compatibility Guide* on the EMC Powerlink website provides details on cluster and DPF requirements.

NetWorker PowerSnap Module requirements

To enable supported PowerSnap snapshot backup and restore features, the NetWorker PowerSnap Module that is designed for the primary storage system must be installed on *both* of the following hosts:

- ◆ NMDB2 host
- ◆ A separate proxy client host or NetWorker storage node host

The NetWorker PowerSnap Module documentation provides more information.

The following documentation gives details on the limitations of PowerSnap support:

- ◆ NetWorker Module for DB2 4.0 release notes
- ◆ NetWorker PowerSnap Module documentation
- ◆ *EMC Information Protection Software Compatibility Guide*

NMDB2 requirements

The NMDB2 software must be installed on the DB2 server.

The EMC Powerlink website provides details on any patches required for the particular system as well as the most up-to-date documentation for the NMDB2 product.

Internationalization requirements

Before NMDB2 version 4.0 is installed in a non-English environment, ensure that the NMDB2 host meets the following requirements:

- ◆ A supported internationalized version of the operating system is installed.
- ◆ The DB2 software provides the required National Language Support (NLS) or globalization support, and is configured with the required non-ASCII character set.
- ◆ A supported version of NetWorker is installed.

Installation roadmap

Use the following roadmap when installing the NMDB2 software on each DB2 server host that requires backup and recover services:

1. Review the [“Installation checklist” on page 13](#) and verify that you have the documentation, installation media, pathnames, and license information, as required.
2. Install the NMDB2 software as appropriate for the host operating system:
 - [Chapter 2, “UNIX and Linux Installation”](#)
 - [Chapter 3, “Microsoft Windows Installation”](#)

Note: [“Updating from a previous version” on page 14](#) provides instructions on how to update from a previous NMDB2 version.

3. Enable and register the NMDB2 software.
[Chapter 4, “Licensing and Enabling the Software”](#) provides instructions.
4. Configure a Client resource on the NetWorker server for each NMDB2 host.
The *EMC NetWorker Module for DB2 Administration Guide* gives instructions on how to create the NetWorker Client resources.

Installation checklist

Review the following checklist to ensure that you have the required materials for the installation and configuration procedures.

Documents

- ◆ *EMC NetWorker Module for DB2 Installation Guide* for the existing version, if a previous version of NMDB2 must be uninstalled before NMDB2 4.0 can be installed
- ◆ *EMC NetWorker Module for DB2 Version 4.0 Release Notes*
- ◆ *EMC NetWorker Module for DB2 Version 4.0 Administration Guide*
- ◆ *EMC NetWorker Administration Guide* for the supported NetWorker version

Installation media

- ◆ DVD from the EMC Media Kit
- ◆ Link to the EMC website if downloading the software.

Pathnames

- ◆ Path to the NetWorker binaries and the directory where the NMDB2 software is installed.
- ◆ Path to the DB2 default data directory and other data directories.

The *EMC NetWorker Module for DB2 Administration Guide* gives more information on the required pathnames and parameters.

License information

- ◆ Evaluation enabler
- ◆ Enabler certificate

NMDB2 version 4.0 has separate license enablers for UNIX (including Linux) and Windows platforms. The license enablers are *not* interchangeable.

[Chapter 4, “Licensing and Enabling the Software”](#) provides more information on licensing.

Updating from a previous version

To update to NMDB2 version 4.0 from a previous version:

1. Uninstall the previous version of the NMDB2 software.

The appropriate version of the *EMC NetWorker Module for DB2 Installation Guide* provides details.

2. Install the NMDB2 software.

The following chapters, appropriate for the operating system, provide details:

- [Chapter 2, “UNIX and Linux Installation,”](#)
- [Chapter 3, “Microsoft Windows Installation,”](#)

3. Enable and register the NMDB2 software.

[Chapter 4, “Licensing and Enabling the Software”](#) gives details.

4. If updating NMDB2 from version 1.6 and earlier, ensure the DB2_VENDOR_INI registry variable is *not* set. This variable is no longer used.

Also, if the \$INSTHOME/sqlib/cfg/vendor.cfg file exists and contains only NMDB2 parameters, such as NSR_DATA_VOLUME_POOL, as listed in the *EMC NetWorker Module for DB2 Administration Guide*, remove this file. Otherwise, delete all NMDB2 parameters from this file.

To implement these deletions:

- a. Edit the `$INSTHOME/sqlib/cfg/vendor.cfg` file, removing any NMDB2 variables
- b. Recycle the database instance and clear the `DB2_VENDOR_INI` variable with the appropriate **stop** and **start** commands. For example:

```
$ db2stop
$ db2set DB2_VENDOR_INI=
$ db2start
```

Updating remotely (push installation)

To update from NMDB2 version 2.x on a remote client by using the software distribution feature (push installation) on the NetWorker server:

Note: Push installation is *not* supported on Linux Itanium, Solaris AMD64/EM64T, or cluster environments.

1. Ensure that the following requirements are met:
 - The NMDB2 client host has a supported operating system.
 - NetWorker client 7.4 or later is installed on the remote NMDB2 client host.
 - NetWorker server 7.4 or later is installed on the NetWorker server host.
 - The NetWorker Console server includes administrative privileges.
2. Use the Software Administration Wizard or **nsrpush** command on the NetWorker server to perform the NMDB2 update.

The server transfers and installs the NMDB2 software to the client host.

The *EMC NetWorker Installation Guide* and *EMC NetWorker Release Notes* provide more information.

This chapter includes the following sections:

- ◆ Installing on a single UNIX or Linux host..... 18
- ◆ Installing on a cluster or DPF on UNIX or Linux 25
- ◆ Uninstalling on UNIX and Linux..... 25

Installing on a single UNIX or Linux host

To install and enable the NetWorker Module for DB2 (NMDB2) version 4.0 on a single host with a supported UNIX or Linux operating system, perform the following steps:

1. [“Perform the preinstallation tasks on UNIX or Linux” on page 18](#)
2. [“Install the NMDB2 software on UNIX or Linux” on page 20](#)
3. [“Perform the postinstallation tasks on UNIX or Linux” on page 24](#)
4. [“Enable the software” on page 25](#)

Perform the preinstallation tasks on UNIX or Linux

Perform the required preinstallation tasks:

- ◆ [“Preinstall tasks for relocated NetWorker client on Linux” on page 18](#)
- ◆ [“Access the software on UNIX or Linux” on page 18](#)

Preinstall tasks for relocated NetWorker client on Linux

If the NetWorker client is relocated to a *nondefault* directory on Linux, perform *one* of the following:

- ◆ Ensure that the LD_LIBRARY_PATH environment variable is set to include the additional directories listed in [Table 2 on page 18](#)
where *relocation_dir* is the relocation path of the NetWorker client base directory.
- ◆ Ensure that the system default library search path is changed with the **ldconfig** command to include the additional directories listed in [Table 2 on page 18](#).

The appropriate Linux documentation on the runtime linking environment provides more details.

Table 2 Additional library search directories for a relocated NetWorker client

Platform	Include these additional directories in the library search path
Linux AMD64/EM64T	<i>relocation_dir</i> /lib: <i>relocation_dir</i> /lib/nsr/apps/lib64: <i>relocation_dir</i> /lib/nsr/lib64
Linux Intel	<i>relocation_dir</i> /lib: <i>relocation_dir</i> /lib/nsr/apps: <i>relocation_dir</i> /lib/nsr

Access the software on UNIX or Linux

The NMDB2 software is distributed in the following forms:

- ◆ On the NetWorker Modules DVD, which is included in the EMC Information Protection and Availability Product Families Media Kit. The kit contains the software and online documentation for related products.
- ◆ In the downloadable file of the *evaluation* software, available from the EMC website.



IMPORTANT

The NMDB2 software obtained from the DVD or EMC website does *not* include an enabler code. The software can only be *evaluated*. [Chapter 4, “Licensing and Enabling the Software”](#) provides more information on enabling NMDB2.

Access the NMDB2 software files from either of the following sources:

- ◆ “From a local DVD drive” on page 19
- ◆ “From the EMC website” on page 19

From a local DVD drive

To access the NMDB2 software files on a host with a local DVD drive:

1. Log in as root on the host.
2. Insert and mount the NetWorker Module DVD in the DVD drive:

```
mount /dev/DVD_drivename /mount_point
```
3. Go to the correct directory on the DVD, as shown in [Table 3 on page 19](#).

Note: The *EMC Information Protection Software Compatibility Guide on Powerlink* provides details on the operating systems supported for specific database and application software.

Table 3 Accessing the correct directory on the local DVD

Platform	Type the following command
AIX (64-bit)	<code>cd /mount_point/db2/aix_64</code>
HP-UX PA-RISC (64-bit)	<code>cd /mount_point/db2/hpux11_64</code>
HP-UX Itanium	<code>cd /mount_point/db2/hpux11_ia64</code>
Linux Intel	<code>cd /mount_point/db2/linux_x86</code>
Linux AMD64/EM64T	<code>cd /mount_point/db2/linux_x86_64</code>
Linux Itanium	<code>cd /mount_point/db2/linux_ia64</code>
Solaris SPARC (64-bit)	<code>cd /mount_point/volume_label/db2/solaris_64</code>
Solaris AMD64/EM64T	<code>cd /mount_point/volume_label/db2/solaris_amd64</code>

4. Continue with “Install the NMDB2 software on UNIX or Linux” on page 20.

From the EMC website

The *evaluation* version of NMDB2 downloaded from the EMC website contains tarred and compressed versions of the software files.

To access the *evaluation* version of the NMDB2 software from the EMC website:

1. Log in as root on the host.
2. Create a temporary installation directory in a local file system with sufficient free disk space to contain and extract the downloaded software. The directory must have space for *both* the compressed download file and the uncompressed and untarred files. For example, create the following directory:

```
mkdir /usr/nsr_extract_nmdb2
```
3. Go to <http://Powerlink.EMC.com>.
4. Select **Support > Software Downloads and Licensing > Downloads J-O > NetWorker Module**.
5. In the table of NetWorker Module Software Downloads, click the **NetWorker Module for DB2 Version 4.0** for the particular UNIX or Linux platform.

6. Download the NMDB2 software file to the temporary directory you created, for example, `/usr/nsr_extract_nmdb2`.
7. Uncompress the downloaded file by typing the following **gunzip** command, and replacing the `filename.tar.gz` name with the specific download filename:


```
gunzip filename.tar.gz
```
8. Extract the software from the uncompressed, tarred file:


```
tar -xvpBf filename.tar
```

The distribution software files are listed on the screen as the extraction proceeds.
9. Remain in the installation directory created in [step 2](#), for example, `/usr/nsr_extract_nmdb2`.
10. Continue with [“Install the NMDB2 software on UNIX or Linux” on page 20](#).

Install the NMDB2 software on UNIX or Linux

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

To install NMDB2 version 4.0 on the UNIX or Linux system:

1. Ensure that all the installation requirements have been met, as described in [“Installation requirements” on page 11](#).
2. Ensure that you are logged in as the root user.
3. Ensure that you are in the correct directory, as described in [“Access the software on UNIX or Linux” on page 18](#).

Note:

- If the installation is *not* started from the correct directory, the installation might fail.
 - A database does *not* need to be shut down during the installation.
-

4. Install the software according to the instructions in the appropriate section:
 - [“Install on AIX” on page 21](#)
 - [“Install on HP-UX” on page 21](#)
 - [“Install on Linux” on page 22](#)
 - [“Install on Solaris” on page 23](#)

After the software installation completes, a message is displayed on how to start the NetWorker Client Configuration Wizard for configuring backups. The *EMC NetWorker Module for DB2 Administration Guide* provides more information on the wizard.

Before you use NMDB2 for backups, you must enable the software according to [“Enable the software” on page 25](#).

5. If the MANPATH environment variable does *not* include the pathname of the directory that contains the NMDB2 man pages, modify the variable to include the correct pathname and enable access to the man pages with the **man** command.

The NMDB2 man pages are installed in the same location as NetWorker client man pages. For example, with the man pages in the default directory, ensure that MANPATH includes `/usr/share/man`.

Install on AIX

To install NMDB2 on an AIX system, invoke either the **installp** command line interface (CLI) or the AIX System Management Interface Tool (SMIT) GUI program:

- ◆ To invoke the CLI, type the following command:

```
installp -a -d /dir_pathname LGTONmdb2.rte
```

where */dir_pathname* is the complete pathname of the correct directory, as described in [“Access the software on UNIX or Linux” on page 18](#).

To verify that the installation succeeded, type the following command:

```
lslpp -L all | grep -i lgtonmdb2
```

If the **lslpp** command output includes LGTONmdb2.rte 4.0.0.0, the installation succeeded.

- ◆ To invoke the SMIT GUI program, perform the following:
 - a. Type the following command:


```
smitty install_latest
```
 - b. In the **Entry Field**, type the location of the NMDB2 installation software as the complete pathname of the directory described in [“Access the software on UNIX or Linux” on page 18](#).
 - c. Select the option **SOFTWARE to install**.
 - d. Type **yes** in response to the following prompts:


```
Accept new license agreements?
Preview new license agreements?
```
 - e. Select **F4=List** to display the list of NMDB2 software packages.
 - f. Select **LGTONmdb2.rte** to install the NMDB2 software.
 - g. Select **Install and Update Software**.
 - h. Press **Enter** to begin the installation.

Install on HP-UX

To install NMDB2 on an HP-UX system, type the **swinstall** command to invoke either the command line interface (CLI) or the graphical user interface (GUI) program:

- ◆ To invoke the **swinstall** CLI program, type the following command:

```
swinstall -x mount_all_filesystems=false  
-s /dir_pathname/LGTONmdb2.pkg NMDB2
```

where */dir_pathname* is the complete pathname of the directory containing the software package, as described in [“Access the software on UNIX or Linux” on page 18](#).

- ◆ To invoke the **swinstall** GUI program, type the following command:

```
swinstall -x mount_all_filesystems=false -i  
-s /dir_pathname/LGTONmdb2.pkg NMDB2
```

where */dir_pathname* is the complete pathname of the directory containing the software package, as described in [“Access the software on UNIX or Linux” on page 18](#).

- a. From the **Actions** menu, select **Install (analysis)**.

When the analysis is complete, a “Ready with Warnings” message appears. This is normal.

- b. Click **OK**.

The NMDB2 installation on HP-UX stores informational messages including installation errors in the `/var/adm/sw/swagent.log` file. If an error occurs during the installation, check this file to obtain details on the error.

Install on Linux



IMPORTANT

The software must be installed in the same base directory as the NetWorker client software. The software can be *relocated* during the installation on Linux, but *only* to the same relocation path as the NetWorker client. For example, if the NetWorker client software is installed in the `/disk1` (nondefault) directory, NMDB2 must also be installed in the `/disk1` directory.

To install NMDB2 on a Linux system, type the appropriate `rpm` command:

Note: If the NetWorker client version is earlier than 7.5, you must also use the `--nodeps` option with the `rpm` command to install NMDB2.

- ◆ On Linux AMD64/EM64T:

- To install the NMDB2 software in the default directory:

```
rpm -i lgtonmdb2-4.0-1.x86_64.rpm
```

- To relocate the NMDB2 software to the same relocation path as the NetWorker client:

```
rpm -i lgtonmdb2-4.0-1.x86_64.rpm --relocate
/usr=NetWorker_base_directory
```

Note: To relocate the software during the installation, type the `--relocate` option for the `/usr` directory only, *not* for individual subdirectories.

- ◆ On Linux Intel:

- To install the NMDB2 software in the default directory:

```
rpm -i lgtonmdb2-4.0-1.i686.rpm
```

- To relocate the NMDB2 software to the same relocation path as the NetWorker client:

```
rpm -i lgtonmdb2-4.0-1.i686.rpm --relocate
/usr=NetWorker_base_directory
```

Note: To relocate the software during the installation, type the `--relocate` option for the `/usr` directory only, *not* for individual subdirectories.

To verify that the installation succeeded, type the `rpm -aq` command:

```
rpm -aq | grep -i lgto
```

If the `rpm -aq` command output includes the appropriate lines, the installation succeeded, for example:

```
lgtocInt-7.4-1
lgtonmdb2-4.0-1
```

Note: If other NetWorker software components are also installed on the Linux system, the `rpm -aq` command produces other output lines in addition to these two lines.

Install on Solaris

**IMPORTANT**

If the Solaris system has Solaris zones and NMDB2 4.0 is to run on a sparse root zone:

1. Install NMDB2 on the global zone.
2. Install NMDB2 on each required sparse root zone.

Perform all NMDB2 installations by using the `pkgadd` command, as described in the following steps. [Table 4 on page 26](#) provides information on the NMDB2 uninstall procedures on Solaris zones.

To install NMDB2 on a Solaris system, perform the following:

1. Verify the `basedir` variable setting in the `/var/sadm/install/admin/default` file. The `basedir` variable in this file can be set to one of three possible values:
 - If `basedir=default`, the software will be installed in the same directory as the NetWorker client software.
 - If `basedir=ask`, you will be prompted for the name of the base directory where the software will be installed.
 - If `basedir=/dirpath`, the software will be installed in the `/dirpath` directory. The `/dirpath` must be the pathname of the NetWorker client software base directory, as determined by this `pkgparam` command:

```
pkgparam LGTOclnt BASEDIR
```

**IMPORTANT**

The software must be installed in the same base directory as the NetWorker client software. The software can be *relocated* during the installation on Solaris, but *only* to the same relocation path as the NetWorker client. For example, if the NetWorker client software is installed in the `/disk1` (nondefault) directory, NMDB2 must also be installed in the `/disk1` directory.

2. Type the appropriate `pkgadd` command:

```
pkgadd -d /dir_pathname LGTONmdb2
```

where `/dir_pathname` is the complete pathname of the directory containing the LGTONmdb2 package.

3. Complete the NMDB2 installation, depending on the `basedir` variable setting in the `/var/sadm/install/admin/default` file:
 - If `basedir=default` in the file, type `y` when prompted whether to continue the installation.

The software is installed in the same directory as the NetWorker client software.
 - If `basedir=ask` in the file, perform the following:
 - a. Type the result of the `pkgparam LGTOclnt BASEDIR` command when prompted for the pathname of the base directory.
 - b. Type `y` when prompted whether to continue the installation.

The software is installed in the specified base directory.

Note: If an incorrect pathname is typed at the prompt, the installation displays an error and the software is installed in the incorrect directory. In this case:

- a. Uninstall the software by typing the **pkgrm LGTONmdb2** command.
- b. Reinstall the software by typing the correct pathname at the first **pkgadd** prompt.

- If `basedir=/dirpath` in the file, type **y** when prompted whether to continue the installation.

The software is installed in the specified `/dirpath` directory.

Note: If `/dirpath` is *not* the base directory where the NetWorker client software is installed, the installation displays an error and the software is installed in the incorrect directory. In this case:

- a. Uninstall the software by typing the **pkgrm LGTONmdb2** command.
 - b. Correct `basedir=/dirpath` in the `/var/sadm/install/admin/default` file.
 - c. Reinstall the software.
-

Perform the postinstallation tasks on UNIX or Linux

Perform the following tasks, if required, after NMDB2 installation on UNIX or Linux DB2 servers.

Run the NetWorker client program

If the NMDB2 software is installed on a fresh host that has never run the NetWorker client (the **nsrexecd** daemon), an error message may indicate that directories required to run NMDB2 are missing, for example:

```
NMDB2 failed to create logging directory /nsr/applogs/nmdb2
NMDB2 failed to create temporary directory /nsr/tmp/nmdb2
```

To avoid or correct this problem, start the NetWorker client daemon. The *EMC NetWorker Installation Guide* provides instructions for each supported operating system.

Register the wizard manually

If the wizard fails to run for NMDB2, automatic registration of the wizard might have failed during the installation.

Register the wizard manually as follows:

1. Log in as the root user.
2. Type the following command:

```
nsrdb2ra -i
```

Note: To manually unregister the wizard, use the following command: **nsrdb2ra -u**

Ensure the DB2_VENDOR_INI is *not* set

Ensure the `DB2_VENDOR_INI` registry variable is *not* set. This variable was used with NMDB2 version 1.6 and earlier to set environment variables and may still be set if installing NMDB2 on legacy systems. If this variable is set, backups may fail.

To remove the setting of this variable, recycle the database with the appropriate stop and start commands, for example:

```
$ db2stop
$ db2set DB2_VENDOR_INI=
$ db2start
```

Enable the software

Before you use NMDB2 for backup and restore operations, you must properly enable and configure the software.

[Chapter 4, “Licensing and Enabling the Software,”](#) provides details.

The *EMC NetWorker Module for DB2 Administration Guide* provides information on how to configure and use the software.

Installing on a cluster or DPF on UNIX or Linux

NMDB2 version 4.0 supports active-passive cluster and DB2 Database Partitioning Feature (DPF) configurations.

Install NetWorker client and NMDB2 software on *each* cluster node or DPF partition (node) to be used for backup and restore operations as follows:

1. Meet all the requirements in [“Installation requirements” on page 11](#).
2. Follow the instructions in [“Installing on a single UNIX or Linux host” on page 18](#).

The current *EMC Information Protection Software Compatibility Guide* on Powerlink provides details on the operating system and database or application versions supported with cluster and DB2 DPF.

The *EMC NetWorker Module for DB2 Version 4.0 Administration Guide* provides information on how to configure the NMDB2 software on a cluster or DPF system.

Uninstalling on UNIX and Linux

To uninstall NMDB2 version 4.0 on UNIX or Linux:

Note: If uninstalling the software from a cluster, perform the uninstall procedure on *each* required node of the cluster.

1. Ensure that no database or application backups are running.
2. Log in as the root user on the NMDB2 host.
3. Uninstall the NMDB2 software by using the instructions from [Table 4 on page 26](#) for the operating system.

Note: A database does *not* need to be shut down in order to uninstall the software.

Table 4 Procedures for uninstalling NMDB2 on UNIX and Linux

On this system	Perform the following to uninstall the NMDB2 software	And complete the uninstall as follows
AIX	Perform one of the following: <ul style="list-style-type: none"> Invoke the installp command line interface by typing the appropriate command: installp -u LGTONmdb2.rte (NMDB2 software) Invoke the SMIT GUI program by typing the following command: smitty remove 	If using the SMIT GUI program, perform the following after typing the smitty remove command: <ol style="list-style-type: none"> Select F4=List to display a list of the installed software packages. Select the packages to be uninstalled: LGTONmdb2.rte (NMDB2 software) Ensure that the PREVIEW Only option is set to no. Press Enter to uninstall the NMDB2 software. Exit the SMIT program.
HP-UX	Perform one of the following: <ul style="list-style-type: none"> To invoke the swremove command line interface, type this command: swremove NMDB2 To invoke the swremove GUI program, type this command: swremove -i NMDB2 	If using the swremove GUI program: <ol style="list-style-type: none"> Select Actions > Remove (analysis). When the system analysis is complete, click OK to complete the uninstall. To confirm the uninstall, click Yes.
Linux	Type the appropriate command: rpm -e lgtonmdb2-4.0-1 (NMDB2 software) To uninstall <i>both</i> NMDB2 and the NetWorker client on Linux, perform <i>one</i> of the following: <ul style="list-style-type: none"> Type this command: rpm -e lgtonmdb2-4.0-1 lgtoclnr Type these separate commands, in this order <i>only</i>: rpm -e lgtonmdb2-4.0-1 rpm -e lgtoclnr <p>Note: On Linux, the NetWorker client software must be uninstalled <i>after</i> the NMDB2 software.</p>	There are no additional steps. Uninstallation is complete.
Solaris	Type the appropriate commands, depending on the packages installed: pkgrm LGTONmdb2 (NMDB2 software) <p>Note: To uninstall NMDB2 on Solaris zones:</p> <ol style="list-style-type: none"> Uninstall NMDB2 on the global zone. Uninstall NMDB2 on each required sparse root zone. 	Perform the following according to the basedir variable setting in the <code>/var/sadm/install/admin/default</code> file: <ul style="list-style-type: none"> If <code>basedir=default</code> in the file, type y when prompted. The software is uninstalled from the directory containing the NetWorker client software. If <code>basedir=ask</code> in the file, type the result of the pkgparam LGTONmdb2 BASEDIR command when prompted for the pathname of the base directory. The software is uninstalled from the specified base directory. If <code>basedir=dirpath</code> in the file, type y when prompted. The software is uninstalled from the specified <code>/dirpath</code> directory.

This chapter includes the following sections:

- ◆ Software installation path on Microsoft Windows..... 28
- ◆ Installing on a single Microsoft Windows host..... 28
- ◆ Installing on a cluster or DPF on Microsoft Windows..... 32
- ◆ Maintaining the installation on Microsoft Windows 32
- ◆ Uninstalling on Microsoft Windows 33

Software installation path on Microsoft Windows

This guide refers to the root directory of the NetWorker installation path on Microsoft Windows by using the variable `NetWorker_install_path`. The actual location represented by this variable depends on where the NetWorker software was installed on the Windows platform.

For new installations of NetWorker version 7.x, the default location is `%SystemDrive%\Program Files\Legato\nsr`.

The installation path is not changed during a NetWorker update. For example, an installation of NetWorker version 6.x software that has been updated to version 7.x has the default installation path `%SystemDrive%\Program Files\nsr`.

In NetWorker documentation, references to locations under the installation root use the `NetWorker_install_path` variable in the path statement. For example, the `daemon.raw` file is located in the `NetWorker_install_path\logs` directory.

Note: During a NetWorker installation, you can specify a nondefault location. The appropriate NetWorker installation guide provides more information on NetWorker installation procedures.

Installing on a single Microsoft Windows host

To install and enable the NetWorker Module for DB2 (NMDB2) version 4.0 on a single host with a supported Microsoft Windows operating system, perform the following steps:

1. [“Access the software for Microsoft Windows” on page 28](#)
2. [“Install the NMDB2 software on Microsoft Windows” on page 30](#)
3. [“Perform the postinstallation tasks on Microsoft Windows” on page 31](#)

Access the software for Microsoft Windows

The NMDB2 software is distributed in the following forms:

- ◆ On the NetWorker Modules DVD, which is included in the EMC Information Protection and Availability Product Families Media Kit. The kit contains the software and online documentation for related products
- ◆ In the downloadable file of the *evaluation* software, available from the EMC website.



IMPORTANT

The NMDB2 software obtained from the DVD or EMC website does *not* include an enabler code. The software can only be *evaluated*. [Chapter 4, “Licensing and Enabling the Software,”](#) provides more information on enabling NMDB2.

Access the NMDB2 software files from either of the following sources:

- ◆ [“From a local DVD drive” on page 29](#)
- ◆ [“From the EMC website” on page 29](#)

From a local DVD drive

To access the NMDB2 software files on a host with a local DVD drive:

1. Log in as the Windows system administrator on the host.
2. Insert the NetWorker Module DVD into the DVD drive.
3. Select the DVD drive in Windows Explorer.
4. Go to the correct directory on the DVD, as shown in [Table 5 on page 29](#).

Note: The *EMC Information Protection Software Guide on Powerlink* provides details on the operating systems supported for specific database and application software.

Table 5 Directory that contains the software

On this platform	Go to this directory
Windows AMD64/EM64T	nmdb2\win_x64
Windows Intel	nmdb2\win_x86
Windows Itanium	nmdb2\win_ia64

5. Continue with [“Install the NMDB2 software on Microsoft Windows” on page 30](#).

From the EMC website

To access the *evaluation* version of the NMDB2 software from the EMC website:

1. Log in as the Windows system administrator.
2. Create a temporary installation directory in a local file system with sufficient free disk space to contain the downloaded software file. For example:


```
mkdir C:\instdir
```
3. Go to <http://Powerlink.EMC.com>.
4. Select **Support > Software Downloads and Licensing > Downloads J-O > NetWorker Module**.
5. In the table of NetWorker Module Software Downloads, click the **NetWorker Module for DB2 Version 4.0** for the particular Windows platform.
6. Download the NMDB2 software file to the temporary directory you created, for example, C:\instdir.
7. Unzip the downloaded software file, as shown in [Table 6 on page 29](#).
8. Go to the correct directory, as shown in [Table 6 on page 29](#).

Table 6 Zipped download file and correct directory for install

On this platform	Unzip this downloaded file	Then go to this directory
Windows AMD64/EM64T	nmdb240_win_x64.zip	win_x64
Windows Intel	nmdb240_win_x86.zip	win_x86
Windows Itanium	nmdb240_win_ia64.zip	win_ia64

9. Continue with [“Install the NMDB2 software on Microsoft Windows” on page 30](#).

Install the NMDB2 software on Microsoft Windows

Once you have accessed the NMDB2 software files, you are ready to begin the installation.

To install and enable the NMDB2 software on a supported Windows platform:

1. Ensure that all the installation requirements have been met, as described in [“Installation requirements” on page 11](#).
2. Ensure that you are logged in as the Windows system administrator.
3. Ensure that no database or application backups are running.
4. Ensure that you are in the correct directory containing the NMDB2 installation files, as described in [“Access the software for Microsoft Windows” on page 28](#).

Note: If the installation is *not* started from the correct directory, the installation might fail.

5. Run the NMDB2 installer program, `networkr\setup.exe`, either from the NetWorker Module DVD or from the temporary installation directory created during the software download from the EMC website.
6. In the **Welcome** dialog box, click **Next**.
7. In the **License Agreement** dialog box, scroll down to read the license agreement. If you accept the terms, select the appropriate option and click **Next**.
8. In the **Ready to Install the Program** dialog box, click **Install**.

The **Setup** program installs the NMDB2 binaries in the same directory as the NetWorker client binaries (the `NetWorker_install_path\bin` directory) by default.

Note: If the **Setup** program detects *no* NetWorker client binaries, it displays an error message and exits *without* installing the NMDB2 software.

At the end of the NMDB2 install, the **InstallShield Wizard Completed** dialog box displays a message on how to start the NetWorker Client Configuration Wizard. The *EMC NetWorker Module for DB2 Administration Guide* provides more information on the wizard.

9. In the **InstallShield Wizard Completed** dialog box, click **Finish** to exit the installation program.
10. Verify that the system PATH environment variable includes the NetWorker client installation directory. If required, add the NetWorker client installation directory to the system PATH variable.



IMPORTANT

The NetWorker client directory pathname may include spaces. Do not include any spaces before or after the NetWorker client directory pathname in the system PATH environment variable.

11. If you changed the system PATH variable, reboot the Windows system, and verify that any required database instances and services were restarted.
12. Enable the NMDB2 software according to [Chapter 4, “Licensing and Enabling the Software.”](#)

After NMDB2 is installed and enabled, the software must be properly configured for backup and restore operations. The *EMC NetWorker Module for DB2 Version 4.0 Administration Guide* provides information on how to configure and use the software.

Perform the postinstallation tasks on Microsoft Windows

Perform the following tasks, if required, after NMDB2 installation on Microsoft Windows DB2 servers.

Run the NetWorker client program

If the NMDB2 software is installed on a fresh host that has never run the NetWorker client (the **nsrexecd** executable), an error message may indicate that directories required to run NMDB2 are missing, for example:

```
NMDB2 failed to create logging directory /nsr/applogs/nmdb2
NMDB2 failed to create temporary directory /nsr/tmp/nmdb2
```

To avoid or correct this problem, start the NetWorker client executable. The *EMC NetWorker Installation Guide* provides instructions for each supported platform.

Increase stack size

Increase the stack size for the **db2syscs.exe** application. Insufficient stack size causes backup failure with error SQL2079N, Return code 30.

1. Stop the database engine with the **db2stop** command.
2. Use the **db2hdr.exe** utility to increase the stack size to a minimum of 512, for example:

```
C:\Program Files\IBM\SQLLIB\BIN> ..\misc\db2hdr db2syscs.exe /s 512,32
```

3. Start the database engine with the **db2 start** command.

Ensure the DB2_VENDOR_INI is *not* set

Ensure the DB2_VENDOR_INI registry variable is *not* set. This variable was used with NMDB2 Version 1.6 and earlier to set environment variables and may still be set if installing NMDB2 on legacy systems. If this variable is set, backups may fail.

To remove the setting of this variable, recycle the database with the appropriate stop and start commands, for example:

```
% db2stop
% b2set DB2_VENDOR_INI=
% db2start
```

Register the wizard manually

If the wizard fails to run for NMDB2, automatic registration of the wizard might have failed during the installation.

Register the wizard manually as follows:

1. Log in as a member of the Microsoft Windows Administrators group.
2. Type the following:

```
nsrdb2ra.exe -i
```

Note: To manually unregister the wizard, use the following command: **nsrdb2ra.exe -u**

Enable the software

Before you use NMDB2 for backup and restore operations, you must properly enable and configure the software.

[Chapter 4, “Licensing and Enabling the Software,”](#) provides details.

The *EMC NetWorker Module for DB2 Administration Guide* provides information on how to configure and use the software.

Installing on a cluster or DPF on Microsoft Windows

NMDB2 4.0 supports active-passive cluster and DB2 Database Partitioning Feature (DPF) configurations.

Install NetWorker client and NMDB2 software on *each* cluster node or DPF partition (node) to be used for backup and restore operations:

1. Meet all the requirements in [“Installation requirements” on page 11](#).
2. Follow the instructions in [“Installing on a single Microsoft Windows host” on page 28](#).

The current *EMC Information Protection Software Compatibility Guide* on Powerlink provides details on the operating system and database or application versions supported with cluster and DB2 DPF systems.

The *EMC NetWorker Module for DB2 Administration Guide* provides information on how to configure the NMDB2 software on a cluster or DPF system.

Maintaining the installation on Microsoft Windows

The following sections describe how to modify, repair, or remove an existing NMDB2 installation on Microsoft Windows:

Run the Setup program in maintenance mode

To run the **Setup** program in maintenance mode:

1. Ensure that you are logged in as the Windows system administrator.
2. Ensure that no database or application backups are running.
3. Go to the directory that contains the NMDB2 installation files, as described in [“Access the software for Microsoft Windows” on page 28](#), and run the `networkr\setup.exe` program.
4. In the **Welcome** dialog box, click **Next**.
5. In the **Program Maintenance** dialog box, select the maintenance task to perform, and click **Next** to proceed:
 - **Repair** — Allows you to replace missing or corrupted files in the NMDB2 installation. [“Repair an NMDB2 installation” on page 33](#) provides details.
 - **Remove** — Allows you to remove the NMDB2 software.

You can also use **Add or Remove Programs** in the Windows Control Panel to remove the components. [“Uninstalling on Microsoft Windows” on page 33](#) provides details.

Repair an NMDB2 installation

To repair an NMDB2 installation:

1. Start the **Setup** program in maintenance mode. [“Run the Setup program in maintenance mode” on page 32](#) provides details.
2. In the **Program Maintenance** dialog box, select **Repair** and click **Next**.
3. In the **Ready to Repair the Program** dialog box, click **Install** to begin the installation. The **Setup** program reinstalls the NMDB2 files as required.

At the end of the install, the **InstallShield Wizard Completed** dialog box displays a message on how to start the NetWorker Client Backup Configuration wizard. The *EMC NetWorker Module for DB2 Administration Guide* provides more information on the configuration wizard.

4. In the **InstallShield Wizard Completed** dialog box, click **Finish** to exit the wizard.
5. If you changed the system PATH variable, reboot the Windows system, and verify that any required database instances and services were restarted.

Uninstalling on Microsoft Windows

To uninstall NMDB2 version 4.0 on a supported Microsoft Windows operating system, perform one of the following procedures:

Note: If uninstalling the software from a cluster, you must perform the uninstall procedure on *each* required node of the cluster.

Uninstall NMDB2 by using the Setup program

To uninstall NMDB2 version 4.0 by using the **Setup** program:

1. Log in as the Windows system administrator.
2. Ensure that no database or application backups are running.
3. Uninstall the NMDB2 software:
 - a. Run the `networkr\setup.exe` program, as described in [“Run the Setup program in maintenance mode” on page 32](#).
 - b. In the **Program Maintenance** dialog box, select **Remove** and click **Next**.
 - c. In the **Remove the Program** dialog box, click **Remove** to uninstall the NMDB2 software.

Uninstall NMDB2 by using the Control Panel

To uninstall NMDB2 version 4.0 by using Add or Remove Programs in the Control Panel:

1. Log in as the Windows system administrator.
2. Ensure that no database or application backups are running.
3. In the **Windows Control Panel**, select **Add or Remove Programs**. (On Windows 2008 or Vista, select **Programs and Features**.)
4. In the **Control Panel Add or Remove Programs** window, select **NetWorker Module for DB2** and click **Remove**.

The chapter includes these sections:

◆ Software licensing	36
◆ The evaluation process	36
◆ The licensing process	37
◆ Client connection licenses	37
◆ NMDB2 license	38
◆ Using nsrlic to gather license information.....	38
◆ Managing licenses	41

Software licensing

Software and added features, such as modules, are installed in evaluation mode with all of the features enabled for a period of 30 days. The software is licensed by the entry of enabler and authorization codes on the server for the environment. Without these codes, the software and/or added features will *not* run beyond the evaluation period.

Each installation of server software must be licensed with a base enabler. This enabler “turns on” the software and allows you to use a particular bundle of features, such as a specified number of clients and devices. All licensing takes place on the server. The licenses are entered and stored on the server. The server enforces the licensing.

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

The steps in this chapter assume that the software is installed and that all of the software and hardware requirements have been met on the computer that will access the NetWorker Management Console (NMC).

The evaluation process

You can evaluate software in two ways:

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

Evaluating a new installation

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

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

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

Evaluating features on an existing installation

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

An alert message is generated 15 days before a NetWorker license is about to expire. The alert remains until the NetWorker license is authorized or deleted.

To view the license alert:

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

By the end of the evaluation period, you must purchase, install, and authorize the corresponding license enablers to continue to use modules or features you have evaluated. [“The licensing process” on page 37](#) provides instructions.

Entering a temporary enabler code

To enter the temporary enabler code:

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 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**.

The licensing process

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

The license enabler code that you purchase is valid for 45 days, as a registration period. During the registration period, you must obtain and enter a corresponding authorization code. More instructions for purchasing, enabling, and authorizing the NetWorker software are provided in [“The evaluation process” on page 36](#).



IMPORTANT

Automatically importing and installing the NetWorker license enablers and authorization codes from EMC Powerlink is the recommended way to obtain and install license enablers and authorization codes. Do not manually enter and authorize license enablers unless you cannot import and install automatically. The NetWorker installation guide provides details on the procedures for the NetWorker license enablers, authorization codes, and update enablers.

The NetWorker documentation provides details on a simplified licensing model for virtualized environments. The *EMC Information Protection Software Compatibility Guide* provides a detailed list of supported server virtualization environments.

Client connection licenses

Every computer to be backed up in a datazone requires a client connection license, even the 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.

NMDB2 license

The NMDB2 host requires an NMDB2 license in addition to the client connection license.

Detailed information on the licensing requirements for NetWorker modules is available in the EMC pricing guide.

Using nsrlic to gather license information

The `nsrlic` command is installed as part of the server installation and is not available on machines that only have the client software installed. There are a number of ways that a customer can obtain license information from a server or servers.

Querying the local server

To query the local server (the server where `nsrlic` is stored), type `nsrlic` at the command line. For example:

- ◆ On UNIX:

```
/usr/sbin/nsrlic
```

- ◆ On Windows:

```
NetWorker_install_dir\bin\nsrlic
```

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

Example 1 Report from the nsrlic command

```
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: witt bride pasay frankenstein
nsrlic: Connected Virtual Client Physical hosts: (3)
12128:nsrlic: NetWorker Module for DB2, Windows Client/1: Available=2,
Remaining=0, Used=2
12128:nsrlic: NetWorker Module for DB2, Unix Client/1: Available=4,
Remaining=0, Used=4

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 DB2, Windows Client/1
Available: 2
Used: 2
Remaining: 0
Connected Clients: witt, bride;

NetWorker Module for DB2, Unix Client/1
Available: 4
Used: 4
Remaining: 0
Connected Clients: witt, bride, pasay, frankenstein;

```

Determining the number of available client licenses

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

In the report in [Example 1 on page 38](#), "sv=12" means that the particular server has 12 licenses available. Also, in the STANDARD CLIENT LICENSES section, "Available: 12" indicates the number of available client licenses.

Querying a server

To query a specific server, type the `-s server` option at the command line. For example:

```
/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. For example:

```
/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 from the nsrlic command

```
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: witt bride pasay frankenstein
nsrlic: Connected Virtual Client Physical hosts: (3)
12128:nsrlic: NetWorker Module for DB2, Windows Client/1: Available=2,
Remaining=0, Used=2
12128:nsrlic: NetWorker Module for DB2, Unix Client/1: Available=4,
Remaining=0, Used=4

STANDARD CLIENT LICENSES
Available: 12
Used: 3
Loaned to Virtual: 2
Remaining: 7
Connected Clients: witt, bride, pasay, frankenstein

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 DB2, Windows Client/1
Available: 2
Used: 2
Remaining: 0
Connected Clients: witt, bride;

NetWorker Module for DB2, Unix Client/1
Available: 4
Used: 4
Remaining: 0
Connected Clients: witt, bride, pasay, frankenstein;

```

Managing licenses

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

To begin to implement the NetWorker License Manager:

1. Obtain bulk enabler codes from EMC Powerlink, <http://Powerlink.EMC.com>
2. Install the NetWorker License Manager software.
3. Configure the NetWorker License Manager software.
4. Configure the NetWorker servers to access the NetWorker License Manager for their licenses.

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

