NuSphere™ Advantage

Installation Guide

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Contents

Installation Guide

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About This Guide

This guide explains how to install and get started using **NuSphere™ Advantage** software. This guide also explains how to install the basic Getting Started version of NuSphere MySQL.

NuSphere software is a multi-platform integrated distribution of Apache, Perl, PHP, and MySQL—the most popular open source database available—on Linux and Windows platforms.

NuSphere MySQL Advantage and **NuSphere Professional Advantage** include **Enhanced MySQL**, UNIX platform support, plus extra tools and components not available in the standard Getting Started version. Throughout this guide, components, concepts, and procedures relevant only to **NuSphere Advantage** products are indicated by the Advantage logo shown to the left of this paragraph.

NuSphere Corporation provides enhanced open source software and commercial services for creating database-driven Web sites and applications. NuSphere Advantage with Enhanced MySQL provides a complete back-to-front solution for creating and deploying your Web site.

For more information, please visit the NuSphere Web site at http://www.nusphere.com.

About NuSphere Packages

NuSphere software is available in five packages:

- Free download
- NuSphere MySQL Getting Started
- NuSphere MySQL Advantage
- NuSphere PHPEd Advantage
- NuSphere Professional Advantage

The primary differences between the packages are:

- The free download and NuSphere MySQL Getting Started packages are the most basic bundles.

- NuSphere MySQL Advantage includes Enhanced MySQL with GEMINI table support, but not the PHPEd script editor/debugger.

- NuSphere PHPEd Advantage includes the PHPEd script editor/debugger, but not GEMINI table support.

- NuSphere Professional Advantage includes all extra tools, including Enhanced MySQL with GEMINI table support and the PHPEd script editor/debugger.

The following table synopsizes the features of the five NuSphere packages.

	Free Download	Nusphere MySQL Getting Started	NuSphere MySQL Advantage	NuSphere PHPEd Advantage	NuSphere Professional Advantage
Linux	X	X	X	X	X
Win32	X	X	X	X	X
Solaris	X	X	X	X	X
RPM		X	X	X	X
ProApps			X	X	X
Sample Apps	X	X	X	X	X
HTDig			X	X	X
PHPWeb-site			X	X	X
Access Manager for Apache			X	X	X
Gemini			X		X
PHPEd				Win32	Win32

Throughout this guide, **NuSphere Advantage** is used to refer generically to all three Advantage packages.

See later in this guide for explanations of the various package features.

About NuSphere Advantage

NuSphere Advantage is an open source Web development platform built from the same best-of-breed components, Enhanced MySQL, Apache, Perl and PHP, that drive the Internet today. This core set of technologies is tightly integrated to provide professional developers the stability needed to build web-based, database-driven solutions, today.

Enhanced MySQL includes the latest commercial release of GEMINI, the MySQL table type designed by NuSphere to provide all the functionality required for highly granular, transaction-intensive database applications.

GEMINI integrates seamlessly into MySQL resulting in the performance, scalability and reliability required by the most demanding applications. With automatic crash recovery, failover clusters, table and site replication, and flexible backup solutions, you can now use MySQL to develop all your business applications.

NuSphere Advantage Features and Components

The table below highlights the key features and components implemented in NuSphere Advantage.

NuSphere Advantage Features	
Feature/Component	*Description*
Enhanced MySQL	Latest version of MySQL, enhanced with GEMINI tables and other features
Apache with SSL Support	Latest version of the most robust, most widely used Web server software in the world today
MyODBC Driver	Latest version of driver for connecting ODBC-aware applications with MySQL
MM.MySQL.JDBC Driver	Latest version of driver for connecting Java applications with MySQL
Perl	Latest version of the Perl programming language
PHP	Latest version of PHP scripting language
PHPEd	PHP script development and debugging environment for Win32
phpWebSite Portal	Complete cross-platform, open-source integrated Web site development tool for getting sophisticated database-driven Web sites up and running quickly
Access Manager for Apache	Custom NuSphere application for administering authentication and security on Apache Web servers

NuSphere Advantage Features *(continued)*	
Feature/Component	*Description*
ht://Dig Web Site Search Engine	Robust, cross-platform, open-source search engine for your Web site
HtDig-Config	Browser-based configuration tool for ht://Dig
Webmin	Browser-based Linux/UNIX system administration tool
Bugzilla Bug Tracking Software	Database for bugs that lets users report software glitches and now supports the Windows environment
IRM	Web-based asset tracking system built for IT departments and HelpDesks
Encryption Support for MySQL on Windows	Lets you write queries that return encrypted values for security-conscious MySQL applications on Windows
Sendmail for Windows	Windows utility that mimics Linux/UNIX sendmail; lets you write Perl programs with embedded email functions that are portable between Windows and *nix platforms
Comprehensive Printed Documentation	The only commercially printed version of the complete, indexed *MySQL Reference Manual*, as well as copies of O'Reilly & Associates *Apache Pocket Reference*, *Perl 5 Pocket Reference*, and *PHP Pocket Reference*
Automatic Quarterly Updates	Automatic patch and tool updates; each update CD includes a complete professional application

NuSphere Advantage Features *(continued)*	
Feature/Component	**Description**
Technical Support	30 days web and email-based technical support for MySQL
Installation support	Full year of installation support

See the *NuSphere Advantage User's Guide* for information about using Advantage applications. This file is linked by default from the NuSphere Admin site (`http://localhost:9000`) Documentation page.

Supported Platforms

NuSphere Advantage runs on the following platforms:

- Redhat Linux 6.2 and higher on IA32
- Sun Solaris 2.6 on SPARC III
- Windows 95/98/NT/2000

About the Getting Started Package

The NuSphere MySQL Getting Started package is an entry-level version of NuSphere software and, while stable and robust, does *not* include many of the features, enhancements, and additional components included in NuSphere Advantage.

The NuSphere Getting Started package includes the following items:

- **NuSphere CD-ROM** – MySQL, Apache with SSL support, MyODBC Driver, MM.MySQL.JDBC Driver, Perl, PHP, Webmin Linux system administration tool, a Windows-compatible sendmail service, and a sample Web site with two sample applications.

- *MySQL Reference Manual* **in printed form** – The only commercially available printed version of the MySQL Reference manual; includes the latest copyedits from contributors around the world, and an updated index

- *Apache Pocket Reference*

- *Perl 5 Pocket Reference*

- *PHP Pocket Reference*

Supported Platforms

NuSphere MySQL Getting Started is currently supported on the following platforms:

- Redhat Linux 6.2 and higher on IA32
- Sun Solaris 2.6 on SPARC III
- Windows 95/98/NT/2000

Before You Install

Before you install any version of NuSphere software, it is recommended that you read the following documents for additional installation information and descriptions of known issues:

- **Release Notes** – The RELNOTES.TXT (DOS/Windows format) and RELNOTES (Linux/UNIX format) files contain last-minute installation and troubleshooting information.

- **Readme File** – The README.TXT (DOS/Windows format) and README (Linux/UNIX format) files contain additional information about the contents of the NuSphere CD.

- **Installation Guide** – This Installation guide is also available in HTML format on the NuSphere CD in the advantage_install.html file.

The NuSphere installation uses a browser-based interface. You need to have a browser on your machine to run it. If you want to run setup on a Linux/UNIX machine that does not have access to a browser, you can perform the installation remotely on any Linux/UNIX, Windows, or Macintosh machine with a browser, using the instructions provided in "Performing a Remote Install" on page 23.

About NuSphere Installation

By default, all versions of NuSphere install the following components:

- MySQL
- MyODBC
- MM.MySQL.JDBC
- Perl
- Apache with SSL support
- PHP
- phpMyAdmin Data Dictionary
- Webmin (when installation run as root on Linux/ UNIX systems only)
- Windows-compatible sendmail service (page 48)
- Admin Web site with two sample applications

Additional Advantage Components

In addition to the common components, NuSphere Advantage installs the following components:

- Enhanced MySQL with GEMINI tables
- PHPEd scripting environment and debugger (Windows only)
- phpWebSite Portal
- Access Manager for Apache
- ht://Dig Web site search engine
- HtDig-Config configuration tool
- Advantage "professional" applications (page 37)

Note: *The specific components installed may vary depending on the Advantage package you are using.*

Component Integration

The NuSphere installation integrates all of these components—resolving dependency issues, upgrading existing installations, configuring and starting components—automatically under a single browser-based interface.

Installation Directories

Rather than scattering installed components across your disks in multiple directories, the NuSphere installation puts everything under one common root directory. When run as root, the installation program installs all components by default in `/usr/local/nusphere` (Linux/UNIX) or `C:\Program Files\NuSphere` (Windows). When run as a normal user, the default installation directory is `$HOME/nusphere`. In both cases, you can specify a different directory if you prefer.

The specific components installed and methods used to install them depend on the NuSphere installation options you choose. These options are described in the next section.

Installation Options

There are three types of installation available for NuSphere software. The specific options available and components installed vary depending on whether you perform the installation as a root or non-root user.

Option	Platforms	Users	Description
Quick	All	root, non-root	Installs all NuSphere components. See "Performing a Quick Install" on page 17.
Custom	All	root, non-root	Lets you install only selected components. See "Performing a Custom Install" on page 19.
RPM	Red Hat Linux only	root only	Lets you install only selected components, similar to the Custom option, but installs them using the RPM tool. The RPMs may also be installed directly using rpm -i or another RPM installation tool. See "Performing an RPM Install" on page 21.

Each of these options can be performed remotely by logging into the machine on which you want to install the packages, starting the setup script, and then running the installation from a browser on the remote machine. See "Performing a Remote Install" on page 23 for more information.

Which Installation Option Should I Choose?

Most users will want to choose either the Quick or Custom installation option. These options provide the greatest convenience and quickest configuration. For example, the NuSphere installation scripts automatically resolve package dependencies and install components in the correct order.

The RPM installation is useful for people running Red Hat Linux who are comfortable with the Red Hat RPM tools and want to integrate their NuSphere installation with other applications registered in their RPM database. For example, if you install some third-party RPM that requires MySQL, the RPM package manager will determine that the NuSphere MySQL RPM satisfies this requirement and successfully install the third-party RPM.

The following table lists some considerations to help you choose between RPM and non-RPM installation.

Function	Quick/Custom	RPM
Check whether parent component is being installed or is previously installed in the NuSphere installation directory	Yes	Yes
Check whether parent NuSphere RPM component is being installed or is previously installed anywhere on system	No	Yes
Check for conflicts with other installed RPMs	No	Yes
Allow files to be located in user defined directory	Yes	Yes
Allow multiple installations of NuSphere on same system	Yes	No

Performing a Quick Install

The easiest way to get NuSphere up and running as quickly as possible is by using the Quick Install option.

To perform a Linux/UNIX Quick Install

Note: *If you want to install the Webmin tool, you need to log in as root before running the NuSphere installation.*

1. Load and mount the NuSphere CD-ROM.

A browser is launched, and the NuSphere installation program starts automatically.

If the installation program does not start automatically, change the working directory to the CD-ROM directory and run `./setup`

2. Click Install.

3. Click Quick Install.

When run as root, the installation program installs all components by default in `/usr/local/nusphere`. When run as a normal user, the default installation directory is `$HOME/nusphere`. In both cases, you can specify a different directory if you prefer.

4. **When the installation is complete, follow the onscreen instructions to exit the installation program and launch the NuSphere components.**

To perform a Windows Quick Install

1. **Insert the CD in the CD-ROM drive.**

A browser is launched, and the installation program starts automatically.

If your Windows autorun setting is turned off, choose Start>Run, browse to the CD-ROM drive, select the `setup.exe` file, and choose OK.

2. **Click Install.**

3. **Click Quick Install.**

The installation program installs all components by default in `C:\Program Files\NuSphere`.

4. **When the installation is complete, follow the onscreen instructions to exit the installation program and launch the NuSphere components.**

Performing a Custom Install

The Custom Install option lets you choose specific components to install.

To perform a Linux/UNIX Custom Install

Note: *If you want to install the Webmin tool, you need to log in as root before running the NuSphere installation.*

1 . Load and mount the NuSphere CD-ROM.

A browser is launched, and the NuSphere installation program starts automatically.

If the installation program does not start automatically, change the working directory to the CD-ROM directory and run `./setup`

2 . Click Install, and then click Custom Install.

3 . Choose the components you want to install, and then click Install.

When run as root, the installation program installs all components by default in `/usr/local/ nusphere`. When run as a normal user, the default installation directory is `$HOME/nusphere`. In both cases, you can specify a different directory if you prefer.

4 . When the installation is complete, follow the onscreen instructions to exit the installation program and launch the NuSphere components.

Windows Installation

1 . Insert the CD in the CD-ROM drive.

A browser is launched, and the installation program starts automatically.

If your Windows autorun setting is turned off, choose Start>Run, browse to the CD-ROM drive, select the setup.exe file, and choose OK.

2 . Click Install.

3 . Click Custom Install.

4 . Choose the components you want to install, and then click Install.

The components are installed by default in C:\Program Files\NuSphere.

5 . When the installation is complete, follow the onscreen instructions to exit the installation program and launch the NuSphere components.

Performing an RPM Install

RPM installation can be performed on Red Hat Linux systems using NuSphere RPMs through a browser-based interface, or directly from the command line using `rpm -i` or another generic RPM tool.

To perform a browser-based RPM installation

Note: *The RPM Install option is only available when the NuSphere installation program is run as root on Red Hat Linux systems.*

1. Load and mount the NuSphere CD-ROM.

A browser is launched, and the NuSphere installation program starts automatically.

If the installation program does not start automatically, change the working directory to the CD-ROM directory and run `./setup`

2. Click Install.

3. Click RPM Install.

4. Select the components you want to install, and then click Install.

5. **When the installation is complete, follow the onscreen instructions to exit the installation program and launch the NuSphere components.**

To perform a command-line-based RPM installation

Note: *The RPM packages are compatible with Red Hat Linux systems only.*

1. **Load and mount the NuSphere CD-ROM.**

Exit the installation program if it started automatically.

2. **Change to the directory containing the NuSphere RPM packages:**

/mnt/cdrom/Linux/RPMS

3. **Start your RPM tool, and choose the components you want to install.**

Performing a Remote Install

The NuSphere installation program is a browser-based tool that lets you run the installation from any Linux/UNIX, Windows, or Macintosh machine configured with a Web browser.

If the Linux/UNIX or Windows machine on which you want to install NuSphere is not configured with a browser, you can still perform a browser-based installation from a remote machine.

To perform a remote installation

1. **Mount the NuSphere CD-ROM on the target machine on which you want to install NuSphere software.**

2. **Open a command-line shell (for example, telnet, rlogin, ssh2, character console) on the machine from which you want to perform the installation.**

3. **Log in as root, if desired.**

4. **Change to the** /mnt/cdrom **directory on the target machine and launch the** ./setup **script.**

5 . **You are prompted to open a browser with the URL:**

```
http://<target_machine>:4001
```

6 . **Follow the installation steps provided earlier in this guide.**

7 . **When the installation is complete, press Ctrl+D in your command shell to exit the** setup **script.**

Starting on Linux/UNIX

You can start NuSphere by:

- Using the Quick Start option from the final page of the install script
- Entering commands at the command line
- Opening the user menu in the GNOME or KDE Window Managers (Linux only)

Using Quick Start

The Quick Start program automatically starts the NuSphere servers and opens a browser so you can view the Admin Web site. To run Quick Start, click the Quick Start button on the last page of the install script.

To open the Admin Site later, use the following URL:

```
http://<hostname>:9000
```

Note that if you ran the installation as root, you must be root access this URL.

Using the Command Line

If you installed the scripts into a shared directory on your `$PATH`, use the following commands to start the NuSphere servers:

```
apachectl start | startssl
```

`start` starts the Apache Server in non-SSL mode; `startssl` starts the Apache Server in SSL mode.

```
mysql.server start (starts the MySQL Server)
```

To view the Apache server, point your browser to:

```
http://servername:PORT
```

For example: `http://localhost:8080`

To start the Webmin tool, which opens the Admin Web site, use the following command:

```
webmin start
```

To access the Webmin tool, point your browser to:

```
http://servername:10000
```

For example: `http://localhost:10000`

Using the NuSphere User Menu (Linux Only)

If you use the GNOME or KDE user interface on a Linux machine, you can start the NuSphere services through the user menu.

The NuSphere menu option is under the Favorites menu for the GNOME Windows Manager; it is under the Personal menu for the KDE Windows Manager.

You can start and stop all servers through the "Start NuSphere Admin Site" and "Stop NuSphere Admin Site" options, respectively. To start or stop servers for any of the individual NuSphere components (Apache, MySQL, or Webmin), select the appropriate option.

Starting on Windows

You can start NuSphere using the Quick Start option from the final page of the install script or by using the Windows Start Menu.

If you are running NuSphere Advantage on a Windows 95 or Windows 98 system, be sure to read the instructions in "PHPEd Notes" on page 50 before running PHPEd for the first time.

Using Quick Start

The Quick Start program automatically starts the NuSphere servers and opens a browser so you can view the Admin Web site.

To run Quick Start, choose the Quick Start link on the last page of the install script.

To open the Admin Site later, use the following URL:

```
http://<hostname>:9000
```

Using the Windows Start Menu

On Windows NT/2000, you can install the NuSphere Servers as services. If you did not install these servers as services when you ran the NuSphere installation

program, you can do so manually by following the steps below.

To install Apache and MySQL as services

1. **Select Start>Programs>NuSphere>Apache - Install Service.**

2. **Select Start>Programs>NuSphere>MySQL - Install Service.**

3. **To start the services manually, choose Start>Programs>NuSphere>Apache – Start Server or MySQL – Start Server.**

To start the services automatically at startup

1. **Select Start>Settings>Control Panel.**

2. **Select Services.**

3. **Choose the Apache and MySQL services.**

4. **Choose the Start button.**

   The services start automatically every time you reboot your machine.

Running System Test Applications

The following table describes the system test applications that install with NuSphere and that are accessible from the Admin Site.

Test Application	*Description*
testform.htm	A test form to start a CGI program
hellocgi.pl	A simple "hello world" CGI sample script
cgisamp.pl	A simple GCI sample script that uses the CGI.pm module
mod_perl_test.pl	A simple script that tests the mod_perl functionality
testenv.php	A PHPInfo() script that displays PHP environment and operating parameters

Running Administrative Applications

The following table describes the Administrative applications that install with NuSphere and are accessible from the NuSphere Admin Site.

Admin. Application	Description
phpMyAdmin	MySQL Data Dictionary written in PHP
Webmin	Browser-based system administration tool (Linux/UNIX only)

The Advantage distribution by default also includes the following three applications.

Admin. Application	Description
Access Manager for Apache	Broser-based authentication and security administration tool for Apache Web servers
HtDig-Config	Browser-based configuration tool for the ht://Dig Web site search engine
PHPEd	Windows-only PHP script editor with integrated debugger

Please refer to the *NuSphere Advantage User's Guide* for information about using the Advantage adminstrative applications.

Running Sample Applications

The following table describes the sample applications that are installed with NuSphere and are accessible from the NuSphere Admin Site.

Sample Application	*Description*
Shopping cart	A sample shopping cart written in PHP that uses the MySQL database.
	See the README file in the *apps/ shopcart* directory for more information.
MRB	A Meeting Room Booking System written in PHP that uses the MySQL database.
	See the README file in the *apps/mrbs* directory for more information.

Setting Up a New MySQL Database

One of the first things you will probably want to do after installing NuSphere is to create a database and specify the users who are allowed to access it. This is a relatively complex topic that is beyond the scope of this guide, but briefly, the general steps are as follows:

1 . Create and select a new MySQL database.

The easiest way to do this is through the NuSphere interface using the phpMyAdmin tool, which is available from the NuSphere Administration page.

Alternatively, you can create a database from the MySQL command line with the `CREATE DATABASE <database>` command. To select the database and make it active, use the `USE <database>` command.

2 . Create one or more tables within the database.

Again, the easiest way to do this is through the phpMyAdmin tool, but if you prefer, you can also use the MySQL command line:

```
CREATE TABLE <tablename> (column_specs)
```

3. The final step is to define users and their access privileges to the database.

The easiest way to do this is from the MySQL command line, using the GRANT command. The GRANT command lets you define restrictions based on any combination of user name, IP address, machine name, and/or individual databases; for example:

```
GRANT SELECT ON BUGS.* to joe@work
```

Allows the user joe on system work to have select access to all the tables on the database bugs.

```
GRANT ALL PRIVILEGES ON BUGS.* to joe@localhost
```

Allows the user joe on this computer to have all privileges to access all the tables on the database bugs.

```
GRANT ALL PRIVILEGES ON BUGS.* to joe@192.168.1.6
```

Allows the user joe on the computer whose IP address is 192.168.1.6 to have all privileges to all tables of the database bugs.

```
GRANT ALL PRIVILEGES ON BUGS.PROFILES to
joe
```

Allows the user joe to have all privileges on the profiles table of the database bugs from any computer.

Please see the GRANT section of the MySQL documentation or refer to the *MySQL Reference Manual* for detailed instructions.

Configuring the Apache Web Server

After the NuSphere installation is complete, and your Apache Web server is up and running, you will want to add your own pages and scripts to the Apache server directories.

The table below lists the locations you should use for HTML pages, PHP scripts, CGI Perl scripts, and mod_perl scripts.

File Type	Apache Directory
HTML pages	Any directory in or below *<installdir>*/apache/htdocs
PHP scripts	Any directory in or below *<installdir>*/apache/htdocs; note that PHP scripts should be named with a .php or .php3 extension
CGI Perl scripts	Any directory in or below *<installdir>*/apache/cgi-bin
mod_perl scripts	Any directory in or below *<installdir>*/apache/perl-bin

Using NuSphere Advantage Applications

By default, the NuSphere Advantage installation copies one or more additional "professional" applications to your disk. The specific applications may vary according to the version of NuSphere Advantage you are using.

These applications are only **copied** to your disk during NuSphere installation. To use these applications, you must **install** them first, as described later in this section.

The NuSphere installer provides a simple way to get these applications up and running quickly, without any significant knowledge of Apache, MySQL, Perl, or PHP.

Note: *See the NuSphere Advantage User's Guide for more detailed information about using the NuSphere Advantage applications. This file is linked by default from the NuSphere Admin Web site (`http://localhost:9000`) Documentation page.*

Prerequisites for Using the Professional Applications

The professional applications are included with the NuSphere Advantage distribution only, and are not included with either the download or Getting Started distribution of NuSphere.

In addition, the professional applications require that you:

- Have at least version 2.0 of NuSphere installed
- Install the NuSphere Admin Site (includes Apache, MySQL, and Perl)
- Meet any other requirements of the individual applications.

Please also note that these applications are not supported by NuSphere. Please contact the application authors or support newsgroups if you have any application-specific issues.

To install professional applications

1. Start NuSphere, if it is not running already.

2. From the NuSphere main screen, click Install Prof. Apps.

3. Specify the directory in which you want to install the applications, and then click Submit.

4. Select the application you want to install, and then click Install.

5. Select the specific application options you want to use, and then click Submit.

   The application options vary depending on the application you are installing.

Note: *You can only install one application at a time. To install additional applications, repeat the above steps.*

To uninstall professional applications

- Refer to the installation log (`<rootdir>/nusphere/logs/pro_app_install.log`), and reverse the installation steps.

Accessing Online Documents

The following table lists the online documentation provided by NuSphere that can be accessed from the Admin Site.

Document Name	Description
NuSphere Advantage Installation Guide	Current document
NuSphere Advantage User's Guide	Documentation for NuSphere Advantage compents such as Access Manager for Apache, PHPWebisite, and ht://Dig
MySQL	MySQL documentation
MM.MySQL.JDBC	MM.MySQL.JDBC documentation
Perl	Perl documentation
Apache	Apache documentation
MOD_SSL Guide	MOD_SSL Quick Start Guide
MOD_ssl doc	MOD_SSL documentation
PHP	PHP documentation
PhpMyAdmin	PhpMyAdmin documentation
WEBMIN	Access WEBMIN documentation from WEBMIN

Uninstalling NuSphere

Linux/UNIX Systems

To uninstall all NuSphere components, run:

    <installdir>/uninstall.sh

For example:

    /usr/local/nusphere/uninstall.sh

Note: *If you ran the NuSphere* ./setup *script as root, you must also run* uninstall.sh *as root.*

On Linux, if you use the KDE or GNOME Windows Manager, you can also use the *NuSphere>UnInstall NuSphere* option from the user menu.

Alternatively, you can uninstall individual components by passing the name of the component you want to remove to the uninstall.sh script; for example:

    /usr/local/nusphere/uninstall.sh apache
    /usr/local/nusphere/uninstall.sh php

Windows Systems

To uninstall NuSphere for Windows, choose Programs>NuSphere>UnInstall from the Windows Start menu.

Post-Installation Application Notes

The following sections provide important post-installation information.

Tool Note	Page
MySQL Notes	43
MyODBC Notes	44
MM.MySQL.JDBC Notes	44
Apache Notes	45
Webmin Notes	46
phpMyAdmin Notes	47
PHP Notes	48
Perl Notes	48
Sendmail for Windows Notes	48
phpWebSite Notes	50
PHPEd Notes	50

MySQL Notes

The following notes apply to the MySQL Server.

- It is recommended that you set a root password for MySQL. See the "Setting Up the Initial MySQL Privileges" section of the *MySQL Reference* manual for more information.

- If you want to add other users to MySQL, see the "Adding New User Privileges to MySQL" section of the *MySQL Reference* manual.

- Start the server by using `mysql.server start` either from the *shareddir* directory (if you selected a shared directory during the installation) or from *installdir*/mysql/support-files/mysql.server.

- (NT only) MySQL cannot run more than one server at a time on NT, even if you change the port number. This is because the MySQL shutdown uses a named event on NT which all MySQL servers catch at the same time.

- As of the 1.13.7 version of NuSphere MySQL, the MySQL `encrypt()` function works in Windows just as it does in Linux/UNIX. In previous versions of MySQL—from NuSphere or any other vendor—the `encrypt()` function returns a NULL rather than an encrypted string.

MyODBC Notes

The following notes apply to the MyODBC driver.

- As part of the installation, the MyODBC driver is installed and a sample System DSN is created and configured for your MySQL server. By default, the driver accesses the empty test database.

- There are no sample applications installed to demonstrate the MyODBC driver, but you can connect an ODBC client to the System DSN and access the data.

- If you change the port of the MySQL server after installation, you need to reconfigure the sample DSN.

MM.MySQL.JDBC Notes

The following notes apply to the MM.MYSQL.JDBC Server.

- To use MM.MYSQL.JDBC, JDK1.1 or a compatible Java development kit and a MySQL server must be running on machines that can be accessed from the host where you are running MM.MYSQL.

- The directory test suite under `mm_mysql_jdbc` contains a suite of Java classes that use jdbc drivers

to connect to MySQL databases for running SQL statements. These classes use the file mm_mysql_jdbc/jdbc.ini to retrieve the host, port, and database name. If you want to use a different database, you must change these settings to point to the database you want to use.

Apache Notes

The following notes apply to the Apache Server.

- Unless you specified an alternate port that is greater than 1024, you must start the Apache server as root regardless of the UID under which it was installed (Linux/UNIX only).

- Start the server by using `apachectl start` (non-SSL mode) or `apachectl sslstart` (SSL mode) either from the *shareddir* directory (if you selected a shared directory during the installation) or from *installdir*/apache/bin/apachectl (Linux/UNIX only).

- The Apache server supplied with NuSphere includes SSL support. You can start the server in normal (non-secure) mode, or secure SSL mode. So that you can test the secure mode, a test Digital Certificate is created as part of the installation. However, you must obtain a permanent certificate

from a recognized Certificate Authority before
using the server in production.

- The Apache installation includes `mod_php4` (Linux/
  UNIX only), CGI PHP (Windows only), and
  `mod_perl` (all platforms).

- To run Apache on Windows 95, you must have
  Winsock2 installed. If you get an error message
  that states "`A required WS2_32.dll is missing`"
  then you need to install Winsock2 from the
  following URL:

  ```
  http://www.microsoft.com/windows95/
  downloads/contents/WUAdminTools/
  S_WUNetworkingTools/W95Sockets2/
  Default.asp
  ```

Webmin Notes

The following notes apply to the Webmin tool (Linux/
UNIX only).

- The setup for Webmin was changed to be non-
  interactive for the Quick Start program. As a result,
  some information might not be correct.

- You might want to untar the Webmin source files
  and then run the `setup.sh` yourself.

- Under the Custom Install program, you can choose
  to specify that Webmin automatically starts at
  startup time.

- To start or stop Webmin, use the following command syntax:
  installdir/webmin/bin/webmin {start | stop}
- The initial admin login has no password. For more information on changing usernames and passwords, see the Webmin online documentation.
- If you run Webmin under Apache:
  - It requires that you run the Server as root (which is not always a good idea)
  - You lose access to the "Webmin Users" and "Webmin Configuration" modules

  For more information on configuring Webmin for Apache, go to: http://www.webmin.com/ webmin/apache.html

phpMyAdmin Notes

The following notes concern the phpMyAdmin Data Dictionary.

- It is recommended that you set advanced auth for phpMyAdmin.
- If you set a root password for MySQL (recommended), you need to either set that password or change the user/password combination in config.inc.php.

PHP Notes

The alternate PHP modules for IMAP, LDAP, XML, GETTEXT, PGSQL, READLINE, SYSVSEM, SYSVSHM are installed but are not activated on Win32 systems.

On Linux systems, the NuSphere installation script locates any available PHP modules, and activates them by uncommenting the appropriate ldap.so, imap.so, and xml lines in your *installdir*/apache/php/php.ini file.

Perl Notes

If Perl is not installed in a shared directory, you can access it from *installdir*/perl/bin/perl.

Sendmail for Windows Notes

Microsoft Windows does not provide a sendmail-compliant interface for sending email from Perl applications. To resolve this problem, this NuSphere distribution includes a Windows-compatible version of the sendmail service.

You are given the option to install this Windows-compatible version of sendmail when running the NuSphere installer in any of the browser-based modes (Quick, Custom, RPM).

During the sendmail installation, you should be prepared to provide the name of an available SMTP service and a suitable "from:" email address. If this information is not available at installation time, you can modify the sendmail.ini file later.

The sendmail executable and sendmail.ini file are always installed in
<installdir>\nusphere\sendmail. The default sendmail.ini file contains lines using the following syntax:

```
Mail Server Name: smtp.mymailserver.net
From: me@nusphere.com
```

The following is an example of the Windows-compatible NuSphere sendmail service used in a Perl script:

```
$sendmail = "<install_dir>/nusphere/
sendmail/sendmail";
open (MAIL, "| $sendmail -t ") ;
print MAIL "To: you\@nusphere.com \n";
print MAIL "From: me\@nusphere.com \n";
print MAIL "Subject: Testing my sendmail
\n";
print MAIL "Testing 1 2 3 \n";
close (MAIL);
```

phpWebSite Notes

By default, phpWebSite is installed into its own subdirectory under your main Apache server `DocumentRoot`. The NuSphere installation provides access to that subdirectory from the main server without changing the default `DocumentRoot` by including a special `index.html` file in your `DocumentRoot` which redirects you to the phpWebSite directory.

With this configuration, when you access your server root directory at `http://localhost`, you see your new phpWebSite Portal without having to enter the full path to it (`http://localhost/phpwebsite-0.7.6`).

Depending on your needs, you may want to change the main server's `DocumentRoot` to point directly to the phpWebSite subdirectory.

PHPEd Notes

If you are using NuSphere Advantage on a Windows 95 or Windows 98 system, you may need to install the Microsoft DCOM update before starting PHPEd for the first time.

NuSphere provides a copy of the DCOM update in the `\Win32\system` directory on the NuSphere CD.

To install the DCOM update

1. **Use the Start->Run command or Windows Explorer to launch the DCOM installer.**

   a) For Windows 95 systems, use
      `\Win32\system\dcom95.exe`.

   b) For Windows 98 systems, use
      `\Win32\system\dcom98.exe`.

   The Windows update utility determines whether your system requires the DCOM update, and automatically installs it if necessary.

2. **If you are running Windows 95 first edition only, you will also need to run the `comctl32.dll` updater:**

   `\Win32\system\401comup.exe`

   This installer updates `comctl32.dll` to version 4.71.

Contacting NuSphere

Registration

The final page of the install program provides a link to register on the NuSphere Web site. This involves filling out a simple form with your contact information.

By registering with NuSphere, you will receive more detailed information and updates on NuSphere activities.

If you have not already done so, you can register with NuSphere at: `http://www.nusphere.com/cgi-bin/nsp.cgi/custsrvc/register_new.htm`

Technical Support

Take advantage of our phone, email and Web-based support options. Whatever level of service you need, our support contracts have you covered. With all support contracts you have access to Web and email-based support as well as quarterly CD updates. Through Support Online (`http://www.nusphere.com/services/support_online.htm`) and email (`support@nusphere.com`), you will interact directly with the NuSphere technical support team.

Your Comments

In the open source spirit, we hope you will provide us with your impressions and ideas for improving NuSphere software.

Please send us email at: `feedback@nusphere.com`