Novell
NetWare® Migration Wizard

7.0

ADMINISTRATION GUIDE

Novell®

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Contents

About This Guide

This guide describes how to use the Novell® NetWare® Migration Wizard to copy data from one NetWare server to another NetWare server in your network. The guide is intended for network administrators and is divided into the following sections:

Additional Documentation

The entire NetWare 6.5 documentation set is available online at the Novell NetWare 6.5 Product Documentation Web site (http://www.novell.com/documentation/lg/nw65).

Novell Education offers a variety of courses that help you maximize your investment in NetWare. For course descriptions, details, and locations of training events, visit the Novell Education Web site (http://www.novell.com/education/netware6).

Documentation Updates

For the most recent version of the *NetWare Migration Wizard 7.0 Administration Guide*, see the NetWare Migration Wizard 7.0 online documentation (http://www.novell.com/documentation/lg/migwiz70/index.html).

Documentation Conventions

In this documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as UNIX*, should use forward slashes as required by your software.

1 Overview

Novell® NetWare® Migration Wizard lets you copy data from one NetWare server to another NetWare server in your network.

Migrating Data from NetWare 5 or 6—Migration Wizard migrates the file system and NDS database from a NetWare 5, NetWare 6, or NetWare 6.5 source server to a faster, more reliable NetWare 6 or NetWare 6.5 destination server. After NDS is migrated, the destination server replaces and assumes the identity of the source server on the network.

Valid destination servers must be running NetWare 6.0 or 6.5 if migrating from a NetWare 5 source server. If migrating from NetWare 6, valid destination servers must be running NetWare 6. Migrations from NetWare 6 to NetWare 6.5 can be accomplished in one of two ways:

- Migrate from a NetWare 6.0 source server to a NetWare 6.0 destination server, then upgrade the destination server to NetWare 6.5 with either an in-place or remote upgrade.

- Upgrade the NetWare 6.0 source server to NetWare 6.5 with either an in-place or remote upgrade, then migrate the upgraded NetWare 6.5 source server to a NetWare 6.5 destination server.

IMPORTANT: To perform a migration from a NetWare 3 or NetWare 4 source server, or to perform a migration to a NetWare 5 destination server, use the Migration Wizard Utility version 6.5.

What's New

Migration Wizard 7.0 has been updated with the following new features:

- Migration Wizard 7.0 speeds up the file copy procedure by implementing multi-threading in determining file sizes while the file copy is running.

  In previous versions of the Migration Wizard, the file copy procedure does not begin until the file sizes are completely discovered. With Migration Wizard 7.0, the copy procedure and the file size determination occur simultaneously.

- The transfer of NICI keys during the migration can now be accomplished across the wire with Migration Wizard 7.0.

  Previous versions of the Migration Wizard required using a floppy diskette swap to transfer NICI keys. Migration Wizard 7.0 still provides the option of using the floppy diskette swap if wanted, but now the transfer can be completed quickly and securely over the wire instead.

- Migration Wizard 7.0 now displays a listing of created folders, dropped volumes, and dropped folders during the verification stage of the migration.

- Migration Wizard 7.0 now has the ability to update ZENworks® for Servers information during the migration process.

2 Migrating Data from NetWare 5 or 6

When you migrate data from a NetWare® 5 or NetWare 6 source server to a NetWare destination server, Novell® NetWare Migration Wizard 7.0 copies the file system and NDS® database from the source server to the newly installed NetWare destination server.

After the source server's file system and NDS database is migrated to the destination server, the source server is automatically brought down and the destination server reboots and assumes the name and identity of the source server on your existing network.
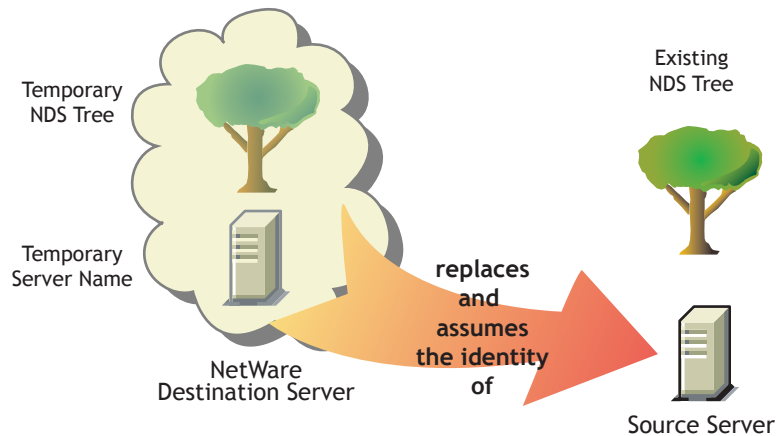
Before you can migrate your data, you must first install a destination NetWare server in a temporary NDS tree. A temporary tree is simply a tree that contains one server with a basic installation of NetWare and no additional products installed (other than SMS™ or any other default products).

To migrate data from NetWare 5 or NetWare 6, complete the following tasks in the order they are listed:

1. Meet System and Software Requirements (page 8).

2. Run Migration Wizard (page 10).

3. Model Your Migration Project (page 11).

4. Verify Your Migration Project (page 11).

5. Copy File System Data (page 12).

6. Edit Configuration Files (page 13).

7. Begin NDS Migration (page 13).

8. Finish the NDS/eDirectory Migration (page 16).

9. Perform Post-Migration Tasks (page 16).

Meet System and Software Requirements

Workstation Requirements

❏ A Windows NT (4.0 or later), Windows 2000, or Windows XP Professional Edition workstation with 50 MB of available disk space.

If running on a Windows 2000 workstation, Service Pack 2 or later must be installed.

The Migration Wizard Utility does not work with Windows XP Home Edition or Windows 95/98.

❏ Novell Client™ software installed and connected to the network.

Windows NT/2000/XP workstations must be running Novell Client for Windows NT/2000/XP version 4.9 or later.

To check the Novell Client version, right-click the N icon on the workstation toolbar, then click Novell Client Properties > Client. To download the latest client, see the Novell Software Downloads site (http://download.novell.com).

❏ Microsoft* Jet Database drivers installed if running on a Windows NT 4.0 workstation.

If Microsoft Jet Database drivers are not installed on your NT 4.0 workstation, they can be downloaded from www.microsoft.com/downloads by searching for the Jet 4.0 Service Pack 3 Update.

❏ Microsoft Data Access Components (MDAC) 2.7 installed on the workstation.

If MDAC 2.7 is not installed on your workstation, it can be downloaded from www.microsoft.com/downloads.

❏ (Conditional) If migrating from NetWare 4, the IPX™ protocol should be configured on your Novell Client workstation.

❏ For better performance, we strongly recommend that the source server, destination server, and client workstation run on a common LAN segment.

Source Server Requirements

The source server is the NetWare server that contains the files, volumes, and NDS objects that will be copied to the NetWare destination server. Valid source servers can be running NetWare 5.0, 5.1, 6.0, or 6.5. Migrations to a NetWare 6.5 destination server can be successfully completed from a NetWare 5.0, 5.1, 6.0, or 6.5 source server. However, migrating from NetWare 6.0 to NetWare 6.5 must be done in one of two ways:

◆ Migrate from a NetWare 6.0 source server to a NetWare 6.0 destination server, then upgrade the destination server to NetWare 6.5 with either an in-place or remote upgrade.

◆ Upgrade the NetWare 6.0 source server to NetWare 6.5 with either an in-place or remote upgrade, then migrate the upgraded NetWare 6.5 source server to a NetWare 6.5 destination server.

IMPORTANT: To perform a migration from a NetWare 3 or NetWare 4 server, use the Migration Wizard Utility version 6.5.

❏ Use ConsoleOne® to verify that you have the Supervisor right to the source server's file system and the source server itself.

WARNING: When migrating a NetWare 6.0 server with eDirectory™ version 8.6.2 to a new NetWare 6.0 server with eDirectory 8.6.2, you might encounter an NDS® error stating you couldn't copy an NDS object because you do not have the proper rights. This can occur even if you are logged in as Admin.

Installing eDirectory version 8.7 on the source server and running the migration again resolves this issue.

❑ Update the source server with the latest NetWare Support Pack.

Updates are available at the Consolidated Support Pack home page (http://support.novell.com/tools/csp).

❑ Any applications, products, or services (virus scan software, backup software, etc.) running on the server to be migrated should be shut down before beginning the migration.

❑ Load DSRepair and run the following three options:

  ◆ Unattended Full Repair

  ◆ Time Synchronization

  ◆ Report Synchronization Status

Make sure that these finish with no errors.

❑ Back up NDS and all data.

Destination Server Requirements

The destination server is the new computer that will receive the data from the source server. This server must be installed into a temporary tree.

After data is migrated from the source server to the destination server, the destination server reboots and Migration Wizard automatically modifies the destination server's autoexec.ncf file to include the source server's name and internal IPX number/server ID. You don't have to modify these manually.

Valid destination servers can be running NetWare 6.0 and 6.5. Migration Wizard 7.0 does not migrate to NetWare 4 or NetWare 5 destination servers. If migrating from NetWare 6.0, valid destination servers must be running NetWare 6.0. Migrations from NetWare 6.0 to NetWare 6.5 can be accomplished in one of two ways:

  ◆ Migrate from a NetWare 6.0 source server to a NetWare 6.0 destination server, then upgrade the destination server to NetWare 6.5 with either an in-place or remote upgrade.

  ◆ Upgrade the NetWare 6.0 source server to NetWare 6.5 with either an in-place or remote upgrade, then migrate the upgraded NetWare 6.5 source server to a NetWare 6.5 destination server.

IMPORTANT: To perform a migration to a NetWare 5 server, use the Migration Wizard Utility version 6.5.

❑ Install the destination server with the NetWare operating system that you are migrating to.

  ◆ For instructions on installing NetWare 6.0, see the *NetWare 6 Overview and Installation Guide* (http://www.novell.com/documentation/lg/nw6p/index.html?page=/documentation/lg/nw6p/setupenu/data/hz8pck9v.html).

    Make sure that you select the Pre-migration Server option described in "Selecting the Type of Installation" in the *NetWare 6 Overview and Installation Guide* during the NetWare 6 installation. And then select the custom option so that you can verify that you have enough room on your destination server to accommodate your source server data.

  ◆ For instructions on installing NetWare 6.5, see the *NetWare 6.5 Installation and Overview Guide* (http://www.novell.com/documentation/lg/nw65).

Make sure that you select the Pre-migration Server pattern described in the *NetWare 6.5 Overview and Installation Guide* (http://www.novell.com/documentation/lg/nw65/index.html?page=/documentation/lg/nw65/install/data/aj8szb0.html) under the Choosing the Server Type heading during the NetWare 6.5 installation.

❑ Use ConsoleOne to verify that you have the Supervisor right to the destination server's file system and the destination server itself.

❑ If the destination server is running NetWare 6.5, the Universal Password feature must be disabled until the migration completes.

Universal Password is disabled by default on NetWare 6.5.

❑ Create a temporary NDS tree with a temporary NDS tree name.

IMPORTANT: The temporary name and temporary NDS tree name must not be the same as the source server's name or NDS tree name; otherwise, the destination server will not assume the identity of the source server after the migration.

❑ Migration Wizard migrates compressed volumes. If you are migrating compressed volumes to uncompressed volumes, Migration Wizard decompresses the volumes during the migration. Make sure you have enough room on the uncompressed volume to accommodate the source volumes after they are decompressed.

❑ During the installation, assign a different IP address to the destination server than is assigned to the source server.

After the migration completes and the source server is taken offline, you can change the destination server's IP address to match what had been assigned to the source server.

Continue with the next section, Run Migration Wizard.

Run Migration Wizard

1 Install NetWare Migration Wizard 7.0 from the products\migrtwzd directory on *NetWare 6.5 CD 1 (Operating System)*.

Expand the utility and install it on a workstation by double-clicking the migrtwzd.exe file.

TIP: There are some known issues with Java and certain video cards that cause the Migration Wizard installation to quit after extracting. If you encounter this issue, update your graphics card drivers to the latest version, or disable the hardware acceleration for your graphics card.

2 Run Migration Wizard from the location where you installed it.

The installation program, by default, installs Migration Wizard at this location: Start > Programs > Novell > Netware Migration Wizard > NetWare Migration Wizard.

3 Read the Welcome screen, then click OK.

4 Click Create a New Project > OK.

5 Click NetWare 5 or 6 to NetWare 6 or 6.5 > OK.

6 Click View Online Documentation.

This launches your default Web browser and takes you to the NetWare Migration Wizard 7.0 online documentation.

7 Make sure you have completed the system and software requirements in "Meet System and Software Requirements" on page 18, then close your browser.

8 Click Next.

9 Name the project, select a place to save it, then click Next.

By default, Migration Wizard saves all projects to c:\Program Files\Novell\NetWare Migration Wizard.

10 Select the NDS tree that contains your source server, then click Next.

11 Select your source server from the NDS tree, then click Next.

12 Select the NDS tree that contains your destination server, then click Next.

13 Select your destination server from the destination NDS tree, then click Next.

14 To save your project and access the Project Window, click Create.

Continue with the next section, Model Your Migration Project.

Model Your Migration Project

Most of your work will be done in the Project Window, where you can drag-and-drop NetWare 5 and 6 data into volumes and folders in the destination NDS tree.

The Project Window is a place to model different migration scenarios before you begin the actual migration. The source server's volume data is shown in the left side of the Project Window, and the destination NDS tree is displayed in the right side of the Project Window. All of the planning in the Project Window is done offline, meaning that folders moved and created in the Project Window are not actually copied or created until you begin the migration.

The Project Window and the Using the Project Window dialog box appear after you have created the migration project.

1 Determine what NetWare 5 or 6 volume data will be copied to which folders in the destination server's NDS tree.

2 If needed, create new folders in the destination NDS tree.

  ◆ To create a new folder, right-click an existing folder or volume.

3 Drag-and-drop NetWare 5 or 6 folders and volumes into NDS containers.

IMPORTANT: If you are migrating NDPS® information to the destination server, make sure you migrate the sys:ndps directory and the sys:login/ippdocs directory. They are necessary for NDPS to function properly.

Continue with the next section, Verify Your Migration Project.

Verify Your Migration Project

After you have modeled your migration by dragging-and-dropping volume data in the Project Window, you should verify your project. The Verification Wizard will inform you of such things as insufficient rights, name spaces that are not loaded, disk space limitation, and improper TSAs.

Remember, dragged-and-dropped items appearing in the NDS tree are merely *assigned* to be copied to that area in the NDS tree. Objects will not actually be migrated until you begin the migration.

To begin the verification and migration:

1 On the Migration Wizard toolbar, click Project > Verify and Migrate Project, or click the Verify and Migrate button.

Continue with the next section, Copy File System Data.

Copy File System Data

During the Copy File System step, all source server trustees and ownerships are backed up to special trustee backup files. These files can be used in case the NDS/eDirectory on the source server has to be removed and the trustees and ownerships restored. For more information on NDS restoration, see "NDS Migration" on page 22.

Additionally, all source server standard sys: volume trustees and ownerships will be backed up to special trustee backup files and these files are copied to the destination server. They are restored during the fourth phase of the migration.

All trustees for dropped folders are also backed up to special backup files and these files are copied to the destination server during this step. Also, dropped directories are copied to the destination server and created directories are added to the destination server during this step.

1 In the Project View dialog box, click Copy File System Data.

Before Migration Wizard starts copying files, it backs up your directory and file trustees and saves them in files located on the source and the destination server. When the NDS migration is complete, Migration Wizard restores the trustees from the files it stored on the destination server.

2 Decide how you want to handle any duplicate filenames between the source server and the destination NDS tree, select one of the following, then click Next:

◆ Don't Copy Over Existing Files

◆ Copy the Source File If It Is Newer

◆ Always Copy the Source File

3 Decide how you want to copy your volumes, select one of the following, then click Next.

◆ Copy Volumes with Users Logged In

◆ Disable Login

Migration Wizard does not copy open files. If you disable user login, you can be sure that no other users will log in to the network and open files during the file copy.

4 Type the passwords for the source and destination trees, then click Next.

5 If prompted, resolve any critical errors or warnings and then click Next.

6 (Conditional) If newer NLMs are available, a dialog box displays asking if you want to copy these newer NLMs to your system. To have the Migration Wizard Utility copy the NLMs for you, click Yes.

7 In the Ready to Copy Files dialog box, read the explanation of the file copy process and then click Proceed.

The Back Up the Source Server's Trustees? screen displays.

8 If your source server has previously been backed up by the Migration Wizard during this step, you can click No. If the source server has not undergone a Migration Wizard backup, back it up now by clicking Yes.

9 Review the error and success logs, then click Done.

Continue with the next section, Edit Configuration Files.

Edit Configuration Files

The Edit Configuration Files step compares the configuration files between the source and destination servers and lets you make changes to those files if you want.

1 In the Project View dialog box, click Edit Configuration Files.

Migration Wizard lets you modify any .ncf or .cfg files on the destination server. These files contain default LOAD statements and parameters.

IMPORTANT: Make sure that all files are closed before you migrate your NDS database.

2 In the text box, select the configuration file that you want to edit and then click Edit File.

3 Copy and paste the commands from the configuration file on the source server to the corresponding configuration file on the destination server, then click Save & Close.

If you intend to change the IP address on your destination server to be the same as the IP address of your source server, you must edit your configuration files and change the IP address in two places: autoexec.ncf and sys:\etc\hosts.

Copy the source server's IP address and paste it into the destination server's autoexec.ncf file. (This works only if your IP LOAD and BIND statements are located in autoexec.ncf.) You also need to go to the server console of the destination server and change the IP address in the sys:\etc\hosts file. Look for the original name of the destination server.

If you use INETCFG to assign IP addresses, change the IP addresses *after* the migration is complete.

4 (Conditional) If you are using configured time sources (timesync.cfg), then copy and paste your Timesync information from the source server's timesync.cfg file to the destination server's timesync.cfg file.

5 Close the Compare Configurations dialog box.

Continue with the next section, .

Begin NDS Migration

The Begin NDS Migration step migrates the NDS/eDirectory files from the source server to the destination server. The source server is brought down and the destination server is restarted during this step.

1 In the Project View dialog box, click Begin NDS/eDir Migration.

2 Back up all volumes that you are *not* planning to migrate and ensure the following before continuing:

◆ All volume data migrated successfully

◆ All critical errors from the file copy are resolved

◆ The servers in your source NDS tree are in time sync and NDS is synchronized.

For more information, see .

3 Click Next.

4 Select Yes or No to update the source server's schema, then click Next.

Migration Wizard can update the source server's schema to include the NDS classes of the default applications that are installed on the destination server.

By default, Yes is selected, which causes Migration Wizard to compare the source and destination schemas. This comparison will help you determine how to extend your schema in preparation for the migration.

5 (Optional but recommended) Verify that you have run the DSREPAIR procedures in "Source Server Requirements" on page 8 to verify that the NDS tree containing the source server is functioning correctly, click Yes or No to acknowledge that your tree is healthy, then click Next.

Migration Wizard does not prevent you from continuing if you have not run DSREPAIR to verify the health of your tree. However, if your tree is unhealthy before you begin the migration, the migration might not complete successfully.

6 You are now prompted to copy and transfer the NICI configuration files from the source server to the destination server.

To ensure the security certificate works properly on the destination server, you must copy the source server's NICI configuration files to the destination server. To facilitate the NICI file copy, nuwnici.nlm is first copied to both the source and destination servers.

You can choose to copy the NICI files Automatically (Over the network) or using a diskette swap. Select the radio button next to the method you want, then click Next.

7 (Conditional) If you selected the diskette swap, continue with Step 7a. If you selected the automatic copy over the network, proceed to Step 8.

7a To copy the nuwnici.nlm to the source and destination servers, click Copy NLM.

7b Click Next.

7c Insert a blank formatted diskette into the floppy drive on the destination server.

7d At the destination server console, enter **load nuwnici -1**.

7e Remove the diskette from the destination server and insert it into the source server's floppy drive.

7f At the source server console, enter **load nuwnici -2**.

This copies the NICI files to the diskette.

7g Remove the diskette from the source server and insert it into the destination server's floppy drive.

7h At the destination server console, enter **load nuwnici -3**.

This copies the NICI files to the destination server.

7i Click Next.

TIP: If you get NICI errors when NDS tries to load or when you copy the NICI files, check and see if pki.nlm will load on the destination server. If it won't load, see "NICI Errors" on page 22.

8 Delete all user connections (except your own) to the source and destination servers, then click Next.

If you want to first broadcast a logout message to any users logged in to the server, click Broadcast Logout Message, type the message in the field, and then click OK.

9 Type the passwords for the source and destination trees, then click Next.

10 Resolve any critical errors or warnings on the Migrate NDS Verification Results screen, then click Next.

11 Perform the eDirectory step-by-step migration.

The eDirectory migration is broken into several steps. This is for diagnostic purposes. If the eDirectory migration fails for any reason, you will know exactly what step it failed on and can take the appropriate measures to fix the problem.

For more information on the eDirectory/NDS migration process, including steps to restore the source and destination servers, see "NDS Migration" on page 22.

11a Click Next.

The first step changes autoexec.ncf and timesync.cfg; modifies the server name in hosts, hostname, and snmp.cfg; and renames smdr.cfg to smdr.mig. The first step also renames rootcert.der in both the sys:system and sys:public directories to rootcert.der.bak.

At the end of the migration process, the source server is brought down and the destination server reboots and takes over the name and identity of the source server.

Migration Wizard automatically modifies the following items in the destination server's autoexec.ncf file:

- The file server name is changed to the name of the source server

- The time zone is changed to the time zone stored in the source server's autoexec.ncf file

- The server ID is changed to the IPX internal net value or server ID stored in the source server's autoexec.ncf file

- The default time server type is changed to the value stored in the source server's autoexec.ncf file

- The bindery context is changed to the bindery context stored in source server's autoexec.ncf file

IMPORTANT: During the migration, the source server's Timesync information is not automatically migrated.

11b To begin the next step (backing up eDirectory, copying the eDirectory backup files to the destination server, and copying the eDirectory backup files to sys:system\nuw30\ndsbu on the source server), click Next.

11c Down the source server by clicking Next.

The Source Server Status dialog box displays.

11d Verify that the source server is down, then click OK.

11e To begin the next step (removing eDirectory from the destination server and deleting the client connection), click Next.

11f To begin the next step (upgrading eDirectory on the destination server if necessary, restoring eDirectory on the destination server, and preparing to reboot the destination server), click Next.

11g Reboot the destination server by clicking Next.

11h If you are ready to proceed, click Yes > Finish.

12 Check the former destination server and verify that it has restarted and taken on the name of the source server.

13 Reboot your workstation and log in to the former destination server.

This clears old connections from the workstation and establishes a clean connection to the former destination server.

If you can't log in, refer to .

14 Restart the Migration Wizard utility.

15 Read the Welcome screen, then click OK.

16 Click Open Last Project > OK.

The utility verifies that the first three steps of the project file are complete.

17 If you are ready to finish the migration, click Yes.

Finish the NDS/eDirectory Migration

The Finish the NDS/eDirectory Migration step upgrades the schema and restores the trustees to the new server after it has restarted.

1 In the Project View dialog box, click Finish NDS/eDir Migration.

The Continue NDS/eDir Migration dialog box appears, outlining the NDS backlink process that needs to be run on the destination server.

2 At the destination server console, enter the following:

`set dstrace=on`

then

`set dstrace=+blink`

then

`set dstrace=*b`

3 Click Yes > Next.

4 Type the tree password in the field provided, then click Next > Continue.

5 Review the error and success logs, then click Done.

6 In the Project View dialog box, click Close.

Continue with the next section, Perform Post-Migration Tasks.

Perform Post-Migration Tasks

1 Run DSREPAIR on the destination server and select Unattended Full Repair.

2 Make sure that user information migrated successfully.

TIP: During the migration, the standard sys directory from the source server is saved in the sys.mig directory on the destination server.

3 Run DSREPAIR > Time Synchronization to verify that your source server is synchronized with the rest of your servers.

4 Verify that the correct IP address is assigned to the new server in all appropriate files.

For example, autoexec.ncf, sys:\etc\hosts, and sys:\etc\hostname.

IMPORTANT: Failure to have the correct IP address in the hosts or hostname files causes the post-installation of some products to fail.

5 (Conditional) If you have performed a migration to a NetWare 6.0 destination server, verify that sys:\public\rootcert.der exists. If it does not, copy the file from an existing server on the network, or create a new one following the instructions in ROOTCERT.DER not exported during the install of Certificate server (http://support.novell.com/cgi-bin/search/ searchtid.cgi?/10066860.htm).

If the rootcert.der file does not exist, a post-migration install of applications could fail.

6 Reinstall any applications.

IMPORTANT: Because the source server's identity replaces the destination server, all NDS objects on the destination server, including those representing applications, are removed and replaced by the NDS objects that exist on the source server. However, the NLM programs associated with the destination server's applications still exist. Because you cannot manage applications without their corresponding NDS objects, you must reinstall the applications to restore their NDS objects to the NDS tree.

If your destination server was running NetWare 5.1, you might see warnings on your server referring to SMS, LDAP, Novell Certificate Server, or NetWare Management Portal. Just ignore the warnings and reinstall the products after NDS has been migrated.

To reinstall these network products and services, go to the NetWare Deployment Manager utility (nwdeploy.exe) located on *NetWare 6.5 CD 1 (Operating System)*, or go to the GUI interface and click the Novell icon on the servertop.

7 If you haven't already done so, install the latest NetWare Support Pack.

This ensures that you get the latest code for the applications that you are reinstalling. The latest Support Packs are available at the Novell Support Web site (http://support.novell.com/ misc/patlst.htm).

Installing Tomcat and exteNd Application Server After the Migration

After completing a NetWare 6.5 to NetWare 6.5 migration using the Migration Wizard, complete the following steps to ensure that Tomcat installs correctly:

1 Copy sys:\sys.mig\java to sys:\java, overwriting all existing files.

2 Copy sys:\sys.mig\adminsrv to sys:\adminsrv, overwriting all existing files.

3 Copy sys:\sys.mig\system\ipconf to sys:\system\ipconf, overwriting all existing files.

After completing a NetWare 6.5 to NetWare 6.5 migration using the Migration Wizard, complete the following steps to ensure that exteNd Application Server installs correctly:

1 Copy sys:\sys.mig\java to sys:\java, overwriting all existing files.

2 Copy sys:\sys.mig\etc\my.cnf to sys:\etc\my.cnf.

Installing Native File Access for UNIX after the Migration

After completing a NetWare 5.1 to NetWare 6.5 migration using the Migration Wizard, complete the following steps to ensure that Native File Access for UNIX installs correctly:

1 Delete the NFAUUser object.

2 Run the schinst utility.

Syntax:

```
schinst -n -w
```

SCHINST takes the administrator's FDN and password as input for extending the schema.

3 Run nisinst.

4 Execute nfsstart.

3 Troubleshooting

Refer to the appropriate section if you are having trouble with any of the following:

General Connection Problems

To eliminate unnecessary connection problems, make sure that

- The source and destination servers have enough available server and workstation licenses to do the migration.

- The NDS® user that you are using to do the migration has no concurrent connection limitations. To check this, do the following:

  - Run ConsoleOne® on the workstation.

  - Edit the properties of the NDS User object.

  - Click the Login Restrictions tab.

  - Uncheck the Limit Concurrent Connections check box.

- The NDS user that you are using to do the migration has the Supervisor right to the source server's NDS object. Use ConsoleOne to verify that the NDS object of the NDS user is listed in the source server's Operators list.

Workstation-to-Server Connections

If you have problems establishing or maintaining connections between your servers and workstations, try one or more of the following:

- Reboot the client workstation to clear the cache in the Novell® Client™ software.

- Map a drive to the server instead of logging in. This is especially useful when connecting with the IPX™ protocol.

- Search for the server by its IP or IPX address instead of its name. Type the IP or IPX address in the Server field of the Novell Login dialog box.

- Try connecting to the server and not the NDS tree by specifying only the name of the server and leaving the tree name and context blank.

- Clear all unauthenticated connections. To do this, right-click the N icon and then click NetWare Connections. Detach from all servers and trees that you are not authenticated to, then try logging in again.

- Make sure your Preferred NetWork Protocol is set correctly by doing the following:

    - Right-click the N icon.

    - Click Novell Client Properties > Protocol Preferences.

    - Select the desired preferred network protocol, then click OK.

    - Reboot the workstation.

- Unbind the protocol you are not using from the destination server. For example, if you are using IPX for the migration but IP is bound on the destination server, unbind the IP protocol on the destination server during the migration.

Server-to-Server Connections

If you have problems establishing or maintaining connections between your servers, try one or more of the following:

- Do not remove the source or destination server from the NDS tree. The servers must be able to communicate with the other servers in the tree during the migration.

- Make sure the destination and source servers can communicate with each other.

    For IPX connections, enter **`DISPLAY SERVERS`** at the server console. For IP connections, enter **`PING`** at the server console.

- If you are using IPX, make sure the frame type and the IPX network number/server ID are consistent between the source and destination servers. For IP connections, verify that you have corresponding addressing, subnet mask, and gateway information.

- Reboot the destination server.

File Copy

If you are having problems during the file copy, try one or more of the following:

- Enable login on both the destination and source servers. If you have disabled login before you started the file copy, the servers can't log in to each other in order to migrate the files.

    NOTE: If you have selected to do so, Migration Wizard disables login for you during the migration.

- If files are copying very slowly, make sure that the servers and workstation are configured at the lowest common LAN speed. Verify that the NICs and anything in between are all hard coded to either communicate half-duplex or full-duplex; they need to be the same throughout. If there are problems with full-duplex, use half-duplex.

  NOTE: If compressed files are migrated to uncompressed volumes, file copy might be slower.

SMDR Errors

Sometimes the smdr.nlm program that is running on the destination server can't make a connection to the source server. To correct this problem, try one or more of the following:

- Unbind the protocol you are not using from the destination server. For example, if you are using IPX for the migration but IP is bound on the destination server, unbind the IP protocol on the destination server during the migration.

- If Migration Wizard can't load the appropriate tsa.nlm on your destination server, manually load it from the destination server console and following the onscreen instructions. Or, enter **SMDR NEW** at the server console to re-create the SMDR object.

- Load smdr.nlm at the destination server console and then enter **SMDR NEW** at the destination server console to solve SMS™ problems.

- Make sure the latest NLM™ programs are loaded.

  Migration Wizard automatically copies the required NLMs to the source and destination servers. To verify that you have the latest NLMs loaded, check the files in the NetWare Migration Wizard\products\nw3*x* directory. You might have to load TSA312 manually.

- Check your primary connections. Right-click the N icon in the system tray, then click NetWare Connections. Make sure the destination tree and server are marked as "primary."

- Reboot the source server.

Restoring Trustees

- If the trustees fail to restore and you get a 0xfffffffb error, this means that you did not modify your IP address in all the necessary places. For more information, see "Edit Configuration Files" on page 13.

- If you need to restore trustees, in the Migration Wizard, you can click the Finish NDS Migration button or select Restore Trustees on the toolbar.

Nuwagent.nlm

Nuwagent.nlm is the NLM program that the Migration Wizard uses to do much of its work. If you get errors that the nuwagent.nlm won't load, try the following:

- Manually load nuwagent.nlm at the server console.

- Enter **SMDR NEW** at the destination server console. This re-creates the SMDR configuration and allows nuwagent.nlm to load.

NICI Errors

If you are getting NICI errors when NDS is trying to load or when you are copying the NICI files in the Migration Wizard, this might mean that your NICI files are corrupt. To correct the problem, follow these steps on the server that is getting NICI errors:

1 Copy the *.nfk file from *NetWare 6.5 CD 1 (Operating System)* to the server's sys:system directory.

2 Rename the *.nfk file that you just copied to nicifk (this has no extension).

3 Go to the Novell Support Web site (http://support.novell.com/filefinder) and download nrepair3.exe.

4 Extract nrepair3.exe and locate nrepair.nlm.

5 Run nrepair.nlm on the server, clicking Yes at all the prompts.

6 Reboot the server.

7 Load pki.nlm on the server and verify that you are no longer getting NICI errors.

If you still see NICI errors, go to the Novell Knowledgebase (http://support.novell.com/search/kb_index.jsp) and search for TID #10025666.

NDS Migration

If the migration fails during the NDS Migration step, you need to restore the source and destination servers to their original configuration before you can retry the NDS migration. The instructions for restoring the servers to their original configurations are different depending on when the migration of data failed.

If Begin NDS Migration, button 3, failed and the destination server did *not* reboot and take on the name and identity of the source server, complete the steps in "Restore Source Server to Its Original Configuration" on page 22.

If Begin NDS Migration, button 3, successfully completed and the destination server has already rebooted and taken on the name and identity of the source server, complete the steps in the following sections:

1. "Remove NDS from the Destination Server" on page 23.

2. "Remove NDS from the Source Server" on page 24.

3. "Restore NDS to the Source Server" on page 24.

4. "Reinstall the Destination Server" on page 25.

Restore Source Server to Its Original Configuration

If Begin NDS Migration, button 3, failed and the destination server did *not* reboot and take on the name and identity of the source server, you need only restore NDS to the source server. When NDS has been restored, you have restored the source server to its original configuration and you are ready to try the NDS migration again.

1 Enter one of the following at the server console of the source server:

- **LOAD INSTALL** if the source server is running NetWare 4

- **NWCONFIG** if the source server is running NetWare 5 or later

2 Select Directory Options > Directory Backup and Restore > Restore Local DS Information after Hardware Upgrade.

3 Press F3 and enter **SYS:SYSTEM\NUW30\NDSBU** when prompted for the location of the backup files.

NDS has now been restored to the source server.

IMPORTANT: Do *not* reboot the destination server. Because the destination server did not take over the identity of the source server, no other action is required prior to performing the NDS migration again.

4 To perform the NDS migration again, launch Migration Wizard and then open the project you were previously working on. When the project opens and you see the Project Window, click the Begin NDS Migration button and follow the instructions in "Begin NDS Migration" on page 13.

Remove NDS from the Destination Server

If Begin NDS Migration, button 3, successfully completed and the destination server has already rebooted and taken on the name and identity of the source server, you must remove NDS from the destination server before you can restore NDS to the source server.

1 At the destination server console, enter **NWCONFIG**.

2 Select Directory Options > Remove Directory Services from This Server.

3 Press Enter when you see a warning instructing you to not remove Directory Services.

Ignore any other errors during the removal of NDS.

4 Select Yes to Remove Directory Services.

5 Specify the Admin username and password.

6 Press Enter to reference a different object.

This object is used when NDS is restored back to the source server.

WARNING: Do not press Esc. If you do, the server references you entered will not be saved or restored to the server.

7 Specify the full Admin username as the placeholder object distinguished name.

8 Specify Root as the distinguished name to change from.

9 (Conditional) If the information about single reference time source appears, review the information and press Enter.

10 (Conditional) If your server holds the Master copy of a replica, press enter when you see a warning.

11 Designate another server to hold the Master replica.

You can choose to let NWCONFIG randomly select another server, or you can designate one yourself.

12 Return to the NWCONFIG utility and verify that NDS has been removed by selecting Remove Directory Services from This Server.

If the message appears saying that NDS has already been removed, *bring the destination server down* and continue with the next section, "Remove NDS from the Source Server" on page 24.

If NDS was *not* successfully removed, exit NWCONFIG and enter **NWCONFIG -DSREMOVE** at the destination server console. Then follow this procedure again, beginning with Step 2.

Remove NDS from the Source Server

After NDS has been removed from the destination server, remove NDS from the source server.

1 Restart the source server by entering **Server** at the DOS command prompt.

2 Enter one of the following:

- **LOAD INSTALL -DSREMOVE** (if source server is running NetWare 4)

- **NWCONFIG -DSREMOVE** (if source server is running NetWare 5 or later)

INSTALL or NWCONFIG will now ignore any warnings or errors during the removal of NDS.

3 Select Directory Options > Remove Directory Services from This Server.

4 Press Enter to skip past any warning screens.

5 Select Yes to remove NDS.

6 Press Enter to skip the error message warning you that NDS is locked.

Ignore, but keep track of, any additional NDS error messages that appear.

7 When the INSTALL or NWCONFIG menu appears again, select Remove Directory Services again.

If a message indicates that NDS is already removed, continue with the next section, .

If NDS was *not* properly removed, contact Novell Technical Services℠ at 1-800-858-4000.

Restore NDS to the Source Server

By removing NDS from the source server, you removed the server from any replica rings that held a partition of the source server. Now you must complete the following procedure to restore NDS to the source server.

1 Enter one of the following at the server console:

- **LOAD INSTALL**. (if source server was running NetWare 4)

- **LOAD NWCONFIG**. (if source server was running NetWare 5 or later)

2 Select Directory Services > Install Directory Services onto This Server.

3 Select the NDS tree where the source server existed prior to migration.

4 Select a time zone and time configuration parameters.

Ignore any warnings or errors that appear during the restoration of NDS, but make a note of the errors before pressing Esc.

5 Type the Admin name and password.

6 Type the context where the source server existed prior to migration, then press F10.

7 Save the NDS (Directory) information.

8 Wait while the server synchronizes with the NDS tree, which might take a while.

9 Return to the INSTALL or NWCONFIG utility and select Directory Options > Select Directory Back Up and Restore > Restore Reference from another Object to This Server.

This restores all references that you assigned to the Server object when you removed NDS from the destination server.

10 Press Enter.

11 Type the full Admin username as the placeholder object distinguished name, then specify Root as the distinguished name to change from.

12 Exit the NWCONFIG or INSTALL utility.

13 At the server console of the source server, enter **LOAD DSREPAIR**.

14 Select Unattended Full Repair > Advanced Options > Check Volume Objects and Trustees.

15 Type the Admin username and password.

16 Exit DSREPAIR.

17 At the workstation where you performed the migration, open your project.

18 From the Migration Wizard Tools menu, select Restore Trustees to restore the trustee assignments.

19 (Conditional) If the source server held the master replica of any partitions and you want to restore these partitions prior to doing the NDS migration again, use DSREPAIR to re-create them.

The source server is now restored to its original configuration.

Continue with the next section, .

Reinstall the Destination Server

To perform the migration again, you must reinstall the operating system on the destination server.

TIP: If you had your server imaged, you can just restore the image rather than reinstall the server.

1 Bring down the destination server.

2 Install NetWare and follow the on-screen instructions during the installation.

After NetWare is installed on the destination server, you are ready to perform the NDS migration again. Go to .

CCS_pbeDecrypt Error When Migrating from NetWare 5.0

When performing a migration from NetWare 5.0, you might receive a CCS_pbeDecrypt error on the source server console when attempting to back up either the source server trustees or the NDS database.

If this occurs, make sure that the latest Support Pack is installed on the NetWare 5.0 server and do the following:

1 At the NetWare 5.0 source server console, enter **Down**.

2 At the DOS prompt, enter **copy c:\nwserver\expxeng.xlm c:\nwserver\novxeng.xlm**.

3 Enter **copy c:\nwserver\domxeng.xlm c:\nwserver\novxeng.xlm**.

NOTE: This might fail because domxeng.xlm is not present. This is not a problem.

If you used a directory other than \nwserver to store the server files, substitute that directory for *nwserver* in steps 2 and 3.

4 Restart the NetWare 5.0 server.