

# Installing NetWare Support Packs

*Novell recently launched two new NetWare support packs. We take a look at what's been fixed and how to install the packs.*

*By PCNA Staff*

**Y**ou might be forgiven for thinking that Novell and Microsoft are engaged in a constant competition to see who can produce the largest support pack for an operating system.

Although it's Microsoft that has the reputation for bloatware and huge service packs for NT, it's actually Novell that is currently way ahead in the game. Whereas SP6 for NT4 is a 34 MB download, the latest sets of fixes for NetWare 4 and 5, packs 8 and 4 respectively, weigh in at a ridiculous 76 and 102 MB.

These support packs are cumulative, in that they contain all fixes from previous support packs. So you can go straight from an unpatched OS (or one at any other patch level) to the latest version in a single step.

If you haven't already obtained these latest support packs, you'll always find the latest NetWare and NT packs on your PCNA CD-ROM, either in the Featured Files section or the resource library.

This article provides a brief overview of some of the major installation issues regarding NetWare 5 SP4 and NetWare 4 SP8, and also details some of the things that have been fixed. Further information is included in the instructions accompanying the packs, and also at [support.novell.com](http://support.novell.com) if you follow the link to the file finder. You should read these carefully before upgrading your servers.

## Unpacking

First things first. To unpack the support packs, run the NW5SP4.EXE or NW4SP8.EXE file. Assuming it unpacks without reported errors, you can

assume that it's free from corruption. The files on the PCNA CD-ROM were downloaded directly from Novell, but you should still virus-scan them just in case.

If you receive error warnings from the unpacker, this is probably because it's trying to create a file with a path name that's too long for your system. There are some very deep paths in the unpacked version of the support pack. To avoid problems, move the EXE file to the root directory of the drive and unpack from there. Don't worry - the unpacking won't create any files in the root directory itself.

As mentioned, the support packs are cumulative and contain all currently-available patches and fixes for NetWare 4 and 5. Although many of the patches and fixes are available for separate download, the support packs have been tested (with the core OS and alongside other Novell products) as a collection, and Novell recommends that you install them as such. Don't install individual files from the unpacked support packs, as this may cause problems.

If you are running BorderManager, GroupWise or ManageWise and you wish to install any support packs for these products, you should do so after patching NetWare itself.

## NetWare 5 SP4

Figure 1 lists the major bugs in NetWare 5 that are fixed for the first time in Support Pack 4.

Prior to installing the Support Pack or any updates to your server, you should ensure that you have a reliable backup of the server. The backup option provided by the Support Pack in-

staller will not work if the server cannot be rebooted or the volumes will not mount.

NetWare 5 Support Pack 4 must be installed through the NWCONFIG utility and not through the graphical user interface in NetWare 5.

At the start of the installation, the server SET parameters are reset to their defaults. This includes settings like Minimum Packet Receive Buffers. The previous configuration settings are saved to the SYS:\ENVIRO.TXT file on the server. To reconfigure the server's SET parameters, refer to this file and set the parameters again.

After this, the Support Pack files are copied to the server. Newer files on the server are not overwritten. The installation program checks the version of each file. If two files have the same version, the installation program then checks the date of each file. This does not include TAR files, which have no version or date checking.

During installation of the support pack, a record is added to PRODUCTS.DAT in the Installed Products section, and a "SPACK 5.0.4 v4.0 Support Pack for NetWare 5" message appears.

You can find a full list of all the files installed by the support pack at [support.novell.com](http://support.novell.com) - follow the link to the service pack and then click on Long Description. Note that files destined for the \TOOLS directory are not installed automatically. Note also that the install will unload JAVA.NLM and all Java applications in order to update JAVA.NLM and the JavaClass libraries.

If BTREIVE.NLM fails to load and stops the install, you must load IPXSPX.NLM. Or, install Btrieve v7 by running INSTALL.BAT located in the

\TOOLS\PERVASIV directory of the Support Pack.

Installing the Support Pack with the backup option, which can reverse the installation in case of problems, will require an additional 132 MB of disk space. Also, installation of the Support Pack requires access rights to the server console.

If NLSLSP trace is turned on, NLSTRACE.DBG cannot be updated. Unload NLSLSP and reload it with the trace options turned off.

### Installation

To install the Support Pack on a single server, do the following:

- 1 Unpack the EXE file on the server's volume SYS or on another server volume. Remember to do this from the root directory.
- 2 At the server console prompt, type NWCONFIG.
- 3 Select Product Options, then Install A Product Not Listed.
- 4 If the Support Pack files are on the local SYS volume, press F3, then specify the path including the volume name. For example, SYS:\<directory name>. If the files are on a different server, press F3, then specify the full path including the server name (eg, \\SERVER\VOL1:DIRNAME). You will be prompted for a login name and password for the other server.
- 5 Press Enter, then F10 to accept the marked options and continue. Note that if you want to be able to uninstall the Support Pack later you must select the option to back up files.
- 6 Press Enter to end. After the files are copied, review the .NCF files for accuracy.
- 7 At the server console type RESET SERVER. This resets the server (warm boot) and completes the installation of the Support Pack. The RESTART SERVER command will not activate the new SERVER.EXE file.

### If Using NDS 8

If you're running NDS 8, after entering the source location of the Support Pack files you'll get an error message offering you the option of

copying only the remaining files or copying all the files again. Select the latter option. Then, when the installation has completed, you must copy DSBACKER.NLM from NDS v8 to your server's SYSTEM directory.

### ManageWise Error

If the ManageWise module GTREND.NLM is running on the server, you may get an error during the install saying "cannot open GT\_ERR.LOG". To resolve this, switch to the server console. Unload LANZSU.NLM and GTREND.NLM. Switch back to the install screen (NWCONFIG.NLM). Press Enter, and then select the Retry Copying File option. The installation will then proceed.

### BorderManager

When trying to administer BorderManager Enterprise Edition 3.0 services on a NetWare 5 server that has Support Pack 4, you may experience licensing error messages if BorderManager Enterprise Edition 3.0 was installed after the Support Pack. To fix this, download the BM3LICFX.EXE patch from [support.novell.com/search/ff\\_index.htm](http://support.novell.com/search/ff_index.htm).

### BorderManager 3.5

If you install BorderManager 3.5 after installing the Support Pack, an error message may appear that says "Error extending Border Services Schemas in the NDS". Do nothing - this message is not correct.

Another problem with this configuration is that TCPIP.NLM may be copied to the server but it may have a file size of 0 bytes. If this happens, replace the TCPIP.NLM with the version found on the BorderManager 3.5 CD.

### Driver Dates

When updating a server which was previously updated with NetWare 5 Support Pack 3, a message regarding updating newer files with older files may appear. The files from the previous Support Pack had the DOS date inadvertently changed. This has been corrected for future support packs. The files are equivalent. It makes no difference whether you choose to update or not - these are the certified drivers and only the date is different.

### TIMESYNC.NLM

After installing the Support Pack and restarting the server, TIMESYNC.NLM reports "TIMESYNC: To set the time sources to none put a ';' by itself. For example: SET TIMESYNC TIME SOURCES=;" twice on a server that is configured as a single-server time source. This message is irrelevant on a single-server time source because the server won't accept time from a configured source.

If you ignore the message, time is synchronised and you never see the message again unless you reload TIMESYNC.NLM. If you want to stop the message from appearing every time you load TIMESYNC.NLM:

- 1 Load MONITOR.NLM on the server.
- 2 Select Server Parameters/Select Time.
- 3 Enter anything in the TIMESYNC Time Sources field.
- 4 Exit Monitor.
- 5 Load MONITOR.NLM.
- 6 Select Server Parameters/Select Time.
- 7 Edit the TIMESYNC Time Sources field so that it only contains a semi-colon.
- 8 Exit MONITOR.NLM.

### Future Config Changes

The NetWare 5 Support Pack 4 installation detects the current server configuration and installs the appropriate files. If you change the server configuration, you will need to reinstall the Support Pack for the new configuration.

For example, if LDAP Services for NDS is installed on a NetWare 5 server before the Support Pack is installed, then the Support Pack installation automatically upgrades LDAP Services for NDS. If LDAP Services for NDS is installed after the Support Pack installation, you need to reinstall the Support Pack to bring LDAP Services for NDS up to the Support Pack level.

### DSREPAIR

If the NDS tree was originally installed using NetWare 4.0 or 4.01, you should repair the local database. This operation addresses schema definitions that might not have been prop-

# NetWare Patches

erly timestamped if your tree originated in a NetWare 4.0 or NetWare 4.01 server. Using newer versions of NDS with NetWare 4.0 or 4.01 NDS trees could cause possible corruption with the Backlink attribute.

If the tree didn't originate as a NetWare 4.0 or NetWare 4.01 server, you don't need to run DSREPAIR. If you don't know what version the tree is, run DSREPAIR on the master or read/write replica of [Root].

Use DSREPAIR v4.59 or later to repair the NDS database. On a NetWare 4.1x server holding the master or a read/write replica of [Root], run DSREPAIR v4.59 or later. In DSREPAIR, select Advanced Options/Repair Local DS Database.

## DS.NLM

The DS.NLM in the Support Pack should not be installed independently of the Support Pack. This includes using the NDS Version Update utility found in NDS Manager. Doing this will leave NetWare 5 servers without a functional NDS until either the Support Pack is loaded on the servers or the NDS is replaced with an older version.

## CONFIG.NLM

SP5 includes a troubleshooting utility named CONFIG.NLM. CONFIG.NLM creates a text file named CONFIG.TXT in the SYS:SYSTEM directory. This file contains a list of all modules loaded on the server at the time CONFIG.NLM is loaded. Also in-

cluded are the contents of all server .NCF files found in the server's boot directory, usually C:\NWSERVER, and in the SYS:SYSTEM directory.

## NetWare 4 SP8

At the same time as pack 4 for NetWare 5, Novell also released Support Pack 8 for NetWare 4. The remainder of this article looks at this Support Pack and offers some tips for installation. For a list of problems which are fixed in NetWare 4 for the first time with SP8, refer to Figure 2.

### Installation

As with NetWare 5 SP4, you need to unpack NW4 SP8 from the root directory on the server for the reasons stated above. Also as per the NetWare 5 pack, don't install individual files from the compilation - they are designed to work together.

To install NetWare 4 SP8:

- 1 Unpack the file on the server's volume SYS, or another server's volume, by running the EXE file.
- 2 At the server console prompt, type LOAD INSTALL.
- 3 Select Product Options/Install A Product Not Listed.
- 4 Press F3. If the Support Pack files are on the local server, enter the path including the volume name. If the files are on a different server, enter the path including the server name.
- 5 Press Enter. Then press F10 to ac-

cept the marked options and continue.

- 6 Press Enter to end. After the files finish copying, review the .NCF files for accuracy, then bring down the server and restart it to complete the installation of the Support Pack.
- 7 In order to activate the purge fixes (PRGFREFX.NLM), the PURGE /ALL DOS command must be run at the root of all the server volumes. In addition, VREPAIR.NLM should be run until there are no errors.

### SETUPNLS.NLM Error

During the installation, the module SETUPNLS.NLM may fail to load because of Public Symbol errors. This usually indicates that the server modules may need to be updated before loading SETUPNLS.NLM. If this occurs, finish the Support Pack installation without loading SETUPNLS.NLM. Reboot the server. At the server console type LOAD SETUPNLS.

If you experience a licensing error when installing the Support Pack, run the DSREPAIR utility followed by the SETUPNLS utility.

### Radius

After the installation of the Support Pack, the server is rebooted. If, after the installation, the server abends running process RADIUS.NLM, edit the AUTOEXEC.NCF file. Move the command LOAD RADIUS.NLM to the bottom of the AUTOEXEC.NCF file.

### Multiple Servers

The application to install the Support Pack on multiple servers from a workstation is not included with the Support Pack. It is available from the Web at [www.netpro.com/configcentral/sp8/](http://www.netpro.com/configcentral/sp8/).

### Directory Services

Upgrade the root of the NDS tree first. Mixed versions of NetWare 4.11 NDS (DS.NLM) interoperate completely, but Novell strongly recommends that all NetWare 4.11 servers be upgraded to the new version to ensure consistency and easier future maintenance. When using DSREPAIR.NLM, you must use version 4.59 on all NetWare 4.11 servers running DS.NLM version 6.00.

- Move Subtree now works correctly.
- DIB corruption due to missing TTS flag no longer happens.
- Obituary processing works faster.
- Removal of subrefs works faster.
- Valueless attributes no longer cause -632 errors.
- DSRepair has additional schema fixes for NDS 8 compatibility.
- NDS8 TSANDS can now run against NW5 with recman DS.
- Alias handling in DClient is fixed.
- DSTRACE \*E option removed.
- Several minor fixes imported from NDS 8.
- Several low-frequency abends were fixed.
- In CLIB.NLM, fixed daylight saving time calculations.
- In LIB0.NLM, fixed corruption to the reply list.
- Numerous fixes to REQUESTR.NLM that were causing crashes and errors.

Figure 1 - Some problems fixed for the first time in NetWare 5 SP4.

The Support Pack copies the NDS Manager program to the SYS:PUBLIC/WIN32 directory. To use it with NT, launch NDSMGR32.EXE from SYS:PUBLIC/WIN32.

**Protocols**

The SP8 installer does not detect what is loaded and currently running

at the server to determine which updates to install. To ensure that the protocol updates are installed on your server, the MultiProtocol Router v3.1 must be listed as an installed product.

**LOADER Errors**

When the Support Pack is installed, SERVER.EXE will be updated with the

current version of LOADER. Occasionally, the modified version of SERVER.EXE becomes corrupted and displays the error message "LOADER-4.10-19: Error reading load file C:\NWSERVER\SERVER.EXE". If you receive this, it is a sign that your server machine has become infected with the DIE\_HARD virus.

- Not-Logged-In connections are now marked as audited.
- Corrected the generation of Delete File audit record.
- Fixed several audit records.
- Fixed Archive Audit File on Overflow.
- Fixed broadcast-free abend when auditing is enabled.
- Increased cache performance.
- Fixed close file corruption.
- Fixed compression build path.
- Encrypted handling of large strings.
- Fixed invalid data stream abends.
- Fixed Macintosh and DOS time difference.
- Fixed FAT corruption.
- Increased erase file performance.
- Fixed Generate Directory Handle.
- Advanced hot plug is now allowed.
- Fixed logout connection timing window.
- Connection properly marked as Macintosh Station.
- Fixed media manager partition read and write.
- Ensured that NCP is the correct size.
- Fixed the invalid nspace page fault.
- Fixed the NetWare alert.
- Fixed QMS abend on volume dismount.
- Fixed the read ahead code.
- Fixed the Read Over 4 GB abend.
- Disallowed the renaming of protected files.
- Enhanced the scanning of the bindery object API.
- Fixed the packet signature page fault.
- Fixed SPX packets.
- Allow TTS to be throttled.
- Fixed reschedule during volume dismount.
- SCMD/STAT displays the Local Clients IP Netnumber List in correct order.
- Fixed calculations in CLIB.NLM for out of range month days.
- In NLMLIB, changed start value for MaximumNumberOfDSCConnections from 2000 to 10,000.
- In REQUEST, fixed BADSERVICECONNECTION error that would cause packets to be sent from applications repeatedly, causing high CPU utilisation problems on the server.
- Fixed abend in THREADS when there is no context on the thread.
- Fixed page faults in PSERVER when servers initialise.
- Fixed high utilisation occurrences with GroupWise.
- If a 4.11 server holds the master replica of a partition that is also replicated on 5.x servers, obituaries now process correctly.
- Fixed potential memory leak when AFP is loaded.
- Fixed a problem with HP JetDirect printers.

**Boot Failure**

If for some reason the server fails to boot after installation, then you will need to rename the SERVER.OLD file manually to SERVER.EXE to bring the server back up.

**If DOS Removed**

If you remove DOS at the server, you must restart the server with DOS active in order to install the Support Pack. This is because files cannot be copied to the DOS partition unless DOS is active. If the AUTOEXEC.NCF file contains the command REMOVE DOS, comment out that line and restart the server.

**Config Changes**

As with the NetWare 5 pack, the Support Pack installation detects the current server configuration and installs the appropriate files. If the server configuration is changed - for example, changing from NetWare SFT/III to NetWare 4 - you will need to reinstall the Support Pack for the new configuration.



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**Acknowledgement**

This article has been prepared from information supplied by Novell and edited by PCNA staff.

Figure 2 - The major bugs fixed in NetWare 4 for the first time by SP8.

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