LogMatrix

NerveCenter

Installing NerveCenter

Unix and Windows
Version 5.1.0*

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Introduction

<div style="text-align: right">**1**</div>

Welcome to *Installing NerveCenter*. This chapter introduces the audience and purpose of this guide, and how you can best use it.

This chapter includes the following sections:

Section	Description
Overview of this book on page 2	Includes an overview of the contents of this guide and what you need to know before you use the guide.
NerveCenter Documentation on page 3	Lists and describes the components of the LogMatrix NerveCenter support system, including printed guides, online guides, help, and links to the LogMatrix NerveCenter Web site and the LogMatrix technical support Web site.
LogMatrix Technical Support on page 7	Describes how to access the NerveCenter knowledge base and other LogMatrix support services.

1 Introduction

Overview of this book

Installing NerveCenter describes how to install and configure NerveCenter.

> **NOTE**
> It is assumed you are an experienced network administrator and are familiar with
> the platforms on which you are installing.

Installing NerveCenter contains the following sections:

Title	Description
Chapter 2, Archiving and Removing Prior Installations	Describes how to remove NerveCenter from UNIX and Windows platforms.
Chapter 3, Installing NerveCenter on UNIX	Describes the prerequisites and procedures for installing NerveCenter on Solaris and lists the tasks you do after installation and where you can find more information about them.
Chapter 4, Installing NerveCenter on Windows	Describes the prerequisites and procedures for installing NerveCenter on Windows and lists the tasks you do after installation and where you can find more information about them.
Chapter 5, Setting Up the Database on Windows	Describes how to create a new database, upgrade an existing database, and connect to an existing database.
Installation Quick Reference for NerveCenter 5.1.06 on page 59	Provides a checklist of UNIX and Windows installation prerequisites.

NerveCenter Documentation

This section describes the available NerveCenter documentation, which explains important concepts in depth, describes how to use NerveCenter, and provides answers to specific questions.

The documentation set is provided in online (HTML) format, as well as PDF for printing or on-screen viewing. See the following topics for more information:

- ◆ *Using the Online Help on page 3*
- ◆ *Printing the Documentation on page 3*
- ◆ *The NerveCenter Documentation Library on page 4*
- ◆ *UNIX Systems on page 5*
- ◆ *Document Conventions on page 5*
- ◆ *Documentation Feedback on page 7*

Using the Online Help

You can view the documentation with browsers such as Microsoft Internet Explorer or Firefox. Refer to the *NerveCenter Release Notes* for the browser versions supported with this release.
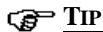
☞ TIP

For in-depth instructions on using the online documentation, click the Help button **?** in the upper right of the Help window.

Printing the Documentation

The NerveCenter documentation is also available as Portable Document Format (PDF) files that you can open and print. All PDF files are located in your *installpath*/doc directory.

✎ NOTE

You must have Adobe Acrobat Reader to open or print the PDF files. You can download the Reader free from Adobe's Web Site at www.adobe.com.

The NerveCenter Documentation Library

The following documents ship with NerveCenter.

Book Title	Description	Application	Audience	PDF for Print
NerveCenter Release Notes	Describes new NerveCenter features and includes late-breaking information, software support, corrections, and instructions.	All	All	relnotes.pdf
Installing NerveCenter	Helps you plan and carry out your NerveCenter upgrades and new installations. Use the *Release Notes* in conjunction with this book.	All	Installation team	install.pdf
Managing NerveCenter	Explains how to customize and tune NerveCenter after it has been installed.	NerveCenter Administrator	Administrator	managing_ nervecenter.pdf
Integrating NerveCenter with a Network Management Platform	Explains how to integrate NerveCenter with network management platforms.	NerveCenter Administrator	Administrator	integratingNC. pdf
Learning How to Create Behavior Models	Provides step-by-step instructions and examples for creating behavior models.	NerveCenter Client	Users with administrative privileges	learningModel. pdf
Designing and Managing Behavior Models	Explains behavior models in depth, how to create or modify models, and how to manage your models.	NerveCenter Client	Users with administrative privileges	designingModels.p df
Monitoring Your Network	Explains how NerveCenter works and how you can most effectively monitor your network.	NerveCenter Client and Web Client	Users	monitoringNet. pdf
Behavior Models Cookbook	Describes each behavior model shipped with LogMatrix NerveCenter.	NerveCenter Client	Users with administrative privileges	modsCookbook. pdf
Quick reference cards	Quick reference cards provide convenient reference material for common NerveCenter tasks.	NerveCenter Client and Administrator	All	quickreference. pdf

UNIX Systems

On UNIX systems, NerveCenter man pages provide command reference and usage information that you view from the UNIX shell as with other system man pages. When you specify documentation during NerveCenter installation, the script installs nroff-tagged man pages and updates your system's MANPATH environment variable to point to the NerveCenter man page directory.

Document Conventions

This document uses the following typographical conventions:

Element	Convention	Example
Key names, button names, menu names, command names, and user entries	**Bold**	Press **Tab** Enter **ovpa -pc**
◆ A variable you substitute with a specific entry ◆ Emphasis ◆ Heading or Publication Title	*Italic*	Enter **./installdb -f** *IDBfile*
Code samples, code to enter, or application output	`Code`	`iifInOctets > 0`
Messages in application dialog boxes	Message	Are you sure you want to delete?
An arrow (>) indicates a menu selection	>	Choose **Start > Programs > OpenService NerveCenter**
A link to a section in the same book	*Blue Italic*	For more information, see *Correlating Conditions*.
A link to a section in a different book **Note:** If you are using a PDF viewer, you may need to use the **Go to Previous View** button to return to the original PDF file.	*Green Italic*	For more information, see *Correlating Conditions* in *Monitoring Your Network with NerveCenter*.

⚠ **CAUTION**
A caution warns you if a procedure or description could lead to unexpected results, even data loss, or damage to your system. If you see a caution, proceed carefully.

1 Introduction

> **NOTE**
> A note provides additional information that might help you avoid problems, offers advice, and provides general information related to the current topic.

> **TIP**
> A tip provides extra information that supplements the current topic. Often, tips offer shortcuts or alternative methods for accomplishing a task.

If toolbar buttons are available, they are displayed in the margin next to the step in which you can use them. other shortcuts are noted as tips. Also, shortcut (accelerator) keys are displayed on application menus next to their respective options.

Documentation Feedback

LogMatrix, Inc. is committed to providing quality documentation and to helping you use our products to the best advantage. If you have any comments or suggestions, please send your documentation feedback to:

Documentation
LogMatrix, Inc.
4 Mount Royal Ave, Suite 250
Marlborough, MA 01752

documentation@logmatrix.com

LogMatrix Technical Support

LogMatrix is committed to offering the industry's best technical support to our customers and partners. You can quickly and easily obtain support for NerveCenter, our proactive IT management software.

Professional Services

LogMatrix offers professional services when customization of our software is the best solution for a customer. These services enable us, in collaboration with our partners, to focus on technology, staffing, and business processes as we address a specific need.

Educational Services

LogMatrix is committed to providing ongoing education and training in the use of our products. Through a combined set of resources, we can offer quality classroom style or tailored on-site training.

Contacting the Customer Support Center

For Telephone Support

Phone: 1-800-892-3646 or 1-508-597-5300

For E-mail Support

E-mail: techsupport@logmatrix.com.

For Electronic Support

LogMatrix has a Web-based customer call tracking system where you can enter questions, log problems, track the status of logged incidents, and check the knowledge base.

When you purchased your product and/or renewed your maintenance contract, you would have received a user name and password to access the LogMatrix Call Tracking System using SalesForce. You may need to contact your contracts or NerveCenter administrator for the username and password for your account with SalesForce.

If you have not received or have forgotten your log-in credentials, please e-mail us with a contact name and company specifics at techsupport@logmatrix.com.

We are committed to providing ongoing education and training in the use of our products. Through a combined set of resources, we offer quality training to our global customer base.

For Online KnowledgeBase Access

For additional NerveCenter support information, please go the LogMatrix website www.logmatrix.com for access to the following sections of information:

- **Patches and Updates** - latest installation files, patches, and updates including documentation for NerveCenter.

- **Software Alerts** - latest software alerts relative to NerveCenter.

- **KnowledgeBase Search** - search the NerveCenter KnowledgeBase for answers to your questions whether relating to the installation, usage, or operation of NerveCenter.

For User Community Access

You can seek as well as share advice and tips with other NerveCenter users at http://community.logmatrix.com/LogMatrix/

Archiving and Removing Prior Installations

<div style="text-align: right">**2**</div>

If you are upgrading or removing NerveCenter, this chapter describes how to back up your existing data before uninstalling (and potentially reinstalling) NerveCenter.

If you are installing NerveCenter for the first time, proceed to *Installing NerveCenter on UNIX on page 21* or *Installing NerveCenter on Windows on page 33*.

This chapter includes the following sections:

Section	Description
Upgrade and Uninstallation Overview on page 10	Describes the overall process for upgrading or uninstalling NerveCenter.
Stopping NerveCenter Processes on page 11	Describes how to stop NerveCenter applications, processes, and services in preparation for backing up your data.
Serializing the NerveCenter Database on page 13	Describes how to export your database to a serial file.
Backing Up Your NerveCenter Data and Files on page 16	Describes the types of NerveCenter files that you may want to back up.
Removing NerveCenter on page 17	Describes how to uninstall NerveCenter.

> ✎ **NOTE**
> You must log in as root (UNIX) or as an administrator (Windows) to remove NerveCenter.

Upgrade and Uninstallation Overview

When you upgrade NerveCenter, you go through the following process:

1. If upgrading, confirm that your environment meets the new platform requirements.

    See the *NerveCenter Release Notes*.

2. Stop all NerveCenter applications, services, and processes.

    See *Stopping NerveCenter Processes on page 11*.

3. Serialize your database.

    See *Serializing the NerveCenter Database on page 13*.

4. Back up any files you want to save.

    See *Backing Up Your NerveCenter Data and Files on page 16*.

5. Upgrade or Uninstall NerveCenter:

    *   **If you are upgrading** NerveCenter, proceed to one of the installation chapters; the installer will detect and upgrade the previous NerveCenter installation.

        See *Installing NerveCenter on UNIX on page 21* or *Installing NerveCenter on Windows on page 33*

    *   **If you are uninstalling** NerveCenter, see *Removing NerveCenter from UNIX on page 17* or *Removing NerveCenter from Windows on page 19*.

Stopping NerveCenter Processes

You must stop all running NerveCenter processes before running the uninstaller. LogMatrix also recommends doing so before backing up your NerveCenter data so you can be sure that you save the most current information.

> **NOTE**
> If you reboot the machine before you finish removing NerveCenter, you should repeat these procedures again, as daemon processes might restart automatically.

TO STOP NERVECENTER PROCESSES ON UNIX

1. Log in as root.

2. Exit any NerveCenter applications that are running (client, ncadmin, nccmd, and trapper applications).

3. Source the NerveCenter environment file from /opt/OSInc/userfiles.

   ◆ **/bin/sh shell:** `. /opt/OSInc/userfiles/ncenv.sh`

   ◆ **/bin/bash shell:** `. /opt/OSInc/userfiles/ncenv.bash`

4. Enter the following command:

   `ncstop`

   The ncstop command stops the following processes: ncserver, all ncsnmppollers, ovtrapper, ncsnmpagt, and brassd.

5. If NerveCenter is integrated with HP OpenView, have OpenView stop the NerveCenter components it controls by executing the following commands:

   `cd /opt/OV/bin`

   `./ovstop ovpa` (stops the OpenView Platform Adapter)

   `./ovstop ncstart` (stops the NerveCenter server *if* it is integrated with OpenView.

6. If NerveCenter is integrated with IBM Tivoli Netcool/OMNIbus, shut down the NerveCenter platform adapter connection to this management platform by executing the following commands:

   `cd /opt/OSInc/nc/install`

   `./paservice stop`

7. If the NerveCenter Web Collector is installed, shut it down by executing the following commands:

```
cd /opt/OSInc/nc/install
```

```
./ncwebstop
```

8. Stop any remaining Wind/U processes by executing the following commands.

These processes normally exit on their own; since a process cleanup is needed, this procedure ensures that they are shut down.

a. `ps -ef | grep windu`

The windu_registryd and windu_clientd processes will be displayed if running; note the process IDs (bolded):

```
root 1053 1 0 Sep 24 ? 0:01 windu_registryd50 -vers 2 -prog 805502977 -d / -k
root 1904 1 0 Sep 24 ? 0:01 windu_clientd50 -vers 2 -prog 805502977 -d / -k
```

b. `kill` *pid 1 pid2* ...

Given the sample output above, you would enter **kill 1053 1904**.

TO STOP NERVECENTER PROCESSES ON WINDOWS

1. Exit any NerveCenter applications that are running (client, ncadmin, nccmd, and trapper applications).

2. Stop any NerveCenter services that are running by doing the following:

a. Open the Services applet (which is typically in Control Panel > Administrative Tools)

b. For each NerveCenter service that is running, select the service and then select **Stop**.

Processes you might need to stop include ovpa, paserver, and webcollector.

c. Exit the Services applet.

⚠ **CAUTION**
You must stop the NerveCenter Server before you export, or you could lose data.

Serializing the NerveCenter Database

After you stop all NerveCenter applications and processes, you can serialize your database. The SerializeDB utility exports a NerveCenter database to a serialized file, which is useful for backing up and restoring database information, for migrating databases from one NerveCenter version to another, and even for migrating databases from one platform to another (e.g., Windows to UNIX)

⚠ **CAUTION**
You must stop the NerveCenter Server before you export, or you could lose data.

⚠ **CAUTION**
You can create a serialized file from a NerveCenter database only via the NerveCenter version that it was used with. If you uninstall an existing NerveCenter version (and potentially install a new one) you will need to reinstall the old version to serialize that database.

TO RUN SERIALIZEDB ON UNIX

1. From a terminal session, navigate to the **/opt/OSInc/bin** directory.

2. Associate serializedb with an X11 desktop (CDE, Motif, GNOME, or Solaris Java Desktop) using one of the following commands:

```
export DISPLAY=:0
export DISPLAY=localhost:0
```

3. Enter the following command:

```
serializedb -f fullyQualifiedFilename.asc -o dbtofile -d
/opt/OSInc/db/nervecenter.ncdb
```

Where *fullyQualifiedFilename* is the file to which you are exporting the serialized database.

Archiving and Removing Prior Installations

1. From the **Start** menu, select NerveCenter > **SerializeDB**.

The SerializeDB application starts.
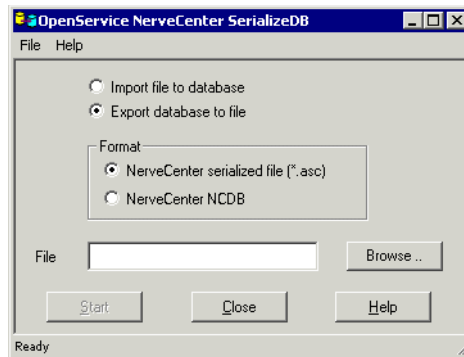
2. Select **Export database to file**.

3. Select NerveCenter **serialized file (*.asc)**.

4. Enter the **File** name for the exported file (which is saved in your working directory unless you provide a fully-qualified path), or click **Browse** and navigate to the directory where the file should be saved..

You might want the file name to indicate the NerveCenter version it was exported from.(e.g., NCExport41.asc or NCExport50.asc). That file will be preserved during an upgrade.

5. Click **Start**.

The Select Data Source window appears.

6. Select the NerveCenter data source for the database you're serializing and click **OK**.

1. Open a command window and navigate to the *install_path*/bin directory, where install_path is typically \Program Files\OpenService\NerveCenter\.

2. Enter one of the following commands:

    ◆ **SQL Server or Access**

    ```
    serializedb -f fullyQualifiedFilename.asc -o dbtofile -r
    ```

    ◆ **SQL Server only**

    ```
    serializedb -f fullyQualifiedFilename.asc -o dbtofile -c
        "DSN=datasourcename;UID=userID;PWD=password"
    ```

    Where *fullyQualifiedFilename* is the file to which you are exporting the serialized database.

Backing Up Your NerveCenter Data and Files

After serializing your database (and before running the uninstaller), you should back up your data and any files that you might have customized or that you may want to preserve for any reason.

> ⚠ **CAUTION**
>
> Consider all files you have customized for your business or your environment.
>
> Also, when copying or moving files, place them in a safe location that is out of the NerveCenter install path.

The following table lists the files that you should consider backing up.

TABLE 2-1. NerveCenter Data Files

Description	File Type	Default Location
NerveCenter database files	`*.ncdb` and `*.node` (UNIX) Microsoft Access (`*.mdb`) or Microsoft SQL Server database	*installation_path*/db
Serialized database files Database installation preferences	`*.asc`, `*.idb` files	*installation_path*/db *installation_path*/bin
Exported model files	`*.mod`, `*.txt` files	/opt/OSInc/models (UNIX) *installation_path*/model (Windows)
NerveCenter MIB; Files used to compile additional MIB definitions	`*.mib`, `mibcomp.txt`, ASN.1 files	/opt/OSInc/mibs (UNIX) *installation_path*/mib (Windows)
List of network nodes and parents (you may have created one if you used the downstream alarm suppression models)	Any text file containing parenting information (`pc.dat`, for example)	N/A
Customized files for platform integrations (such as the LRF file used with HP OpenView).	`ovpa.lrf` and any other network management platform files you might have customized	/opt/OSInc/ovpa (UNIX) *HP_OV_directory*/lrf (Windows) *platform_directory*

Removing NerveCenter

You can remove one or more of the NerveCenter applications by running a script that deletes the appropriate NerveCenter files, executables, and directories.

✎ **NOTE**

If NerveCenter was integrated with a network management platform, you must reconfigure that network management platform to remove the integration before you uninstall NerveCenter. See *Integrating NerveCenter with a Network Management Platform* for instructions.

Removing NerveCenter from UNIX

TO REMOVE NERVECENTER FROM A UNIX MACHINE

1. Navigate to *install_directory*/**nc/install**.

2. Enter the following command to start the install script:

   `./uninst.sh`

3. Press **Enter** as as instructed by the script until you are asked to select the components to be removed.

4. Type the letter for each component you want to remove (separating each letter with a space) and then press **Enter**.

Letter	Component
c	Client
w	Web server integration
a	Administrator
s	Server
d	Online documentation
o	OpenView integration
n	Netcool integration
l	All

5. If you are removing the server but you want to keep your database, type **y** at the following prompt and press Enter.

```
Do you want to retain the database? [n]
```

6. If you are removing the server but you want to keep your MIB, type **y** at the following prompt and press Enter.

```
Do you want to retain MIB? [n]
```

7. If you are removing the server but you want to keep your log files, type **y** at the following prompt and press Enter.

```
Do you want to retain the log files? [n]
```

> **NOTE**
> If you did not shut down all NerveCenter processes, the script lists them, then quits. Kill the processes and run UNINST.SH again.

The script lists files as it deletes them. If you did not previously stop NerveCenter processes, the script lists them and then quits; kill those processes and run uninst.sh again.

8. If you are removing NerveCenter permanently (i.e., not upgrading), do the following:

   a. Press Enter or Y when the uninstall script prompts you to delete the install directory.

   b. If any environment variables to point to the NerveCenter installation directory, modify or delete them as necessary.

   c. Delete all ncusers and ncadmins users and groups, including the nervectr user.

   d. If you are removing NerveCenter web support completely and the Web server is on a different machine, reconfigure the server to remove references to NerveCenter. See *Managing NerveCenter Web Integration in Managing NerveCenter* for details.

Removing NerveCenter from Windows

TO REMOVE NERVECENTER FROM A WINDOWS MACHINE

1. From the **Start** menu, select NerveCenter > **Uninstall** NerveCenter.

2. Click **OK** to verify that you are removing NerveCenter.

3. Click **Yes** when prompted to completely remove the application and all of its components.

    The Remove Programs From Your Computer window appears.

4. Click **OK**.

    NerveCenter is removed from the machine.

5. If unInstallShield was not able to remove all of the files, open the NerveCenter directory and evaluate whether you want to keep the files.

6. If NerveCenter was using a SQL database, do the following on SQL Server:

    a. Delete or clear the SQL database.

    b. Delete the data and log devices used with the database.

    c. Delete the files used by the data and log devices.

7. You may want to manually remove current user entries that are not automatically removed from the configuration settings. However, if you remove them and then reinstall later, users will have to reconfigure their autoconnect preferences, filter settings, and so on.

2

Archiving and Removing Prior Installations

Installing NerveCenter on UNIX

This chapter describes how to install NerveCenter components on UNIX platforms that meet the requirements documented in the *NerveCenter Release Notes*.

This chapter includes the following sections:

Section	Description
Preparing to Install NerveCenter on UNIX on page 22	Describes how to prepare the machine on which you are going to install NerveCenter.
Running the Installation Script on page 26	Describes how to run the installation script and respond to prompts.
Restoring Data After an Upgrade on page 31	Describes where to copy NerveCenter files from a previous version after an upgrade.
Where to Go from Here on page 32	Describes what to do after completing the installation.

Preparing to Install NerveCenter on UNIX

This section provides some general installation notes, describes the NerveCenter licensing model, and lists prerequisites that each machine must meet before NerveCenter can be installed.

Installation Notes

⚠️ **CAUTION**
If you are upgrading from a previous version, you must stop all NerveCenter processes, back up your files, and uninstall NerveCenter before installing NerveCenter 5.1.06. See *Archiving and Removing Prior Installations on page 9*.

If you are upgrading from NerveCenter 4.0, see *NerveCenter and IPv6 in NerveCenter 5.1.06 Release Notes* for additional requirements and limitations for NerveCenter support of the IPv6 protocol.

⚠️ **CAUTION**
NerveCenter 5.1 components are not compatible with those from older versions (e.g., a 5.0 client cannot connect to a 5.1 server). All components, including integration components such as ovpa and paserver, must be installed at once.

📝 **NOTE**
You cannot install multiple versions of NerveCenter on the same machine. Only one version can be installed on a machine.

📝 **NOTE**
NerveCenter supports the SNMP v3 protocol. If you intend to have v3 agents send traps to NerveCenter, then you must select NerveCenter as your trap source when prompted by the installer. You must also disable the Microsoft or OpenView trap services on your system. *Table 3-1* shows SNMP trap support by version.

TABLE 3-1. SNMP Trap Support

Trap Source	SNMP Version			Name
	v1	v2	v3	
NerveCenter	✓	✓	✓	—
OpenView	✓	✓	✗	ovtrapd
Microsoft	✓	✓	✗	SNMP Trap Service

About NerveCenter Licensing

Beginning with release 5.1, NerveCenter uses a new licensing mechanism. Instead of serial numbers or license keys, you must obtain a license file for each NerveCenter server (and only the NerveCenter server; the client, ncadmin, and nccmd are not licensed).

You will receive a *hostname*.dat file for each NerveCenter server you are licensing, which you must copy to **/opt/OSInc/conf/**. NerveCenter *Server processes cannot be started without this file*.

If you are upgrading, run **/opt/OSInc/bin/nclicreport** on each of your NerveCenter servers to print the license key information needed for obtaining the license file required for NerveCenter 5.1 upgrades. Contact your LogMatrix representative to obtain license files.

Prerequisites

Before you prepare the machine, make sure you meet the prerequisites in *Table 3-2*:

TABLE 3-2. Prerequisites for Installing NerveCenter on UNIX

If you are installing...	You must...
Any NerveCenter component, on any platform	◆ Be able to log in as root.
	◆ Verify that the machines on which NerveCenter will be running must meet the system requirements for your environment as described in the *NerveCenter Release Notes*.
	◆ Verify that X-Windows software with Motif or CDE is installed on machines that will be running the Server, Command Line Interface (CLI), Importutil, and IPSweep.
	◆ Verify that X-Windows software with Motif or CDE is installed *and running* on machines that will be running the NerveCenter Client, Administrator, and SerializeDB.
	◆ Verify that the DISPLAY variable points to a valid X display for the NerveCenter Client, Administrator, IPSweep, and SerializeDB.

TABLE 3-2. Prerequisites for Installing NerveCenter on UNIX (Continued)

If you are installing...	You must...
NerveCenter Server	◆ Verify that the **/usr/sbin/rpcbind** process is running.
	◆ Verify that the machine on which you are installing the server has a fixed IP address (i.e., not DHCP).
	◆ Obtain a license file (*hostname***.dat**) from LogMatrix for each machine that will be running the NerveCenter Server. See *About NerveCenter Licensing on page 23* for more information.
	◆ Create the NerveCenter groups and user if necessary (the installation will fail if these do not exist):
	>> Create the **ncadmins** and **ncusers** groups.
	Note: Do not create these groups on the NIS client machine. If you do, you will not be able to log in to the NerveCenter Server on that machine.
	>> Create a **nervectr** user that is a member of the ncadmins group.
	Note: Create the nervectr user in the NIS database if the machine running the NerveCenter Server is using NIS for user authentication.
The OpenView Platform Adapter	◆ Verify that OpenView is running on this machine.
	◆ Start the ovtrapd service unless you will be managing SNMP v3 agents.
	◆ Verify that *PlatformPath* and *PlatformBinPath* refer to the fully qualified path names of the network management platform installation directory and the directory containing all the platform executables, respectively (for example, /opt/OV and /opt/OV/bin).
	◆ For a first-time, OVPA-only installs, add the following line to the host's local **/etc/services** file (or the **/etc/services** file on the NIS server, if running NIS):
	`nl-nc-plat-adapt 6024/tcp`
	This entry specifies the TCP port that platform adapters must open to communicate with NerveCenter Servers. If absent, the platform adapter will exit on startup with an Accept Socket Error.
	If you are making these changes on an NIS server, you must run 'make services' from the **/var/yp** directory to push changes out to NIS clients.

TABLE 3-2. Prerequisites for Installing NerveCenter on UNIX (Continued)

If you are installing...	You must...
The Universal Platform Adapter	◆ Verify that IBM Tivoli Netcool/Omnibus (including the NerveCenter probe) is installed and running on this machine.
	Note: You must obtain the NerveCenter probe from IBM Tivoli.
Web server integration	◆ Be familiar with your Web server, its location, and its configuration files.
Online Documentation	◆ Know the fully qualified path to your browser executable.
CD-ROM drive	◆ Verify that the machine that will run the NerveCenter Client or Server host is the same type as the one connected to the CD-ROM drive you'll use during installation. For example, if you're installing NerveCenter on an HP workstation, make sure the CD-ROM drive is attached to an HP workstation.

Running the Installation Script

The installation script prompts you with a series of questions. At each prompt you can take any of the following actions:

- ◆ Press **Enter** to accept the default value (displayed between brackets **[]**)
- ◆ Press **y** for yes or **n** for no and press **Enter**
- ◆ Enter a question mark (**?**) and press **Enter** to get help
- ◆ Press **q** and then **Enter**, or **Ctrl+c** to terminate the installation

✎ **NOTE**
When you are prompted for the name of a directory, you must enter the fully-qualified path; characters such as the tilde (~) are not recognized.

If an error occurs during the installation process, the script will provide instructions.

T<small>O RUN THE INSTALLATION SCRIPT</small>

1. Mount the NerveCenter CD-ROM.

2. Navigate to *mountpoint/***BIN**.

3. Type the following command and press Enter.

    UNIX: `./INSTALL.SH`

    The script prompts you to copy your license file (*hostname*.dat) to the /opt/OSInc/conf directory.

4. If you are installing a NerveCenter server, verify that the *hostname***.dat** file has been copied to **/opt/OSInc/conf** and press **Enter** to continue.

    The script prompts you for an install path.

5. Press **Enter** to accept the default install directory (**/opt/OSInc**) or provide a new one and then press **Enter**.

    ⚠ **CAUTION**
    LogMatrix recommends using the default installation path. If you must use a location other than /opt/OSInc, NerveCenter creates a link to that directory. Do not delete the link, as NerveCenter may fail to run properly.

    If the directory does not already exist, the script prompts you to create it.

6. Press **Enter** to create the directory.

> ✎ **NOTE**
>
> If you are installing over an existing /opt/OSInc directory, the install script backs the existing files up to /opt/OSInc.sav.

The script prompts you for the components to install.

7. Type the letter for each component you want to install, separating each with a space, and then press **Enter**.

Component	Letter	Notes
All	**l**	Installs all components
Administrator	**a**	Installs the NerveCenter client only, which is used to configure your NerveCenter installation.
Client	**c**	Installs the NerveCenter client only, which is used to monitor the network and create or modify behavior models.
MIB Compiler	**m**	Installs mibTool, the MIB Compiler introduced with NerveCenter 5.1. (The server installation also includes this compiler.)
Netcool integration	**n**	Installs the Netcool integration; Netcool must already be installed and running on this system.
Online documentation	**d**	Installs the complete NerveCenter documentation set in HTML with full-text search and in PDF format for printing.
OpenView integration	**o**	Installs the OpenView integration; OpenView must already be installed and running on this system.
		You do not need to install this component if you plan to use NerveCenter's IPSweep model to gather node information.
Server	**s**	Installs the NerveCenter server and other core components such as the database.
Web server integration	**w**	Installs the web server integration, which allows you to use the NerveCenter Web Client from anywhere on the network. LogMatrix recommends that you install this component on the machine where the web server is installed.

The script lists each file as it is extracted.

The script then prompts you for the X motif library path.

8. Press **Enter** to accept the default path (**/usr/dt/lib**) or provide a different path and then press **Enter**.

   The script prompts you to update the services file.

9. If the installation script indicates that you need to update the services file, type **y** and then press **Enter** at the prompt. Otherwise, just press **Enter**.

   The script prompts you to configure the OpenView platform integration.

10. If you are integrating with OpenView, press **Enter**. If you are not, press **n**, press **Enter**, and skip to step 12.

    If you indicate that you are integrating with OpenView, the script prompts you to indicate whether your NerveCenter and OpenView installations are co-resident on this server or not.

11. Press **Enter** if you are not running co-resident, or press **y** and then **Enter** if you are running both NerveCenter and HP OpenView on this system.

    The script prompts you for the path to your HTML browser.

12. Enter the fully qualified path to your browser executable and press **Enter**.

    > ⚠️ **CAUTION**
    >
    > If you do not enter a path to a browser, you will not be able to view the NerveCenter Help. For a list of supported browsers, see the *NerveCenter 5.1.06 Release Notes*.

    The script prompts you select the NerveCenter startup method.

13. Press **Enter** to configure the server as a daemon so it starts automatically when you reboot the system. To configure the server so you have to start it manually, type **n** and press **Enter**.

    The script describes NerveCenter's PAM login authorization for your system.

14. Note the location of your PAM configuration file and press **Enter** to continue.

Platform	PAM Service	Configuration File	Samples in /opt/OSInc/nc/install
Solaris	nervecenter	/etc/pam.conf	pam_nervecenter_solaris9
			pam_nervecenter_solaris10
LINUX	nervecenter	/etc/pam.d/nervecenter	pam_nervecenter_rhel
			pam_nervecenter_rhel-system-auth

See *Managing Security on UNIX in Managing NerveCenter* for more details about NerveCenter's PAM implementation.

The script prompts you to configure web server integration.

15. Press **Enter** to configure web server integration, or press **n** and then **Enter** if you are not integrating a web server.

> ✏ **NOTE**
> If your Web server is on a different machine, you must configure the Web server yourself. See *Managing NerveCenter Web Integration in Managing NerveCenter* for details.

The script prompts you for the web server that you are integrating.

16. Press **Enter** to use Apache, or press **2** and then **Enter** to use another web server.

Follow the prompts to configure your web server. To integrate NerveCenter with Apache, for example, you would do the following:

a. Press **Enter** to use the default configuration path (**/etc/apache** — the directory containing httpd.conf and srm.conf) or provide another path and then press **Enter**.

b. Press **Enter** to use the default path (**/var/apache/logs**) to the Apache web server pid file or provide another path and then press **Enter**.

c. Press **Enter** to allow the installation script to modify the Apache configuration file (srm.conf).

The script backs up the original file in the /apache/conf directory as srm.conf.NCbak.

d. Press **Enter** to restart the web server now, or press **n** and then **Enter** if you plan to do it later.

e. Press **Enter** to start the webcollector automatically when the system reboots, or press **n** and then **Enter** if you wish to start it manually.

If you are installing the universal platform adapter for integration with IBM Tivoli Netcool/OMNIbus, the script prompts you specify its startup method.

17. Press **Enter** if you wish to start the adapter manually, or press **y** and then **Enter** to start it as a daemon each time the system boots.

18. When the installation script finishes, source the appropriate ncenv shell script in **/opt/OSInc/userfiles** for the shell you are running.

- ◆ **/bin/sh shell:** `. /opt/OSInc/userfiles/ncenv.sh`

- ◆ **/bin/bash shell:** `. /opt/OSInc/userfiles/ncenv.bash`

⚠️ **CAUTION**

You must source this file to be able to run NerveCenter. Add the lines from these files to the login scripts for all users who are going to be starting NerveCenter applications on UNIX.

The script installs NerveCenter, using the options you specified.

If you need to troubleshoot the installation or review the options you specified, you can view the installation log (/opt/OSInc/ncinst_log) in a text editor or viewer. The installation log contains the full installation script, your answers, and the list of files that were installed.

Restoring Data After an Upgrade

NerveCenter automatically upgrades your existing database files (.ncdb and .node, in /opt/OSInc/db) during the installation. If you want to revert to the default database that ships with NerveCenter 5.1, you can use serializedb to import the ncexport51.asc file (see *Restoring the Database in Managing NerveCenter*).

Copy your data from a prior NerveCenter version to the following directories:

Description	File Type	Default Location
Serialized database files	`*.asc`, `*.idb` files	`/opt/OSInc/db`
Database installation preferences		`/opt/OSInc/bin`
Exported model files	`*.mod`, `*.txt` files	`/opt/OSInc/models`
NerveCenter MIB; Files used to compile additional MIB definitions	`*.mib`, `mibcomp.txt`, ASN.1 files	`/opt/OSInc/mibs`
Customized files for platform integrations (such as the LRF file used with HP OpenView).	`ovpa.lrf` and any other network management platform files you might have customized	`/opt/OSInc/ovpa` *platform_directory*

Where to Go from Here

After you finish the installation, you may need to do the following steps before using NerveCenter:

TABLE 3-3. Post-Installation Configuration Steps

If you...	You must...	For details, see...
Installed the server	Obtain a license file.	*About NerveCenter Licensing on page 23*
Are ready to start and configure NerveCenter	Start the server, use the administrator to connect to the server, and configure your node source, inform hosts, email notification, and so on.	*Connecting to a NerveCenter Server in Managing NerveCenter*
Installed a platform adaptor to integrate NerveCenter with a network management platform	Configure NerveCenter and your network management platform to work together.	*Integrating NerveCenter with a Network Management Platform*
Chose to integrate IBM Tivoli Netcool/Omnibus on a machine other than the NerveCenter server	Change the platform adapter's nhost setting to reflect the Netcool host machine.	*Integrating NerveCenter with IBM Tivoli Netcool/OMNIbus in Integrating NerveCenter with a Network Management Platform*
Installed Web support, but the Web server is on another machine	Set up the URL map manually.	*Managing NerveCenter Web Integration in Managing NerveCenter*
Installed Web support	Verify that users have appropriate access to the Web server.	Your Web server documentation
Changed the default directory and you plan on using the IPSweep behavior model	Modify the IPSweep alarm to use the new path.	*Using IPSweep Behavior Model in Designing and Managing Behavior Models*
Must change or build a MIB	Run one of the NerveCenter MIB compilers.	*Compiling the NerveCenter MIB in Managing NerveCenter*

Installing NerveCenter on Windows

<div style="text-align: right">**4**</div>

This chapter describes how to install NerveCenter components on Windows platforms (2000, XP 2003, and Vista) that meet the requirements documented in the *NerveCenter Release Notes*.

This chapter includes the following sections:

Section	Description
Preparing to Install NerveCenter on Windows on page 34	Describes how to prepare the machine on which you are going to install NerveCenter.
Running the NerveCenter Installer on page 37	Describes how to run the installation script and respond to prompts.
Restoring Data After an Upgrade on page 41	Describes where to copy NerveCenter files from a previous version after an upgrade.
Where to Go from Here on page 45	Describes what to do after completing the installation.

Preparing to Install NerveCenter on Windows

This section provides some general installation notes, describes the NerveCenter licensing model, and lists prerequisites that each machine must meet before NerveCenter can be installed.

Installation Notes

⚠️ **CAUTION**
If you are upgrading from a previous version, you must stop all NerveCenter processes, back up your files, and uninstall NerveCenter before installing NerveCenter 5.1.06. See *Archiving and Removing Prior Installations on page 9*.

If you are upgrading from NerveCenter 4.0, see *NerveCenter and IPv6 in NerveCenter 5.1.06 Release Notes* for additional requirements and limitations for NerveCenter support of the IPv6 protocol.

⚠️ **CAUTION**
NerveCenter 5.1.01 components are not compatible with those from older versions (e.g., a 5.1.01 client cannot connect to a 5.1 server). All components, including integration components such as ovpa and paserver, must be installed at once.

📝 **NOTE**
You cannot install multiple versions of NerveCenter on the same machine. Only one version can be installed on a machine.

📝 **NOTE**
NerveCenter supports the SNMP v3 protocol. If you intend to have v3 agents send traps to NerveCenter, then you must select NerveCenter as your trap source when prompted by the installer. You must also disable the Microsoft or OpenView trap services on your system. *Table 4-1* shows SNMP trap support by version.

TABLE 4-1. SNMP Trap Support

Trap Source	SNMP Version			Name
	v1	**v2**	**v3**	
NerveCenter	✓	✓	✓	—
OpenView	✓	✓	✗	ovtrapd
Microsoft	✓	✓	✗	SNMP Trap Service

About NerveCenter Licensing

Beginning with release 5.1, NerveCenter uses a new licensing mechanism. Instead of serial numbers or license keys, you must obtain a license file for each NerveCenter server (and only the NerveCenter server; the client, ncadmin, and nccmd are not licensed).

You will receive a *hostname*.dat file for each NerveCenter server you are licensing, which you must copy to **installation_path\conf**. NerveCenter *Server processes cannot be started without this file*.

Run **installation_path\bin\nclicreport.exe** on each of your NerveCenter servers to print the license key information needed for obtaining the license file required for NerveCenter 5.1 upgrades. Contact your LogMatrix representative to obtain license files.

Prerequisites

Before you install NerveCenter, make sure you meet the prerequisites in *Table 4-2*:

TABLE 4-2. Prerequisites for Installing NerveCenter on Windows

If you are installing...	You must...
Any NerveCenter component	◆ Be able to log in as a Windows Administrator.
	If you are installing on a workstation or server, you must be a member of the local Administrators group (or a member of a group that is a member of the local Administrators group). If you are installing on a Windows domain controller, your user ID must be a member of the Domain Admins group.
	◆ Verify that the machines on which NerveCenter will be running must meet the system requirements for your environment as described in the *NerveCenter Release Notes*.
	◆ Install Simple Network Management Protocol (SNMP) services and SNMP trap services.
	If NerveCenter will manage SNMP v3 agents, then the Microsoft SNMP Trap service must be turned off and disabled on the installation machine. If you are not managing SNMP v3 agents, then start the services.
NerveCenter Server	◆ Verify that the machine on which you are installing the server has a fixed IP address (i.e., not DHCP).
	◆ Obtain a license file (*hostname*.**dat**) from LogMatrix for each machine that will be running the NerveCenter Server. See *About NerveCenter Licensing on page 35* for more information.

TABLE 4-2. Prerequisites for Installing NerveCenter on Windows (Continued)

If you are installing...	You must...
The OpenView Platform Adapter	◆ Verify that OpenView has been installed on this machine. If it is not, the NerveCenter OpenView Platform Adapter (ovpa) cannot be installed.
	◆ Verify that OpenView is running on this machine.
	◆ Verify that the following services are started: SNMP EMANATE Adapter for NT and SNMP EMANATE Master Agent.
	◆ Verify that the SNMP Trap Service is installed but not running.
	◆ Start the ovtrapd service unless you will be managing SNMP v3 agents.
The Universal Platform Adapter	◆ Verify that IBM Tivoli Netcool/Omnibus (including the NerveCenter probe) is installed and running on this machine.
	Note: You must obtain the NerveCenter probe from IBM Tivoli.
Web server integration	◆ Be familiar with your Web server, its location, and its configuration files.
A SQL Server NerveCenter database	◆ Verify that the correct version of SQL Server, as stated in the *NerveCenter Release Notes*, is installed and running.
	◆ Be able to log in to SQL Server with system administrator (sa) rights, as only sa can create devices.

Running the NerveCenter Installer

You should exit all open applications before installing NerveCenter.

TO START THE NERVECENTER SETUP PROGRAM

1. Insert the NerveCenter CD-ROM or navigate to the directory where NerveCenter installer has been downloaded.

    The NerveCenter Setup program should start automatically. If it does not, browse the CD-ROM and run setup.exe.

    The Welcome screen provides some general information, including general setup suggestions and copyright warnings.

2. Click **Next**.

    The Software License Agreement screen displays the software license agreement. You must accept the agreement to install the software.

3. Review the SLA and click **Yes** to accept the terms.

    The NerveCenter Components screen displays the installation options.

4. Select one or more components to install:

Component	Notes
Client	Installs the NerveCenter client only, which is used to monitor the network and create or modify behavior models.
Administrator	Installs the NerveCenter client only, which is used to configure your NerveCenter installation.
Server	Installs the server and other core components such as the database.
MIB Compiler	Installs mibTool, the MIB Compiler introduced with NerveCenter 5.1. (The server installation also includes this compiler.)
Platform support	Gives you the option to install NerveCenter platform integrations.
Web support	Installs the web server integration, which allows you to use the NerveCenter Web Client from anywhere on the network. LogMatrix recommends that you install this component on the machine where the web server is installed.
Online documentation	Installs the complete documentation set in HTML with full-text search and in PDF format for printing.

5. Click **Next**.

   If you selected Platform support on the previous screen, the Platform Integration screen displays your platform integration options.

   ✎ **NOTE**
   The network management platforms must be already be installed and running on this machine.

   a. Select one or both platform adapters to install.

      ◆ **HP OpenView Platform Adapter (OVPA)** - Allows you to collect node information from and send messages to HP OpenView.

      ⚠ **CAUTION**
      Do not select OVPA if you are installing the NerveCenter Server on the same machine as OpenView but you plan on using NerveCenter's Discovery behavior models instead of getting node information from OpenView.

      ◆ **Universal Platform Adapter** - Allows you to integrate NerveCenter with IBM Tivoli Netcool/OMNIbus.

   b. Click **Next**.

   The Destination Directory screen appears.

6. Modify the default installation directories if necessary and click **Next**.

7. If you are installing the Server, the Server Configuration screen appears.

   The Server Configuration screen is only displayed if you are installing a NerveCenter Server. *If you are not installing a server, then skip to step 9*.

8. Select Configure service for automatic startup if the NerveCenter server should start each time the machine is booted.

   If you do not configure it to start automatically, you must start it yourself from the Start menu or the Services applet.

   The Security Options screen prompts you for a security option.

9. To use NerveCenter Server security, select **Yes**; otherwise select **No**.

   If you use NerveCenter security, users will be validated against membership in the NerveCenter Admins or NerveCenter Users user groups, which will be created by Setup

> ✎ **NOTE**
> If you are upgrading NerveCenter and you select **Yes**, Setup will add your
> user ID to your existing local groups.

10. Click **Next**.

    The Trap Options screen prompts you to select an SNMP trap source. (You can change the
    trap source later if necessary; see *Managing the NerveCenter Trap Source in Managing
    NerveCenter* for details.)

11. Select one of the following SNMP trap sources:

    ◆ OpenView - Supports SNMP v1 and v2c traps. OpenView must be co-resident with
       NerveCenter to support this option.

    ◆ Microsoft SNMP Trap Service (MSTRAP) - Supports SNMP v1 and v2c traps. Disable
       the ovtrapd service before leaving the Trap Options screen if you select this option.

    ◆ NerveCenter - Supports SNMP v1, v2c, and v3 traps. Disable the Microsoft Trap
       Service (SNMP Trap Service) and ovtrapd before leaving the Trap Options screen if you
       select this option.

12. Click **Next**.

    The Database Installation screen lets you specify whether you want Setup to automatically
    start DBWizard after the installation is completeso you can set up the NerveCenter database.
    If you decide not to have Setup start DBWizard automatically, you can start it manually from
    the NerveCenter program group on the Start menu after the installation is complete.

13. If you do not have an existing database (e.g., from a previous installation), select **Yes** to have
    DBWizard to create and configure a database.

    > ⚠ **CAUTION**
    > The NerveCenter Server cannot start without a database.

14. Click **Next**.

    The Folder Selection screen prompts you for the program group into which program icons
    should be added.

15. Select a different program group if necessary and then click **Next**.

    NerveCenter is installed with the options you specified. When the installation is complete,
    the Setup Complete screen prompts you to reboot the machine.

16. Click **Finish** to complete the installation.

If you installed the OpenView integration, a DOS window and the NNM Console Output Display window appear. The DOS window closes automatically after NerveCenter has been registered with HP OpenView.

⚠ **CAUTION**

Do not close the DOS window. It will be closed when OVPA has been registered with OpenView. You can close the NNM Console Output Display window.

If you installed the NerveCenter Server and chose to set up a database, the DBWizard application starts. For instructions on installing or upgrading a database, see *Chapter 5, Setting Up the Database on Windows*.

17. Click **Finish** to reboot the machine and complete the installation.

If you had any problems, open the Windows Event Log, review the options and any error messages, fix the problem, and rerun Setup.

Restoring Data After an Upgrade

Copy your data from a prior NerveCenter version to the following directories:

Description	File Type	Default Location
NerveCenter database files	Microsoft Access (`*.mdb`) or Microsoft SQL Server database	*installation_path*\db
Serialized database files Database installation preferences	`*.asc`, `*.idb` files	*installation_path*\db *installation_path*\bin
Exported model files	`*.mod`, `*.txt` files	*installation_path*\model
NerveCenter MIB; Files used to compile additional MIB definitions	`*.mib`, `mibcomp.txt`, ASN.1 files	*installation_path*\mib
Customized files for platform integrations (such as the LRF file used with HP OpenView).	`ovpa.lrf` and any other network management platform files you might have customized	*HP_OV_directory*\lrf *platform_directory*

If you are upgrading from NerveCenter 4.0, you must also upgrade your database and import new MIBs as described in the following procedures:

- *To upgrade a SQL Server database on page 41*
- *To upgrade a Microsoft Access database on page 43*
- *To import the LogMatrix MIBs on page 44*

TO UPGRADE A SQL SERVER DATABASE

1. From the Windows **Start** menu, select **DBWizard** from the NerveCenter program group.

   The DBWizard Start screen appears.

2. Select **Run a SQL script** and click **Next**.

   The ODBC Data Source screen appears.

3. Enter your **ODBC Data Source Name** and click **Next**.

   The SQL Server Information screen appears.

4. Enter the **Server Host Name**, **Server User ID**, **Server Password**, and **Database Name**, and then click **Next**.

   The NerveCenter Paths and Files screen appears.

5. Select the appropriate *installation_path***/mib/From**to**.sql** SQL script to run and your serialized database file (*.ASC) to convert, and then click **Next**.

   There are three SQL upgrade scripts in *installation_path*/mib/ — From40to51.sql, From41to51.sql, and From50to51.sql.

   The Finish screen appears.

6. To create a SQL database with the settings that you just specified, select **Create and Execute InstallDB**.

7. If you are creating multiple databases on different machines, select **Create InstallDB command file with name** and enter the file name.

   DBWizard will create an IDB file with the settings from this installation, which you can load into DBWizard when you run it on the other machines.

8. Click **Next**.

   The Status screen appears.

9. Verify that the settings are correct and click **Finish**.

   If necessary, you can use the Back button to return to the previous dialog boxes and make corrections.

   The wizard creates the NerveCenter database.

10. When the upgrade is complete, click **OK**.

1. From the Windows **Start** menu, select **DBWizard** from the NerveCenter program group.

   The DBWizard Start screen appears.

2. Select **Load Serialized File** and click **Next**.

   The Select DBMS screen appears.

3. Select **Microsoft Access** and click **Next**.

4. Enter the path to your Access database (typically NCAccess.mdb).

5. Enter the path to your serialized database file (typically NCExport40.asc).

   ⚠ **CAUTION**

   If you specify NCExport.asc, DBWizard overwrites the current database with the NerveCenter's default database. If you intend to concatenate behavior models instead of overwriting the existing database, use the Import facility instead.

6. Click **Next**.

   The Finish screen appears.

7. Select **Create and Execute InstallDB** and click **Next**.

   The wizard creates the NerveCenter database.

8. Click **Finish**.

If you are upgrading from NerveCenter 4.0, you must manually import the MIBs (which contain new Property Groups and Properties) to poll the NerveCenter SNMP Agent.

T○ IMPORT THE L○GMATRIX MIBS

1. From the client's **Admin** menu, select **Property Group List**.

2. Click the **MIB to Group** button at the bottom of the window.

3. Select OPENSERVICE-NERVECENTER-CONFIG-MIB.MY from the **MIB** list.

4. Enter a name for the property group in the **Property Group Name** field or accept the default (OPENSERVICE-NERVECENTER-CONFIG-MIB) and click **OK**.

5. Repeat step 2 through step 4 for the other MIBs, OPENSERVICE-NERVECENTER-CORRELATION-MIB.MY and OPENSERVICE-NERVECENTER-MONITOR-MIB.MY.

6. Click **Save**.

Where to Go from Here

After you finish the installation, you may need to do the following steps before using NerveCenter:

TABLE 4-3. Post-Installation Configuration Steps

If you...	You must...	For details, see...
Installed the server	Obtain a license file.	*About NerveCenter Licensing on page 35*
Installed the server and chose not to set up the database during installation	Install a database now.	*Chapter 5, Setting Up the Database on Windows*
Are ready to start NerveCenter	Start the server, use the administrator to connect to the server, and configure your node source, inform hosts, email notification, and so on.	*Connecting to a NerveCenter Server in Managing NerveCenter*
Installed a platform adaptor to integrate NerveCenter with a network management platform	Configure NerveCenter and your network management platform to work together.	*Integrating NerveCenter with a Network Management Platform*
Chose to integrate IBM Tivoli Netcool/Omnibus on a machine other than the NerveCenter server	Change the platform adapter's nhost setting to reflect the Netcool host machine.	*Integrating NerveCenter with IBM Tivoli Netcool/OMNIbus in Integrating NerveCenter with a Network Management Platform*
Installed Web support, but the Web server is on another machine	Set up the URL map manually.	*Managing NerveCenter Web Integration in Managing NerveCenter*
Installed Web support	Verify that users have appropriate access to the Web server.	Your Web server documentation
Changed the default directory and you plan on using the IPSweep behavior model	Modify the IPSweep alarm to use the new path.	*Using IPSweep Behavior Model in Designing and Managing Behavior Models*
Must change or build a MIB	Run one of the NerveCenter MIB compilers.	*Compiling the NerveCenter MIB in Managing NerveCenter*
Are ready to configure NerveCenter	Start the server, use the administrator to connect to the server, and configure your node source, inform hosts, email notification, and so on.	Chapter 4 through Chapter 6 in *Managing NerveCenter*

4 Installing NerveCenter on Windows

Setting Up the Database on Windows   **5**

When you install NerveCenter for the first time or move the NerveCenter database to a new location, you must either set up a new NerveCenter database or reconnect to an existing NerveCenter version 5.1.06 database.

If you instructed NerveCenter Setup to set up your NerveCenter database, then DBWizard is automatically launched for you after NerveCenter Setup is done.

> ⚠ **CAUTION**
> You must be logged in as an administrator to set up the database.

If you create a new database, you can use Microsoft Access or Microsoft SQL Server (2000 or 2005). As part of the creation process, a serialized database file is imported into the database. The serialized file contains the base set of NerveCenter objects, including polls, masks, alarms, etc.

> ✎ **NOTE**
> You must install SQL Server before creating an SQL database, though you do not need to install Access before creating an Access database.

This chapter includes the following sections:

Section	Description
Creating and Installing a New Database on page 48	Describes how to create a new SQL Server or Access database.
Connecting to an Existing Database on page 53	Describes how to connect to an existing NerveCenter 5.1.06 database.

Creating and Installing a New Database

LogMatrix NerveCenter supplies a wizard called DBWizard and a command-line version of the wizard. You can use either one to set up your database. If you are installing NerveCenter on many computers, you may want to use the wizard to set up the first database, then save your configuration settings and use them with the command-line version of DBWizard to save time on subsequent setup routines.

> ✎ **NOTE**
>
> If you are creating a SQL database, you must be logged into the same domain that SQL Server is running on and you must have SQL administrator (sa) rights, including the right to create database devices.

TO SET UP A NEW NERVECENTER DATABASE

1. From the Windows **Start** menu, select **DBWizard** from the NerveCenter program group.

   The DBWizard Start screen appears.

2. Select **Full Database Creation and Installation**.

3. Click **Load IDB File**.

   An IDB file contains database installation settings; if you saved settings from a previous installation, you can re-run DBWizard .

4. Select an IDB file from the NerveCenter Db folder and click **Open**.

   If you haven't created an IDB file, select **InstallDB.idb** to load the default settings.

5. Click **Next**.

   The Select DBMS screen appears.

6. Select **Microsoft SQL Server** or **Microsoft Access**.

7. Click **Next**.

If you selected SQL Server, see *Creating a SQL Server Database on page 49*. If you selected Access, see *Creating an Access Database on page 51*.

Creating a SQL Server Database

After you select **Microsoft SQL Server** from the Select DBMS screen and click **Next**, the ODBC Data Source screen appears.

TO CREATE AN SQL SERVER DATABASE

1. Enter an **ODBC Data Source Name** or keep the default name.

2. Click **Next**.

   The SQL Server Information screen appears.

3. Enter the **Server Host Name**, **Server User ID**, **Server Password**, and **Database Name**.

   📝 **NOTE**

   Each NerveCenter Server must have its own database. Servers cannot share a database.

   You must supply a User ID with database administrator rights (such as **sa**), including the right to create devices.

4. Click **Next**.

   The SQL Server Data Device Information screen appears.

5. Enter the data device information and click **Next**.

   DBWizard supplies default values for each field, which you may change as necessary:

   ◆ **SQL Data Device Name:** The SQL data device to be used by the database. If the database already exists, the existing device name is used. If the database does not exist, it is created when you specify the data device name. Select a device from the list or enter a new name.

   ◆ **File Path and Name:** Fully qualified path to the SQL data device file. (use the UNC convention **\\machine\path** if the file is on a different machine.) The default path is that of the SQL master device; you can enter a different path, but the directory you use must exist. If the file already exists, the operation fails; if the file exists but is not used by a specified device, it is deleted and re-created.

   ◆ **Data Device Size in MB:** Size of the data device. 10 MB is the suggested minimum (NerveCenter will verify that the device has sufficient space). This field is required only if you entered a new device name.

   The SQL Server Log Device Information screen appears.

6. Enter the log device information and click **Next**.

DBWizard supplies default values for each field, which you may change as necessary:

◆ **SQL Log Device Name:** The log device to be used by the database. This field is required only if you entered a new data device name. Select a device from the list or enter a new name.

◆ **File Path and Name:** Fully qualified path to the SQL data device file. (use the UNC convention **\\machine\path** if the file is on a different machine.) This field is required only if you specified the log device name. If the file already exists, the operation fails; if the file exists but is not used by a specified device, it is deleted and re-created.

◆ **Log Device Size in MB:** Size of the log device. 10 MB is the suggested minimum (NerveCenter will verify that the device has sufficient space). This field is required only if you entered a new device name.

The NerveCenter Paths and Files screen appears.

7. Enter fully qualified paths to the **SQL Script File** and **Serialized Database File**, and then click **Next**.

The default script, NCScript.sql, creates the NerveCenter SQL database. Use this script only when creating a new database.

The default serialized database file, NCExport.asc, contains default values for the new database. Use this file only when creating a new database.

The Finish screen appears.

8. To create a SQL database with the settings that you just specified, select **Create and Execute InstallDB**.

9. If you are creating multiple databases on different machines, select **Create InstallDB command file with name** and enter the file name.

DBWizard will create an IDB file with the settings from this installation, which you can load into DBWizard when you run it on the other machines.

> ✎ **NOTE**
> If you do not create an IDB file, the settings can be found in the dbwizard.idb command file.

10. Click **Next**.

The Status screen appears.

11. Verify that the settings are correct and click **Finish**.

   If necessary, you can use the Back button to return to the previous dialog boxes and make corrections.

   The wizard creates the NerveCenter database.

12. When the installation is complete, click **OK**.

   You are prompted to restart the machine; it must be restarted before NerveCenter can be activated.

Creating an Access Database

After you select **Microsoft Access** from the Select DBMS screen and click **Next**, the ODBC for Access screen appears.

TO CREATE AN ACCESS DATABASE

1. Enter an **ODBC Data Source Name** or keep the default name.

2. LogMatrix NerveCenter ships with a default Access database, called NCAccess.mdb. It is located in the NerveCenter Db folder. Specify this default Access database in the **Location of Access Database** field.

3. Click **Next**.

   The NerveCenter Paths and Files screen appears.

4. Enter a fully qualified path to the **Serialized Database File** and then click **Next**.

   Because you are setting up an Access database, the tables are created for you. The NC SQL Script File Name field is grayed out because Access database tables are created for you automatically.

5. The default serialized database file, NCExport.asc, contains default values for the new database.

   The Finish screen appears.

6. To create an Access database with the settings that you just specified, select **Create and Execute InstallDB**.

7. If you are creating multiple databases on different machines, select **Create InstallDB command file with name** and enter the file name.

   DBWizard will create an IDB file with the settings from this installation, which you can load into DBWizard when you run it on the other machines.

   > ✎ **NOTE**
   >
   > If you do not create an IDB file, the settings can be found in the dbwizard.idb command file.

8. Click **Next**.

   The Status screen appears.

9. Verify that the settings are correct and click **Finish**.

   If necessary, you can use the Back button to return to the previous dialog boxes and make corrections.

   The wizard creates the NerveCenter database.

10. When the installation is complete, click **OK**.

    You are prompted to restart the machine; it must be restarted before NerveCenter can be activated.

Connecting to an Existing Database

If you already have a NerveCenter 5.1.06 database, or if you installed NerveCenter 5.1.06 in a new location, you can configure the ODBC data source and connection string to point to this database.

The steps for a SQL database and an Access database are slightly different.

Connecting to a SQL Database

TO POINT TO A SQL DATABASE

1. From the Windows **Start** menu, select **DBWizard** from the NerveCenter program group.

   The DBWizard Start screen appears.

2. Select **Create Data Source and Connection String**.

3. Click **Load IDB File**.

   An IDB file contains database installation settings; if you saved settings from a previous installation, you can re-run DBWizard .

4. Select an IDB file from the NerveCenter Db folder and click **Open**.

   If you haven't created an IDB file, select **InstallDB.idb** to load the default settings.

5. Click **Next**.

   The Select Database screen appears.

6. Select **Microsoft SQL Serve**r as the database type and click **Next**.

   The ODBC Data Source screen appears.

7. Enter an **ODBC Data Source Name** or keep the default name and then click **Next**.

   The SQL Server Information screen appears.

8. Enter the **Server Host Name**, **Server User ID**, **Server Password**, and **Database Name**.

9. Click **Next**.

   The Finish screen appears.

10. To create a ODBC data source and connection string with the settings that you just specified, select **Create and Execute InstallDB**.

11. If you are repeating this process on different machines, select **Create InstallDB command file with name** and enter the file name.

    DBWizard will create an IDB file with the settings from this installation, which you can load into DBWizard when you run it on the other machines.

    > ✏️ **NOTE**
    > If you do not create an IDB file, the settings can be found in the dbwizard.idb command file.

12. Click **Next**.

    The Status screen appears.

13. Verify that the settings are correct and click **Finish**.

    If necessary, you can use the Back button to return to the previous dialog boxes and make corrections.

14. When the installation is complete, click **OK**.

Connecting to an Access Database

FOLLOW THESE INSTRUCTIONS TO POINT TO AN ACCESS DATABASE

1. From the Windows **Start** menu, select **DBWizard** from the NerveCenter program group.

   The DBWizard Start screen appears.

2. Select **Create Data Source and Connection String**.

3. Click **Load IDB File**.

   An IDB file contains database installation settings; if you saved settings from a previous installation, you can re-run DBWizard .

4. Select an IDB file from the NerveCenter Db folder and click **Open**.

   If you haven't created an IDB file, select **InstallDB.idb** to load the default settings.

5. Click **Next**.

   The Select Database screen appears.

6. Select **Microsoft Access** as the database type and click **Next**.

    The ODBC for Access screen appears.

7. Enter the **ODBC Data Source Name** and a fully qualified path to the Access database, and then click **Next**.

    The Finish screen appears.

8. To create a ODBC data source and connection string with the settings that you just specified, select **Create and Execute InstallDB**.

9. If you are repeating this process on different machines, select **Create InstallDB command file with name** and enter the file name.

    DBWizard will create an IDB file with the settings from this installation, which you can load into DBWizard when you run it on the other machines.

    > **NOTE**
    > If you do not create an IDB file, the settings can be found in the dbwizard.idb command file.

10. Click **Next**.

    The Status screen appears.

11. Verify that the settings are correct and click **Finish**.

    If necessary, you can use the Back button to return to the previous dialog boxes and make corrections.

12. When the installation is complete, click **OK**.

5 Setting Up the Database on Windows

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Installation Quick Reference for NerveCenter 5.1.06

Before you install LogMatrix NerveCenter, use the following checklists to make sure you meet the prerequisites:

UNIX Installation Checklist

- ❑ If I am upgrading, I have followed the instructions in *Chapter 2, Archiving and Removing Prior Installations*, including:
  - ❍ Stopping all NerveCenter applications, services, and processes
  - ❍ Serializing the database
  - ❍ Backing up files I need to save
- ❑ The machines on which I am installing NerveCenter meet the system requirements as given in the *NerveCenter Release Notes*.
- ❑ I am logged in as root.
- ❑ I can access and write to the directory in which I want to install NerveCenter.
- ❑ I have the license key file (*hostname*.dat) for my NerveCenter server.
- ❑ If I am installing the server, the machine on which I am installing it has a fixed IP address.
- ❑ Verify that X-Windows software with Motif or CDE is installed (and running, if necessary) and the DISPLAY variable points to a valid X display if necessary.
- ❑ Verify that the /usr/sbin/rpcbind process is running.
- ❑ I have created the ncadmins and ncusers groups, and the nervectr user, who is a member of ncadmins. (Do not do this if you are using NIS.)
- ❑ If I am integrating NerveCenter with HP OpenView, OpenView is installed and running on this machine, and I have configured paths and services properly.
- ❑ If I am integrating with IBM Tivoli Netcool/Omnibus, it and the NerveCenter probe are running on this machine.
- ❑ If I am integrating NerveCenter with a Web server, I am familiar with its location and configuration files.
- ❑ I know the fully qualified path to my browser executable.
- ❑ I have updated the files needed for PAM (Pluggable Authentication Module), used to verify NerveCenter application logins. See *Managing Security on UNIX in Managing NerveCenter* for more information.

Windows Installation Checklist

- ❑ If I am upgrading, I have followed the instructions in *Chapter 2, Archiving and Removing Prior Installations*, including:
  - ❍ Stopping all NerveCenter applications, services, and processes
  - ❍ Serializing the database
  - ❍ Backing up files I need to save
- ❑ The machines on which I am installing NerveCenter meet the system requirements as given in the *NerveCenter Release Notes*.
- ❑ I am logged in as Administrator or as a member of the Administrators group.
- ❑ I can access and write to the directory in which I want to install NerveCenter.
- ❑ I have the license key file (*hostname*.dat) for my NerveCenter server.
- ❑ If I am installing the server, the machine on which I am installing it has a fixed IP address.
- ❑ The SNMP service is installed and running.
- ❑ If I am using MS Trap as my trap source, the SNMP Trap service is installed and running. If NerveCenter will manage SNMP v3 agents, the SNMP Trap service must be turned off and disabled.
- ❑ If I am going to use an SQL database:
  - ❍ SQL 6.x or 7.x is installed and running.
  - ❍ I have an account with system administrator (sa) rights.
- ❑ If I am integrating NerveCenter with HP OpenView:
  - ❍ OpenView is installed and running on this machine
  - ❍ The SNMP EMANATE Adapter for NT and SNMP EMANATE Master Agent services are started
  - ❍ HP OpenView and ovtrapd are running on this machine.
- ❑ If I am integrating with IBM Tivoli Netcool/Omnibus, it and the NerveCenter probe are running on this machine.
- ❑ If I am integrating NerveCenter with a Web server, I am familiar with its location and configuration files.

LogMatrix Software License Agreement

This Software License and Services Agreement ("Agreement") is between LogMatrix, Inc., a Delaware corporation having its principal place of business at 67 Forest Street, Marlborough, MA 01752 ("LogMatrix"), and Your Company and its Affiliates (as later defined; collectively, "Customer"). This Agreement establishes the terms under which LogMatrix will license certain of its software products and provide support and other software-related services to Customer. This Agreement consists of these Standard Terms and Conditions and the LogMatrix Annual Support Policy which will be provided under separate cover.

LogMatrix, Inc.

Standard Terms and Conditions

In consideration of the mutual promises and upon the terms and conditions set forth below, the parties agree as follows:

1. DEFINITIONS

1.1. **"Software"** shall refer to any LogMatrix software application or suite of applications including without limitation Modules, that may be delivered to Customer either with the initial delivery of the software or any time thereafter or any subsequent Order Form, Updates and Subscription Software (only available to the extent Customer has subscribed and paid for this option), and any embedded programs of LogMatrix's licensors, all in object code format only, including all copies in whole or part, backups and related documentation.

1.2. **"Module(s)"** shall refer to the modules described on any Order Form.

1.3. **"Update(s)"** shall refer to any and all patches, bug fixes, workarounds, upgrades and updates specific to a Software application that are customarily provided at no additional cost to LogMatrix customers who have contracted for Annual Support Services with respect to that Software. The term "Update" does not include new modules added to a Software suite where such modules offer discrete new functionalities in addition to or together with the licensed Software applications, or any release, option, future product, or software that LogMatrix licenses separately or offers only for an additional fee.

1.4. **"Services"** shall refer to any services relating to the Software and provided by LogMatrix, including, without limitation, Annual Support Services and Professional Services.

1.5. **"Annual Support Services"** shall refer to the services provided under LogMatrix's then current standard or premium Support Services policy, as elected by Customer. A copy of LogMatrix's current Support Services policy will be shipped under separate cover upon shipment of software.

1.6. **"Professional Service(s)"** shall refer to the installation, training and/or other professional services elected by Customer.

1.7. **"Subscription Software"** shall refer to software that is made generally available only to customers of LogMatrix that have subscribed to and paid for this option.

1.8. **"Custom Development(s)"** shall refer to any and all materials provided to Customer by LogMatrix in the course of performing Professional Services.

1.9. **"Order Form"** shall refer to the LogMatrix document by which Customer orders Software and Services.

1.10. **"Node(s)"** shall refer to workstation or server Agent. You may install and use only the Software for which you have received a valid license key code (serial number) from LogMatrix or its distributors, to manage up to the number of Nodes specified in your purchase documentation. Your license key code (serial number) may only be installed in a single system at any one time. You may use the Software and related documentation on only as many servers as you have purchased licenses.

1.11. **"Affiliate"** shall refer to any legal entity (such as a corporation, partnership, or limited liability company) that is controlled by Customer. For purposes of this definition, "control" means (i) beneficial ownership of at least fifty percent (50%) of the voting securities of a corporation or other business organization with voting securities or (ii) a fifty percent (50%) or greater interest in the net assets or profits of a partnership or other business organization without voting securities.

1.12. **"Specifications"** shall refer to LogMatrix's specifications for particular Software applications in effect on the date of the applicable Order Form.

2. GRANT OF LICENSE

2.1. **License Grant.** Subject to the terms of this Agreement, LogMatrix grants to Customer a nonexclusive, nontransferable license under LogMatrix's intellectual property rights: (i) to use the Software and Custom Developments, if any, for Customer's internal business purposes in connection with the number of Modules and number of Devices for which license fees have been paid and at the locations specified on the Order Form; (ii) to have system integrators implement the Software for the Customer; and (iii) to make one copy of the Software and Custom Developments including related documentation for archival purposes. LogMatrix agrees to provide cold and hot back-up copies of Software as listed on its then current price list. Customer acknowledges that that certain Software applications may include "copy lock" protection and/or require an "enabling key," which shall be provided to Customer by LogMatrix or its licensors for purchased licenses. This is a license agreement and not an agreement for sale. All rights not specifically granted will be reserved to LogMatrix and its licensors.

2.2. **Compliance.** On request, Customer will provide LogMatrix with a written statement, certified by an authorized representative of Customer, listing the number and type of Devices in use and under management in connection with the Software and any changes to the location of the Software. During the term of this Agreement and for three (3) years thereafter, LogMatrix will have the right, no more than once annually, to conduct and/or direct an independent accounting firm to conduct, during normal business hours and on reasonable notice, an audit of the appropriate records of Customer to verify this information. If the information supplied by Customer to LogMatrix proves to be inaccurate by more than five percent (5%) to LogMatrix's detriment, then the Customer will pay all costs of the audit as well as applicable license and support fees on a retroactive basis.

3. LICENSE RESTRICTIONS

3.1. **Restrictions.** Customer will not modify, translate, reverse engineer, decompile, disassemble or otherwise attempt to derive source code, or create derivative works based on the Software or Custom Developments, provided that, if required under applicable law, upon Customer's request, LogMatrix will provide information necessary for Customer to achieve interoperability between the Software or Custom Developments and other software for a nominal administrative charge. Customer may only use the embedded programs of LogMatrix's licensors with and as a part of the Software and/or Custom Developments and is prohibited from using such embedded programs for application development purposes or otherwise outside the scope defined in Section 2.1 of this Agreement.

3.2. **Third Parties.** Customer will not: (i) host the Software and/or Custom Developments for access by any third party; (ii) rent, lease, sublicense, or otherwise distribute the Software and/or Custom Developments to any third party; (iii) offer the Software and/or Custom Developments in connection with timesharing, facility management, or service bureau usage; or (iv) use the Software and/or Custom Developments to develop or modify applications or perform other programming tasks on behalf of Customer or any third party.

3.3. **Proprietary Markings.** Customer agrees to respect and not to alter, remove or conceal any patent, copyright, trademark, government restricted rights, trade name or other proprietary marking that may appear in connection with the Software or Custom Developments.

4. DELIVERY AND LICENSE KEYS

4.1. **Delivery; Updates.** Promptly after the Effective Date, LogMatrix will deliver to Customer one copy of the Software either electronically or on compact disk, at Customer's election, and related documentation. LogMatrix will also make available to Customer one copy of any Updates, if and when available, either electronically or on compact disk, pursuant to Annual Support Services.

4.2. **License Keys.** Customer acknowledges that the Software needs to be activated by identification codes. Customer will receive its license key through LogMatrix's website or FTP site using the unique license number provided to Customer in the Order Form.

5. **PAYMENT**

   5.1.   **License Fee.** In consideration of the licenses granted and Services provided under this Agreement, Customer agrees to pay LogMatrix the license and Services fees specified in each Order Form according to the payment terms therein. Concurrently with the execution of this Agreement, Customer will place a binding initial order for Software using the Order Form.

   5.2.   **Taxes.** Customer will pay all taxes (except taxes based on LogMatrix's net income) and customs duties, however designated, on amounts payable to LogMatrix.

   5.3.   **Payment.** Customer will pay LogMatrix for all Software and Services in U.S. Dollars within thirty (30) days of invoice.

6. **WARRANTY AND DISCLAIMER**

   6.1.   **Warranty.** LogMatrix warrants for thirty (30) days following delivery that: (i) the Software will operate substantially in accordance with the Specifications, provided that the Customer uses the Software in accordance with the Specifications (including without limitation recommendations for best practices in regard to Software configuration) and documentation and does not modify the Software; and (ii) the media on which the Software is delivered will be free from defects in workmanship.

   6.2.   **Sole Remedies.** In the event the Software fails to perform as warranted in Section 6.1(i) and Customer advises LogMatrix in writing of a reproducible error within the warranty period, LogMatrix will use commercially reasonable efforts to correct any defect in the Software. In the event that LogMatrix is unable to correct a defect within a reasonable time, Customer may return the Software and obtain a refund of any prepaid license fees. In the event the Software fails to perform as warranted in Section 6.1(ii), LogMatrix will replace the defective disk or other media. This Section 6.2 sets forth Customer's sole remedy, and LogMatrix's sole obligation, relating to performance of the Software and for breach of the warranties in Section 6.1.

   6.3.   **Disclaimer.** Except for the warranties in section 6.1, to the maximum extent permitted by applicable law, the software, custom developments and the services are provided by LogMatrix and its licensors without express or implied warranty of any kind, including without limitation, any warranty of merchantability, noninfringement or fitness for a particular purpose. LogMatrix specifically does not warrant that the software and/or custom developments will meet all of customer's requirements; that the operation of the software and/or custom developments will be error-free or uninterrupted; or that all errors or defects in the software will be corrected. Some jurisdictions do not allow the exclusion of implied warranties so the above exclusions may not apply to customer. This warranty gives customer specific legal rights. Customer may also have other rights that vary from jurisdiction to jurisdiction.

   6.4.   **Ultra-Hazardous Activities.** The software and/or custom developments are not designed, manufactured or intended for use in any environment in which the failure of software could lead to death, personal injury, or severe physical or environmental damage, including without limitation, in the design or operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, weapons systems or in the on-line control of equipment in any hazardous environment requiring fail-safe performance ("ultrahazardous activities"). LogMatrix and its licensors specifically disclaim any express or implied warranty of fitness for ultrahazardous activities. Customer represents and warrants that customer will not use, or allow others to use, any software or custom development for such purposes.

   6.5.   **Third Party Software and Materials.** Under no circumstances will LogMatrix, its affiliates or their respective officers, directors or employees be liable for any damages arising from Customer's use of any embedded programs, other software or materials developed or manufactured by LogMatrix licensors or other third parties, whether or not such programs, software or other materials were provided by LogMatrix hereunder. LogMatrix's only obligation to Customer will be to assign to Customer the indemnity, if any, that LogMatrix received from the third party licensor, if such indemnity is assignable. Customer is responsible for compliance with third party software license agreements.

7. LogMatrix INDEMNIFICATION.

7.1. **Indemnification.** LogMatrix will indemnify and defend Customer from any damages awarded against Customer by a court or other tribunal from which no appeal can be or is taken, or from final settlement to which LogMatrix has consented, arising out of any claim, action or suit ("Claim") that the Software infringes in the United States a patent, copyright or trade secret of any third party, provided that: (a) Customer notifies LogMatrix promptly in writing if any such Claim is threatened or brought; (b) LogMatrix has the right to assume the sole defense of such Claim with counsel selected by LogMatrix; (c) Customer cooperates in the defense or settlement of such Claim as reasonably requested by LogMatrix, at LogMatrix's expense; and (d) LogMatrix has the option at its own expense and in its sole discretion, at any time with respect to any Claim threatened or brought, or any such determination of infringement, to: (i) procure for Customer the right to continue licensing such Software; (ii) replace or modify such Software so that it is non-infringing; or (iii) terminate this Agreement as to such Software, and upon return of the Software by Customer, refund pro rata any prepaid fees for such Software, based on three-year straight-line depreciation. LogMatrix will have no liability for costs incurred or settlements made without its consent. LogMatrix will have no liability for any Claim based on modification of the Software other than by LogMatrix, the use of a superseded release of Software if the infringement would have been avoided by the use of a current release made available to Customer, or use of the Software other than ordinary use in accordance with the Specifications, documentation and this Agreement. This Section states LogMatrix's entire obligation, and Customer's sole remedy, with respect to any Claim, brought or threatened, or any such determination of infringement.

8. LIMITATION OF LIABILITY

8.1. **Limitation of Liability.** To the maximum extent permitted by applicable law, the maximum cumulative liability of Customer and LogMatrix and its licensors for damages, to the other party hereunder, regardless of the form of legal action, whether in contract or in tort, including without limitation negligence, will in no event exceed the amount of fees paid by Customer under this Agreement, and if such liability relates to particular Modules or Services, the maximum liability will be limited to the payments received by LogMatrix for the particular Software application or Services that gave rise to the liability, except that no limitation on damages will apply to losses due to Customer's breach of the license or license restrictions, Section 12.9 (Export Control) or its warranty in Section 6.4 (Ultra-Hazardous Activities), or for either party's breach of Section 11 (Confidential Information).

8.2. **No Consequential Damages.** To the maximum extent permitted by applicable law, in no event will either party or LogMatrix's licensors be liable under this agreement for special, incidental, indirect or consequential damages, including, but not limited to, loss of profits, loss of revenue, loss of use or loss of data, even if advised of the possibility thereof, or, if reasonably foreseeable, incurred by the other party or claimed against the other party by any third party, except that no such limitation on damages will apply in the event of a breach by customer of the license or license restrictions, section 12.9 (export control) or its warranty in section 6.4 (ultrahazardous activities), or for either party's breach of section 11 (confidential information).

9. SERVICES

9.1. **Services.** In connection with the implementation, support and use of the Software by Customer, LogMatrix will provide Services to Customer as applicable at the rates specified in each Order Form under the terms of this Agreement.

9.2. **Ownership of Intellectual Property.** If Customer suggests any new features, functionality or performance for the Software that LogMatrix subsequently incorporates into the Software, such suggestions will be free from any confidentiality restrictions that might otherwise be imposed upon LogMatrix pursuant to Section 11 (Confidential Information). LogMatrix will own and Customer hereby agrees to assign and assigns to LogMatrix all right, title, and interest in the copyright, patent, trade secret and all other intellectual property rights that may be conceived, reduced to practice, created or developed by LogMatrix or Customer in the performance of Services under this Agreement, including without limitation Custom Developments and such Customer suggestions.

9.3. **Future Activities.** Customer acknowledges that LogMatrix and its employees, consultants or subcontractors may from time to time perform services for others or incorporate functionality in its Software that are similar or identical to Services performed for or a Custom Development created for Customer under this Agreement. So long as no Confidential Information of Customer is disclosed, LogMatrix will not be restricted in any way from developing or providing to others software, forms, materials, methodologies, modifications or services which are similar or identical to Services performed for, or Custom Developments created for, Customer, or be restricted in its use of personnel providing Services hereunder.

9.4. **Payment for Services.** LogMatrix reserves the right to discontinue the provision of any and all Services if payment is not received in accordance with the terms of this Agreement or any Order Form.

9.5. **Reimbursement.** Customer will pay or reimburse to LogMatrix all reasonable travel, accommodation and other out-of-pocket expenses incurred by LogMatrix, its employees, consultants or subcontractors in connection with LogMatrix's provision of Professional Services under this Agreement.

9.6. **Compensation on Termination of Services.** In the event of any termination of Services prior to completion, payment will immediately be due for performance rendered up to the effective date of such termination and for non-cancelable commitments, including expenses.

10. TERM; TERMINATION

10.1. **Term.** This Agreement will be effective from the Effective Date and will continue perpetually with respect to the Software licenses unless terminated in accordance with the provisions of this Section 10.

10.2. **Termination.** Upon any material breach of this Agreement by either party, the other party will have the right to terminate this Agreement and the licenses granted hereunder effective on thirty (30) days' notice; such termination will become automatically effective unless the breaching party has cured any material breach prior to the expiration of the thirty-day period. LogMatrix will also have the right, effective on notice, to immediately terminate this Agreement and the licenses granted hereunder if Customer: (i) files a petition in bankruptcy or insolvency, or for reorganization or the appointment of a receiver or trustee, (ii) is served with an involuntary petition against it in any insolvency proceeding that is not be dismissed within sixty (60) days after filing, (iii) makes an assignment for the benefit of creditors, or (iv) breaches Sections 2 (License Grant) or 3 (License Restrictions) of this Agreement.

10.3. **Consequences.** In the event of termination of this Agreement for any reason, Customer will promptly (i) discontinue all use of the Software and Custom Developments; (ii) erase or destroy any Software and Custom Developments contained in the computer memory or data storage apparatus; (iii) return to LogMatrix or destroy all copies of the Software, Custom Developments and LogMatrix Confidential Information; and (iv) certify in writing to LogMatrix, within thirty (30) days of termination of this Agreement that Customer has complied with the foregoing.

10.4. **Survival.** Termination of this Agreement will not limit either party from pursuing other remedies available to it, including injunctive relief, nor will termination relieve Customer of its obligation to pay all fees that have accrued or are otherwise owed by Customer under any Order Form. Prepaid fees are nonrefundable unless otherwise expressly provided in this Agreement. Sections 1, 2.2 (survives for three (3) years), 6.2, 6.3, 6.4, 6.5, 8, 9.2, 9.3, 10.3, 10.4, 11 and 12 hereof will survive expiration or any termination of this Agreement.

11. CONFIDENTIAL INFORMATION

11.1. **Confidential Information.** Each party may have access to confidential information of the other party, including without limitation, Software, Custom Developments and training materials (if any), and all other information that is identified in writing as confidential at the time of disclosure ("Confidential Information"). Each party agrees that it will use Confidential Information only in the performance of this Agreement and for no other purpose, will not disclose such Confidential Information to any third party (except as required by law or to that party's attorneys, accountants or other fiduciary advisors as reasonably necessary), and will take reasonable precautions to protect the confidentiality of such Confidential Information. Such reasonable precautions will include, but not be limited to, disclosing Confidential Information only to those employees who have a need to have access solely

for the performance of this Agreement and taking measures by instruction and agreement prior to disclosure to such employees to protect against unauthorized use or disclosure.

11.2. **Exclusions.** Confidential Information will not include information that: (i) is rightfully received by the receiving party from a third party without an obligation of confidentiality; or (ii) was publicly known at the time of disclosure to receiving party or becomes publicly known through no act or omission of the receiving party. If any Confidential Information is required to be disclosed by a judicial or governmental order, the receiving party will promptly notify the disclosing party and take reasonable steps to assist in contesting such order or in protecting the disclosing party's rights prior to disclosure.

12. GENERAL

12.1. **Provision of Notice.** Any notice given hereunder will be in writing and delivered by courier service or mailed by pre-paid registered mail, return receipt requested, addressed to the other party at the address on the Signature Cover Page. Any notice so delivered will be deemed to have been received by the addressee at the time and date when actually delivered or in any event within ten (10) days after sending in the manner provided. A party's notice address may be changed at any time effective on notice.

12.2. **Assignment.** Customer may not assign this Agreement or any rights or obligations arising under this Agreement without the prior written consent of LogMatrix, such consent not to be unreasonably withheld; provided, however, that such consent shall not be required if Customer assigns to an Affiliate, unless the Affiliate is a direct competitor of LogMatrix. LogMatrix may assign this Agreement and any rights or obligations hereunder. This Agreement will be binding on the successors and permitted assigns of the parties.

12.3. **Waiver.** The failure of either party to enforce in any one or more instances any of the terms of this Agreement will not be construed as a waiver of future performance of any such term. Waiver of any term will only be deemed to have been made if expressed in writing by the party granting the waiver.

12.4. **Severability.** If any provision of this Agreement is held by a court or other tribunal of competent jurisdiction to be illegal, invalid or unenforceable, that provision will be reformed, construed and enforced to the maximum extent permissible, and the remaining provisions will remain in full force and effect.

12.5. **Governing Law.** This Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, without regard to its conflict of law principles. Subject to Section 12.6 (Arbitration), each party hereby irrevocably submits to the exclusive venue and jurisdiction of any federal or state court sitting in Boston, Massachusetts in any action, suit or proceeding brought against it by the other party under this Agreement. The UN Convention on Contracts for the International Sale of Goods does not apply.

12.6. **Arbitration.** The parties agree to submit any dispute arising under this Agreement (excluding disputes arising out of or relating to intellectual property) to binding arbitration in Boston, Massachusetts, under the then current Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with said Rules. Judgment on the award rendered by the arbitrator may be entered in any court of competent jurisdiction. Notwithstanding the foregoing, at any either party may apply for injunctive or other temporary relief without breach of this arbitration provision.

12.7. **Entire Agreement.** This Agreement constitutes the entire understanding between the parties, and supersedes all prior discussions, representations, understandings or agreements, whether oral or in writing, between the parties with respect to the subject matter of this Agreement. The terms of this Agreement will have no force or effect with respect to any claim based on the use of the Software outside the scope of the licenses and rights expressly granted herein. The preprinted provisions of Customer's purchase order will not apply, and the provisions set forth herein will prevail. In the event of any conflict between the terms of these Standard Terms and Conditions and the terms set forth on any Order Form or any other Schedule, the terms of these Standard Terms and Conditions will prevail, unless expressly provided otherwise. Any amendment to this Agreement must be in writing and signed by an authorized representative of each party.

12.8. **U.S. Government Restricted Rights.** In the event that Customer is an agency of the United States Government, or that the license granted hereunder is pursuant to a contract with either a defense or civilian agency of the United States Government, Customer agrees that the Software is provided with restricted rights. Use, duplication or disclosure by the Government is subject to the restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or the restrictions set forth in subparagraphs (c)(1) and (2) of the Commercial Computer Software Restricted Rights clause at 48 CFR 52.227-19, as applicable, or in successor provisions, as well as the limitations set forth herein. Manufacturer is LogMatrix, Inc., 67 Forest Street, Marlborough, MA 01752.

12.9. **Export Control.** Customer acknowledges that it is subject to United States laws and regulations controlling the export of technical data, computer software and other commodities and agrees not to export or allow the export or re-export of such data, software or other commodities in violation of such laws and regulations.

12.10. **Independent Contractors.** The parties to this Agreement are and will remain independent contractors. Nothing herein will be construed to create a partnership or joint venture between them, and neither will have the power or authority to bind or obligate the other in any manner not expressly set forth herein.

12.11. **Headings.** The headings used in this Agreement are for ease of reference only and will not be used to interpret any aspect of this Agreement.

12.12. **References.** All references in this Agreement to the "sale" or "purchase" of Software or Custom Developments means the granting or obtaining of certain license rights to use such software.

12.13. **Force Majeure.** Neither party shall be in default of its obligations (other than the payment of money) to the extent its performance is delayed or prevented by causes beyond its reasonable control, including without limitation, acts of God, earthquake, flood, embargo, riots, sabotage, utility or transmission disruption, failure or delay of suppliers, fire or labor disturbances.

12.14. **Press Releases; Use of Name.** LogMatrix may issue one or more press releases relating to the business relationship created by this Agreement and may use Customer's name in its general customer list in print and website materials.

Schedule B

LogMatrix Annual Support Services Policy - Standard

Provided that Customer has paid the applicable Annual Support Services fees as described on the applicable Order Form, LogMatrix will provide support for (a) the then current version of the Software enumerated in Order Forms, and (b) the immediately preceding version of such Software, but only for a period of six (6) months following the release of the then current version that is made generally available, provided that the Software is operated on a "Supported Platform." As of the Effective Date, Supported platforms are Linux, Solaris, and Windows. Such Software is referred to in this policy as the "Supported Software."

This document describes Open Service's Support Services policy, including Customer Support hours, information regarding Updates, how to open a support case, and how such cases are prioritized and escalated if necessary.

1. LogMatrix **Customer Support Center**

The LogMatrix Customer Support Center provides Customer with fast access to skilled specialists, who provide assistance answering post-installation technical questions and manage issues relating to Software use. There is no limitation on the number of calls or on the number of incidents reported.

Customer Support Center Access:

Location:	67 Forest Street, Marlborough, MA 01752
Products:	All LogMatrix Software
Telephone:	508-597-5300 or 888-886-1085 Ext 1
Email:	techsupport@logmatrix.com
Normal Business Hours:	8 AM to 8 PM Eastern time Monday through Friday, excluding LogMatrix observed holidays
After-Hours Contact:	Severity P0 & P1 Issues (defined below)

- ◆ Access to support through Pager
- ◆ LogMatrix Certified Engineer

KnowledgeBase: The LogMatrix KnowledgeBase service provides online access to known problems and resolutions and other information on general topics. Please visit the LogMatrix website at www.logmatrix.com to access the KnowledgeBase service.

Support: Support will include diagnosis and resolution of problems or performance deficiencies of the Supported Software according to the terms set forth in this Schedule B.

Remote Access: Customer will provide LogMatrix with the necessary remote access to Customer's Supported Platform so that LogMatrix may, at its option, provide remote diagnostic capability. LogMatrix does not assure performance of these Annual Support Services if such remote access is not provided by Customer when requested by LogMatrix.

Customer Efforts: Support will be provided to Customer only if, after reasonable commercial efforts, Customer is unable to diagnose and/or resolve problems or performance deficiencies of the Supported Software. Support will be provided to up to two designated LogMatrix-trained representatives of Customer.

2. Updates

Subject to the terms of this Agreement, LogMatrix will, from time to time, in its sole discretion and without obligation, make Updates to Supported Software available to Customer at no additional charge. If Customer transfers the Supported Software to a hardware and/or software platform that is not supported by LogMatrix at the time of such transfer, LogMatrix will continue to provide to Customer Updates that operate on a Supported Platform and LogMatrix will have no further obligation to fix errors that occur when the Software is run on any platform other than the Supported Platform.

3. Initiating an Incident

LogMatrix Customer Support follows a Call-back Support Model. However, when contacting LogMatrix Customer Support, Customer may at times speak immediately with a Level-1 Customer Support Engineer. For incidents having a large number of calls, Customer may be asked to log in support issues and to expect a return call.

Before logging an incident, Customer should have the following information available to help our Customer Support Engineers resolve the situation as quickly and efficiently as possible:

- Customer contact name and company

- Customer's contact phone number and email address if Customer has one

- The name and version number of the Software product Customer is using

- The type of hardware Customer is using

- The version and level of operating system(s) Customer is using

- The problem description including step by step instructions required to reproduce the problem

- The full text of any associated error messages displayed

- It is always beneficial to use a telephone near the system on which the problem can be reproduced.

- At times Customer may be asked for the product serial number also

LogMatrix uses an incident-tracking, password-protected product called TeamShare. When Customer initiates an incident, a unique reference number is generated that Customer should use to identify the incident in any future communications. This reference number will be used to track all communications and comments, and to assist with the progression and management of the incident until resolved.

4. Determining the Incident Severity and LogMatrix Response

LogMatrix will use reasonable commercial efforts to respond, as described below, to reported and verifiable errors in Supported Software so that such Software operates substantially in accordance with the applicable Specifications. Customer will be asked for an assessment of the severity of the problem at the time of the support call to assist LogMatrix in assigning a Severity code. LogMatrix recognizes five severity levels to classify support calls:

Severity P0: Critical Problem

Customer's use of the Supported Software is stopped or so severely impacted that the Customer cannot reasonably continue using the Supported Software, and there is no available workaround. LogMatrix Senior Support Engineer will contact Customer within one hour of notification during Customer Support's normal business hours and will engage development staff until an acceptable workaround is achieved, so that such Software operates substantially in accordance with the applicable Specifications.

Severity P1: High Problem

Major Supported Program features are unavailable with no acceptable workaround. Customer's use of the Supported Software is continuing but not stopped; however, there is a serious impact on the Customer's productivity and/or service levels. A LogMatrix Senior Support Engineer will contact Customer within four (4) hours of notification during Customer Support's normal business hours and will engage development staff until an acceptable workaround is achieved, so that such Software operates substantially in accordance with the applicable Specifications.

Severity P2: Medium Problem

Major Supported Software features are unavailable but a workaround is available, or optional or minor Supported Software features are unavailable with no reasonable workaround. Supported Software has minor loss of operational functionality. LogMatrix will provide initial response regarding the requested information or documentation clarification within eight (8) hours of notification during Customers Support's normal business hours and will consider a workaround, if appropriate, and Supported Software enhancements for inclusion in a subsequent Update.

Severity P3: Minimal Impact and/or Questions

Customer requests configuration or product capability information or documentation clarification regarding the Supported Software, but there is no impact on the operation of the Supported Software. Customer's use of the Supported Software is continuing and there is no work being impeded at the time. LogMatrix will provide initial response regarding the requested information or documentation clarification within five (5) days of notification during Customer Support's normal business hours.

Informational: Feature Request or Enhancement

LogMatrix is committed to producing high quality software, and is always looking at ways to improve it. Subject to Section 9.2 of the Agreement, LogMatrix encourages Customers to suggest ways in which LogMatrix can improve its products. The format for suggestions is submission of an Enhancement Request through TeamShare. A Customer Support Center representative will notify Customer upon receiving a request, and will subsequently notify Product Management.

Escalation and Workarounds

LogMatrix's escalation procedures and objectives are further described on the matrix at Section 9 of this Schedule B. LogMatrix will provide Customer with a single copy of any fix or workaround on suitable media or electronically. Customer will distribute the fix or workaround to Supported Software as necessary, and LogMatrix reserves the right to close the incident after thirty (30) days of final recommendation, if no further communications are received from Customer within that time. If in any case of a Severity P0 or Severity P1 reported and verifiable error in Supported Software, LogMatrix is unable to provide an acceptable workaround, Customer may terminate this Agreement as to such particular Software, and upon return of that portion of the Software by Customer, Open Service will refund pro rata any prepaid fees for such Software, based on three-year straight-line depreciation.

5. Annual Support Fees

Annual fees for Support Services will be as set forth in the applicable Order Form. In the event Customer acquires additional Software pursuant to this Agreement, support fees will be payable on the same terms except that the first installment will be pro-rated for the balance of the annual period such that all subsequent fees for Annual Support Services will be payable on the same anniversary date for all Software.

LogMatrix may, at its sole option, reinstate lapsed Annual Support Services in accordance with its then current policies upon payment by Customer of all accumulated Annual Support Fees for the period during which Customer did not purchase Annual Support Services.

6. Excluded Services

The following services are outside the scope of LogMatrix's Annual Support Services:

- Service for Software that has been subject to unauthorized modification by Customer.

- Service for Software for which all required support releases have not been implemented by Customer.

- Third party software, hardware or data, or from the use of hardware not meeting our minimum recommended systems requirements.

- Service that becomes necessary due to: (i) failure of computer hardware or equipment or programs not covered by this Schedule or Schedule C; or (ii) any cause or causes beyond the reasonable control of LogMatrix, including, without limitation, floods, fires, loss of electricity or other utilities, negligence of Customer or any third party, operator error, improper use of hardware or software or attempted maintenance by unauthorized persons.

- Services performed at the Customer's site unless the parties mutually agree otherwise.

7. Changes in Support

LogMatrix reserves the right in its discretion to change the terms of its Annual Support Services and to discontinue Annual Support Services for any Software or Module, effective on one hundred eighty (180) days' notice.

8. Term and Termination

The initial support period will begin on the Effective Date and continue for one (1) year ("Initial Support Period"). The Initial Support Period will automatically be renewed for successive one (1) year periods (each, a "Renewal Support Period") unless: (i) Customer provides LogMatrix with written notice of termination at least thirty (30) days prior to the end of the Initial Support Period or the then-current Renewal Support Period, as applicable; or (ii) the Agreement or Annual Support Services are otherwise terminated. Annual Support Fees for each successive Renewal Support Period will increase from the immediately prior one-year support period by no greater than any increase in the Consumer Price Index as published in the Wall Street Journal within sixty (60) days prior to the new Renewal Support Period.

9. Escalation Matrix

	P0	P1	P2	P3	Informational
1 Hour	Discussion with Senior Support Engineer				
4 Hours	Notify Customer Support Manager	Discussion with Senior Support Engineer			
8 Hours	Alert Account Manager Discussion with Development Manager Notify Director of Customer Support	Notify Customer Support Manager	Discussion with Senior Support Engineer		
2 Days	Notify Sales Manager Update status Development Manager	Alert Account Manager			
3 Days	Escalate to VP Engineering/ VP Services Notify VP Sales	Notify Development Mgr Notify Director of Customer Support Notify Sales Management			
5 Days	Report status	Escalate to VP Development/ VP Services Inform VP Services		Discussion with Senior Support Engineer	
7 Days	Report status	Report status	Contact Product Marketing		
30 Days		Report status			
90 Days		Report status		Contact Product Marketing	Contact Product Marketing

Schedule C

LogMatrix Annual Support Services Policy - Premium

In addition to the standard Annual Support Services described in Schedule B, if Customer pays the applicable Premium Support fees, Customer will receive the following Premium Support Services:

- 24 x 7 Support: Premium Support email and telephone support is provided 24 hours a day, 7 days a week, 365 days a year, including holidays. 24 x 7 service may include pager service during off peak hours. For all other issues, standard support is provided as described in Schedule B. There are no limitations on the number of calls or on the number of incidents reported.

- Annual Support Fees: Annual fees for Support Services will be as set forth in the applicable Order Form.