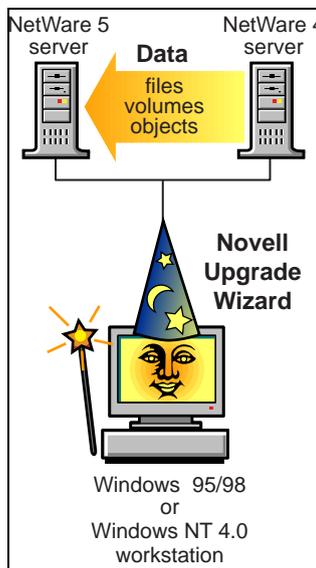


1 *Using Novell Upgrade Wizard 3.0*

Novell® Upgrade Wizard 3.0 helps you copy the files and objects from an existing server running NetWare® to another server running a later version of NetWare.

Note Novell Upgrade Wizard 3.0 is located on your CD or available for free download at www.novell.com/download/.



Upgrade from NetWare 3 to NetWare 4 or NetWare 5. NetWare 3 file system and bindery objects can be copied to another (destination) server running NetWare 4 or NetWare 5. When copied to the destination server, bindery objects are placed in the NDS™ tree and automatically converted to NDS objects.

Upgrade from NetWare 4 to NetWare 5. Novell Upgrade Wizard can be used to copy files and NDS information from a NetWare 4 server to a faster, more reliable computer running NetWare 5. The new NetWare 5 server replaces and assumes the identity of the old NetWare 4 server on the network.

Install Novell Upgrade Wizard

Novell Upgrade Wizard files come compressed in a self-expanding file that must be copied to and installed on the local drive of a Windows* 95/98 or Windows NT* workstation running Novell Client™ software.

To install Novell Upgrade Wizard:

- 1. Copy NUW30.EXE to the local drive of the Windows workstation.**
- 2. Run NUW30.EXE.**

Continue with the appropriate instructions:

- If you are upgrading from NetWare 4, go to “Upgrading from NetWare 4 to NetWare 5” on page 8.
- If you are upgrading from NetWare 3, go to “Upgrading from NetWare 3 to NetWare 4 or NetWare 5” on page 2.

Upgrading from NetWare 3 to NetWare 4 or NetWare 5

To copy the data and objects from an existing server to a new server, you must:

- Meet system and software requirements
- Prepare the NetWare 3 source server
- Prepare the NetWare 4 or NetWare 5 destination server
- Run Novell Upgrade Wizard
- Select files and objects to migrate to the destination server
- Migrate the objects to the destination server

- Perform post-migration procedures

Meet System and Software Requirements

Novell Upgrade Wizard requires the following system and software configuration:

Note Updates are available at www.support.novell.com.

- A Windows 95/98 or Windows NT (4.0 or later) workstation with 25 MB of available disk space.
 - The Windows 95/98 workstation must be running Novell Client for Windows 95/98 version 3.0.1.0 or later.
 - The Windows NT workstation must be running Novell Client for Windows NT version 4.50.819 or later.
- Client connection to source and destination servers using the IPX™ protocol.
- A source server running the NetWare 3.11, 3.12, or 3.2 operating system, and the latest updates.
- A destination server running the NetWare 4.11, 4.2, or NetWare 5 operating system, and the latest updates.
- The source and destination servers running on a common LAN segment (IPX external network number).
- Source and destination servers running the IPX protocol.
- Supervisor or supervisor equivalent rights, including Console Operator rights, to both the source and destination servers.

Prepare the NetWare 3 Source Server

The source server is the computer that contains the data, such as files, volumes, and bindery objects, to copy to the new server (destination server). Valid NetWare 3 source servers can be running NetWare 3.11, 3.12, or 3.2.

To prepare a NetWare 3 source server:

- 1. Update the source server with new NLM™ programs.**
 - 1a. On the Windows workstation, change to the directory where you installed Novell Upgrade Wizard.**
 - 1b. Copy the files from the PRODUCTS\NW3X directory to the SYS:SYSTEM directory on the NetWare 3 server.**
 - 1c. Bring down and restart the NetWare 3 server.**
- 2. Back up all data.**
- 3. Verify that you have Supervisor rights on the source server.**
- 4. Disable SAP filtering.**

To disable SAP filtering, load INETCFG at the server console and follow the on-screen prompts.

If SAP filtering cannot be disabled, you should ensure that the default server (preferred server) for the workstation is on the same LAN segment as the destination and source servers.

- 5. Continue with “Prepare the NetWare 4 or NetWare 5 Destination Server.”**

Prepare the NetWare 4 or NetWare 5 Destination Server

The destination server is the new computer that will receive the data from the source server. Valid destination servers can be running NetWare 4.11, 4.2, or 5.

After copying data from a NetWare 3 server, the data will appear in the destination server's NDS tree.

To prepare a destination server to receive data from a NetWare 3 source server:

- 1. Identify an existing destination server, or install a new destination server to receive the data.**

Verify that the server has enough disk space to accommodate the files and directories moving from the source server.

- 2. Ensure that the server is running the IPX protocol.**

- 3. Ensure that the server is running Storage Management Services™ (SMS™).**

- 4. Update the destination server with the latest software available at www.support.novell.com.**

- NetWare 5 requires Support Pack 2 (NW5SP2.EXE) or later.
- NetWare 4.2 requires Support Pack 6 (installed by default during the NetWare 4.2 server installation program).
- NetWare 4.11 requires LIBUPI.EXE, DS411P.EXE, and TSA410.NLM.

Follow the installation instructions provided with each software update.

- 5. Load DSREPAIR and run Unattended Full Repair.**

Make sure that Unattended Repair, Time Synchronization, and Report Synchronization Status finish with no errors.

- 6. Back up NDS and all data.**

- 7. Continue with “Run Novell Upgrade Wizard.”**

Run Novell Upgrade Wizard

To run Novell Upgrade Wizard:

1. **Log in to the source server from the Windows 95/98 or Windows NT workstation.**
2. **Click Start.**
3. **Select Programs > Novell > Novell Upgrade Wizard.**
4. **Name the project.**

The upgrade project file contains all the commands, successes, and failures relating to copying files and objects to the destination server.

5. **Choose the type of upgrade you want to perform.**
6. **Continue with “Select Files and Objects to Migrate to the Destination Server.”**

Select Files and Objects to Migrate to the Destination Server

NetWare 3 servers use a bindery-based directory structure to manage data. Later versions of NetWare (such as NetWare 4 and NetWare 5) manage data with an advanced directory structure called the NDS tree.

During the installation of the destination server, you created an NDS tree. You must first select which NetWare 3 files will be copied to which containers on the NetWare 4 or 5 server’s NDS tree.

To select the files and objects to migrate:

1. **Select the source server and destination NDS tree.**
2. **Drag the bindery and volume objects from the source server and drop them into containers (folders) on the destination NDS tree.**

To create a new container, right-click on the parent of the container.

3. **Verify that the data can be copied.**

To verify, click Project > Verify Project. Follow the instructions to correct any warnings or errors.

Note All errors must be corrected before migrating.

4. Continue with “Migrate the Objects to the Destination Server.”

Migrate the Objects to the Destination Server

Although you have selected the containers where the NetWare 3 data will be copied, no data has yet been migrated. When migrated, the bindery data are converted to NDS objects and placed in the NDS tree on the destination server.

To migrate the objects to NetWare 4 or NetWare 5:

- 1. Click Project > Migrate.**
- 2. Continue with “Perform Post-Migration Procedures.”**

Perform Post-Migration Procedures

After migrating the files and objects, you should:

- Run DSREPAIR on the destination server.
- Modify the server’s print configuration.
- Ensure that applications have migrated correctly. Reinstall applications that may not have correctly migrated to the destination server.
- Ensure that user information has migrated correctly.
- Modify login scripts

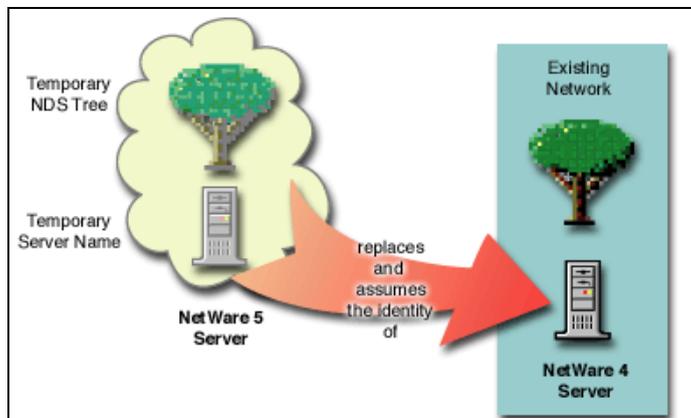
Upgrading from NetWare 4 to NetWare 5

Upgrading from NetWare 4 to NetWare 5 requires you to install a new NetWare 5 server in a temporary NDS tree. Then, you copy the files and data from the NetWare 4 server to the NetWare 5 server. Finally, you transfer the NDS information to the NetWare 5 server.

To upgrade from NetWare 4 to NetWare 5, you must:

- Meet system and software requirements
- Prepare the NetWare 4 source server
- Prepare the NetWare 5 destination server
- Run Novell Upgrade Wizard
- Copy volumes
- Edit configuration files
- Transfer the NetWare 4 NDS to NetWare 5
- Perform post-migration procedures

After the NetWare 4 NDS is transferred to NetWare 5, the source server will be brought down automatically and the NetWare 5 server will reboot. The NetWare 5 server will appear in the same NDS container with the same name as the NetWare 4 source server.



If the upgrade was not successful, you can return the server to its pre-migration configuration by following the instructions in “Restore the NetWare 4 Server to Its Original Configuration—Single-Server Tree” on page 20.

Meet System and Software Requirements

Novell Upgrade Wizard requires the following system and software configuration:

Note Updates are available at www.support.novell.com.

- A Windows 95/98 or Windows NT (4.0 or later) workstation with 25 MB of available disk space.
 - The Windows 95/98 workstation must be running Novell Client for Windows 95/98 version 3.0.1.0 or later.
 - The Windows NT workstation must be running Novell Client for Windows NT version 4.50.819 or later.
- Client connection to source and destination servers using the IPX protocol.
- A NetWare 4 source server running the NetWare 4.10, 4.11, or 4.2 operating system, and the latest updates.
 - NetWare 4.10 requires 410PT8B.EXE, DS410N.EXE, LIBUPI.EXE, and SMSUPG.EXE.
 - NetWare 4.11 requires LIBUPI.EXE, DS411P.EXE, and TSA410.NLM.
 - NetWare 4.2 requires Support Pack 6 (IWSP6.EXE) or later. Support Pack 6 is installed by default during the NetWare 4.2 server installation program.
- NetWare 4 source server running long namespace support on all volumes to be copied.
- A destination server running the NetWare 5 operating system, and the latest updates.

NetWare 5 requires Support Pack 2 (NW5SP2.EXE) or later.

- If the destination server will be the first NetWare 5 server in the NDS partition, the NetWare 4 source server must have a read/write or master NDS replica prior to migrating.
- The source and destination servers running on a common LAN segment (IPX external network number).
- Source and destination servers running the IPX protocol.
- Supervisor or supervisor equivalent rights, including Console Operator rights, to both the source and destination servers.

Prepare the NetWare 4 Source Server

The source server is the NetWare 4 server that contains the files, volumes, and NDS objects to copy to the new server (destination server). Valid NetWare 4 source servers can be running NetWare 4.10, 4.11, or 4.2.

To prepare a NetWare 4 source server:

- 1. Verify that you have Supervisor rights on the source server.**

To verify supervisor rights from a Windows workstation, run NetWare Administrator from the SYS:PUBLIC directory.

- 2. (Conditional) If the destination server will be the first NetWare 5 server in the NDS partition, ensure that the NetWare 4 source server has a read/write or master NDS replica.**

To verify replica status, use NDS Manager (NDSMGR16.EXE).

- 3. Update the source server with the latest software.**

- NetWare 4.2 requires Support Pack 6 (installed by default during the NetWare 4.2 server installation program).
- NetWare 4.11 requires LIBUPI.EXE, DS411P.EXE, and TSA410.NLM.
- NetWare 4.10 requires 410PT8B.EXE, DS410N.EXE, LIBUPI.EXE, and SMSUPG.EXE.

Updates are available at www.support.novell.com.

4. Ensure that namespace support is running on all volumes to be copied.

To add long namespace support to a NetWare 4.11 or NetWare 4.2 server, at the server console, enter **LOAD LONG**, then enter **ADD NAME SPACE LONG TO** *volumename*.

To add long namespace support to a NetWare 4.10 server, at the server console, enter **LOAD OS2**, then enter **ADD NAME SPACE OS2 TO** *volumename*.

5. Load DSREPAIR and run Unattended Full Repair.

Make sure that Unattended Repair, Time Synchronization, and Report Synchronization Status finish with no errors.

6. Back up NDS and all data.

7. Disable SAP filtering.

To disable SAP filtering, load INETCFG at the server console and follow the on-screen prompts.

If SAP filtering cannot be disabled, you should ensure that the default server (preferred server) for the workstation is on the same LAN segment as the destination and source servers.

8. Continue with “Prepare the NetWare 5 Destination Server.”

Prepare the NetWare 5 Destination Server

The destination server is the new computer that will receive the data from the source server. After migrating the data from a NetWare 4 server, the NetWare 5 destination server will replace and assume the identity of the NetWare 4 source server on the network.

To prepare a NetWare 5 destination server to receive data from a NetWare 4 source server:

1. Install a new NetWare 5 server. During the installation, complete the following:

1a. Create a volume SYS on the destination server at least as large as volume SYS on the source server.

1b. Enter a temporary name for the NetWare 5 server.

After upgrading, the destination server will assume the name of the source server.

1c. Create and name other volumes at least as large as the volumes you will migrate from the source server.

Volume names on the destination server must be the same as volume names as on the source server.

1d. Install and configure the IPX protocol.

The IPX protocol must be installed on the destination server for the migration. (You can remove IPX after completing the migration.)

1e. Create a temporary NDS tree with a temporary NDS tree name.

1f. Install Storage Management Services (SMS) software on the destination server using one of the following methods:

- During the NetWare 5 server installation, check the check box to install Storage Management Services from the Other Products and Services screen.
- After server installation, load NWCONFIG at the NetWare 5 server console. Follow the instructions to install other products and services.

Important Do not install any products other than Storage Management Services.

2. Update the NetWare 5 destination server with NetWare Support Pack 1 or later.

Support packs are available at www.support.novell.com.

3. Continue with “Run Novell Upgrade Wizard.”

Run Novell Upgrade Wizard

To run Novell Upgrade Wizard:

1. **Log in to the source server from the Windows 95/98 or Windows NT workstation.**
2. **Click Start.**
3. **Select Programs > Novell > Novell Upgrade Wizard.**
4. **Name the project.**

The upgrade project file contains all the commands, successes, and failures relating to copying volumes and NDS to the destination server.

5. **Choose the type of upgrade you want to perform.**
6. **Continue with “Perform Pre-Upgrade Tasks.”**

Perform Pre-Upgrade Tasks

As part of the prerequisites, you installed a new NetWare 5 destination server and created a temporary NDS tree. The NetWare 4 source server already exists on the network in a container on the NDS tree. For a complete list of tasks, click the Perform Pre-Upgrade Tasks button. After completing all tasks, continue with “Copy Volumes.”

Copy Volumes

You do not need to copy all the volumes at once. You can select volumes to copy now and copy other volumes later by reopening the project file.

Edit Configuration Files

The Novell Upgrade Wizard creates an AUTOEXEC.NCF and STARTUP.NCF file for the NetWare 5 destination server with default LOAD statements and parameters.

If the source server was running an NLM program or application and you want to run it on the destination server, you must copy the commands from the configuration file on the source server to the appropriate configuration file on the destination server.

Transfer the NetWare 4 NDS to NetWare 5

The final step of the upgrade is to migrate the NDS information from the NetWare 4 server to the NetWare 5 destination server.

After clicking Migrate NDS and completing all the steps required to migrate NDS, the NetWare 4 server will be brought down and the NetWare 5 server will restart with its new server name and NDS tree.

Before continuing, you must:

- Make sure the NetWare 5 destination server has restarted.
- Make sure that time is in sync on the NetWare 5 server.

To check time synchronization status, enter DSREPAIR at the server console and select Time Synchronization.

- Make sure that NDS is synchronized on the NetWare 5 server.

To check NDS synchronization status, enter DSREPAIR at the server console and select Report Synchronization Status.

If the destination NetWare 5 server does not contain a Read/Write or Master replica, you must check NDS synchronization by running DSREPAIR on a server with another server in the NDS tree that has a Read/Write or Master replica.

If NDS is not synchronized, enter the following commands at the server console:

```
SET DSTRACE=*U
SET DSTRACE=*H
SET DSTRACE=+SYNC
```

- Resolve any Novell Licensing Service errors recorded in the NUW.ERR error log file.

To view the error log file, enter **EDIT SYS:SYSTEM/NUW30/NUW.ERR** at the server console.

After meeting the conditions listed above, click Migrate. Continue with “Perform Post-Migration Procedures.”

Perform Post-Migration Procedures

After migrating the server, you should:

- Enter DSREPAIR and select Unattended Full Repair on the NetWare 5 server
- Ensure that user information migrated successfully.
- Ensure that applications migrated successfully. You may need to reinstall applications on the destination server.

Troubleshooting

In some cases, you may need to restore the NetWare 4 source to its original configuration on the network.

If you have upgraded one of several servers in an NDS tree, go to “Restore the NetWare 4 Server to Its Original Configuration—Multiserver Tree” on page 16.

If you have upgraded the only server in an NDS tree, go to “Restore the NetWare 4 Server to Its Original Configuration—Single-Server Tree” on page 20.

Restore the NetWare 4 Server to Its Original Configuration—Multiserver Tree

If you have unsuccessfully attempted to migrate to the destination server, one or more of the following conditions may exist.

If the NetWare 5 destination server still has its original server name, complete the following:

1. Check the status of the NetWare 4 source server.
2. If the NetWare 4 source server is down, complete the steps in “Restore the NetWare 4 Source Server—Multiserver Tree” on page 17.

If the NetWare 4 source server did not have a master replica, the NetWare 5 destination server has been renamed and restarted and appears in the source tree, complete the following:

1. Complete the steps in “Remove NDS from the NetWare 5 Destination Server—Multiserver Tree” on page 17.
2. Complete the steps in “Restore the NetWare 4 Source Server—Multiserver Tree” on page 17.
3. Complete the steps in “Restore the NetWare 5 to its Original (Temporary) Configuration—Multiserver Tree” on page 18.

If the NetWare 4 source server had a master replica, the NetWare 5 destination server has been renamed and restarted and appears in the source tree, complete the following:

1. Bring down the NetWare 5 destination server.
2. Complete the steps in “Restore the NetWare 4 Source Server—Multiserver Tree” on page 17.
3. Reinstall a new NetWare 5 server following the instructions in “Prepare the NetWare 5 Destination Server” on page 11.

Remove NDS from the NetWare 5 Destination Server—Multiserver Tree

To remove NDS from NetWare 5:

1. **At the NetWare 5 server console, enter LOAD NWCONFIG - DSREMOVE.**
2. **Select Directory Options > Remove Directory Services from This Server.**

Ignore errors and confirm deletion of NDS (Directory Services).

3. **Select Yes to Remove Directory Services.**
4. **Press Enter to reference a different object.**

Warning Do not press Esc.

5. **Enter the admin username as the placeholder object distinguished name.**
6. **Enter [Root] as the distinguished name to change from.**
7. **Enter the Admin username and password.**
8. **Review the information about single reference time source and press Enter.**

Restore the NetWare 4 Source Server—Multiserver Tree

1. **At the NetWare 4 source server console, enter LOAD INSTALL - DSREMOVE.**
2. **Select Directory Options > Remove Directory Services from This Server.**

Ignore errors and confirm deletion of NDS (Directory Services).

3. **Select Yes to remove NDS (Directory Services).**
4. **Verify that NDS has been removed by again selecting Remove Directory Services from This Server.**
5. **Select Install Directory Services onto This Server.**

6. **Select the NDS tree where the NetWare 4 source server existed prior to migrating.**
7. **Select a time zone and time configuration parameters.**
8. **Enter the administrator name and password.**
9. **Enter the context where the NetWare 4 source server existed prior to migrating.**
10. **Save the NDS (Directory) information and continue.**
Wait while the server synchronizes with the NDS tree.
11. **To restore the references from another object to this server, select Directory Backup and Restore Options > Restore References from Another Object to This Server.**
12. **Enter the administrator name and password.**
13. **When prompted for the placeholder object distinguished name, enter the full context and name of the Admin user, such as admin.acme.**
14. **When prompted to change from which distinguished name and below, enter [Root].**
15. **Restore trustees from tape backup.**
16. **Use NDS Manager to create the NDS replicas that previously existed on the source server.**

Restore the NetWare 5 to its Original (Temporary) Configuration—Multiserver Tree

To perform the upgrade again, you must reinstall NetWare 5 or restore the NetWare 5 server to its original configuration.

To restore the NetWare 5 server to its original configuration:

1. **Restart the NetWare 5 server.**
2. **At the server console, enter LOAD NWCONFIG.**

3. Reinstall NDS.

- 3a. Select Directory Options > Install Directory Services > Create a New DS Tree**
- 3b. Select Yes to create a new tree.**
- 3c. Enter a temporary NDS tree name, such as TEMP-TREE.**
- 3d. Select a time zone.**
- 3e. Enter a temporary Company or Organization name, such as ACME.**
- 3f. Enter an administrator name and password.**

Important Do not forget the administrator name and password.

- 3g. When prompted to save directory information, select Yes.**
NDS will now be installed.

4. Install a license onto the NetWare 5 server.

- 4a. From NWCONFIG, select Configuration Options > License Options > Set Up Licensing Service.**
- 4b. Enter the administrator name and password.**
- 4c. After Licensing Services has been set up, select Install Licenses.**
- 4d. Enter the path where your licenses are located, such as A:\.**

After following the screen prompts, the NetWare 5 destination server is restored to its original configuration.

Restore the NetWare 4 Server to Its Original Configuration—Single-Server Tree

To restore the NetWare 4 source server, you must:

- Remove NDS from the NetWare 5 destination server.
- Restore the NetWare 4 source server.
- Restore the NetWare 5 to its original configuration (optional).

For instructions on multiserver trees, see “Restore the NetWare 4 Server to Its Original Configuration—Multiserver Tree” on page 16.

Remove NDS from the NetWare 5 Destination Server—Single-Server Tree

To remove NDS from NetWare 5:

1. **Remove NDS from the destination server.**
 - 1a. **At the NetWare 5 server console, enter LOAD NWCONFIG - DSREMOVE.**
 - 1b. **Select Directory Options > Remove Directory Services from This Server.**

Ignore errors and confirm deletion of NDS (Directory Services).
 - 1c. **Select Yes to Remove Directory Services.**
 - 1d. **Enter the Admin username and password.**
 - 1e. **Review the information about single reference time source and press Enter.**

Restore the NetWare 4 Source Server—Single-Server Tree

To restore the NetWare 4 source server to its original configuration:

1. **Enter RESTART SERVER at the NetWare 4 server console.**
2. **After the server restarts, enter LOAD DSMMAINT at the NetWare 4 server console.**
3. **Select Restore NDS following Hardware Upgrade.**

4. Press Enter to rename the NDS file.

5. Select Yes to confirm.

NDS should now be successfully restored to the server.

6. Restart the server.

The NetWare 4 source server is now returned to its original configuration.

Restore the NetWare 5 to its Original (Temporary) Configuration—Single-Server Tree

To perform the upgrade again, you must reinstall NetWare 5 or restore the NetWare 5 server to its original configuration.

To restore the NetWare 5 server to its original configuration:

1. Restart the NetWare 5 server.

2. At the server console, enter LOAD NWCONFIG

3. Reinstall NDS.

3a. Select Directory Options > Install Directory Services > Create a New DS Tree

3b. Select Yes to create a new tree.

3c. Enter a temporary NDS tree name, such as TEMP-TREE.

3d. Select a time zone.

3e. Enter a temporary Company or Organization name, such as ACME.

3f. Enter an administrator name and password.

Important Do not forget the administrator name and password.

3g. When prompted to save directory information, select Yes.

NDS will now be installed.

- 4. Install a license onto the NetWare 5 server.**
 - 4a. From NWCONFIG, select Configuration Options > License Options > Set Up Licensing Service.**
 - 4b. Enter the administrator name and password.**
 - 4c. After Licensing Services has been set up, select Install Licenses.**
 - 4d. Enter the path where your licenses are located, such as A:\.**

After following the screen prompts, the NetWare 5 destination server is restored to its original configuration.