



[Release Date]

January 12, 2011

[Applicable Hardware]

NASdeluxe NDL-2450R/NDL-2550T/NDL-2700 Series/NDL-2800 Series

[Software Upgrade/Downgrade Note]

1. We recommend backup the RAID data before firmware upgrade. There is potential risk of data loss when upgrade the NAS firmware and NASdeluxe is not responsible for any data loss and recovery.
2. After firmware v3.05.02.04 installed, the new software doesn't allow users to downgrade to any firmware version below v3.05.02.04.
3. System Configuration Download/Upload does not support different software version.
Reminder: After upgrade to latest firmware, download configuration and save separately.

[New Features/Changes]

1. Added "Optimize Block Size" option in [System Network > Samba/CIFS]
The default setting is enabled. Disabling it can fix the issue that Windows Explorer saw about 20% difference between "Size" and "Size on disk" while browsing some data copied to the NAS.
2. Fixed the mounting issue that USB/eSATA backup module failed with FAT32 eSATA HDD.
3. Fixed the file hidden issue when Mac user did this.
 - 1) Edit a file in an ACL share folder through AFP connecting
 - 2) "Save as" the edited file to a sub-folder of original share folder
 - 3) New file is hidden when browsing it from Windows Explorer
1. Remove wireless LAN support. Both AP mode and client mode driver are no longer available since FW 3.05.02.3.
2. Schedule off process will be skipped if the RAID is creating, rebuilding, expanding, or migrating.

[Changes before firmware v3.05.02.04]

- 1) Added "AutoModule" feature and added a new system share folder "_NAS_Module_Source_".
- 2) Added TFTP service support thus NAS could work as a TFTP server.

Note:

1. TFTP service folder should be public and without any ACL rule.



2. Double byte file name (Chinese, Japanese, Korean, etc) may have problems in case the TFTP client doesn't support UTF8. Anyway we recommend using single byte characters as the file name.
3. TFTP service runs at port 69 by default. It is changeable from admin web interface. Please notify possible port conflicts, if any.
4. The biggest file size is 4GB while transferring thru TFTP.
- 3) **Added driver for Intel® Gigabit ET Quad Port Server Adapter. (For NDL-2700T/NDL-2800R+ only)**
- 4) **Added driver for Intel® 10 GbE CX4 dual port server adapter. (For NDL-2700T/NDL-2800R+ only)**
- 5) **Added driver for Intel® PRO/1000 dual/quad port server adapter. (For NDL-2700T/NDL-2800R+ only)**
- 6) **While Link Aggregation enabled from WAN configuration page, the LAN configuration will be grayed out.**
- 7) **While creating folders in WebDisk, "[", "]", and "!" are not allowed in the folder name.**
- 8) **Share folder name will not allow "#".**
- 9) **Added passive port range support for FTP.**
- 10) **Added a new feature that anonymous FTP user can upload files but cannot modify or delete uploaded files.**
- 11) **Added a feature that IE FTP will pop up the authentication dialog box.**
- 12) **Added Portugal language support in admin web interface.**

[Bug Fixes]

- 1) **Fixed the issue that WD My Book and My Passport caused USB driver panic thus RAID/Disk status incorrect.**
- 2) **Fixed the issue that Mac computer cannot login into NAS ACL folders by AD user account.**
- 3) **Fixed "fdisk fail" issue while doing firmware upgrade.**
- 4) **When users created albums and then the user accounts being deleted, there will be no way to delete the left albums. This firmware makes "admin" can modify and delete such albums via SMB.**
- 5) **Fixed the Publish Wizard button doesn't appear for Windows Vista and Windows 7.**
- 6) **Fixed the last status incorrect while there is special character in Nsync backup folder.**
- 7) **Fixed the slideshow occasionally didn't show the first photo.**
- 8) **Fixed the password issue while batch creating users accounts.**
- 9) **Corrected some translations for Simplified Chinese.**
- 10) **Fixed some UI display issues for Mac Safari.**

11) Fixed could not mount NFS share while fill in a single IP address.

[Limitations]

1. There is an 8 TB limitation for EXT3 file system. It means, if more than four 2 TB HDD installed in NDL-2550T/NDL-2700 series/NDL-2800 series, you may have to create two EXT3 RAID volumes. And both are smaller than 8 TB in capacity. Note: XFS is without the 8 TB limitation.
2. NDL-2550T/NDL-2700 series/NDL-2800 series support up to three RAID volumes. For ZFS RAID volume, just one is allowed. In addition, Snapshot function is only available in ZFS RAID.
3. Some users said Seagate had new firmware for 1.5 TB drives. So NASdeluxe recommends contacting Seagate if you plan to use Seagate 1.5 TB drives in NASdeluxe system. Also, please back up RAID data regularly, no matter the HDD is in NASdeluxe compatibility list or not.

Users' feedback:

Seagate P/N: 9JU138-300, 9JU138-336 with SD15, SD16, and SD17 ==> SD1A or newer

Seagate P/N: 9JU138-301 with CC1G ==> CC1H or newer

4. RAID volume encryption : AES 256 bits
 - a. NAS admin has to insert an USB flash disk to save encryption key file on it.
 - b. To encrypt an existing RAID is not possible. Please do it while creating a new RAID.
 - c. NAS performance will drop significantly while using encrypted RAID.
 - d. The USB flash disk (key file) should exist whenever the NAS reboots/boots up and doing RAID configuring.
 - e. Encrypted RAID doesn't support on-line Expansion, just off-line Expansion is doable.
 - f. Encrypted RAID doesn't support file system check.
 - g. If the USB flash disk (key file) lost or key file modified, the RAID data will be INACCESSIBLE FOREVER and no way to recover it.**
5. Once the RAID created, there will be about 5% data used by EXT3 file system. The capacity stores the journal and inodes; which are necessary to keep RAID data safer.
6. RAID rebuild: in case one HDD failed in RAID 1, 5, 6, and 10 configurations, please hot unplug failed one and hot plug in new one; then RAID rebuilding will automatically start. If the replacement is done after NAS shutdown, administrator has to manually add spare in Admin Web GUI to start the RAID rebuilding.
7. RAID Expansion: When changing the RAID 5 configuration from five smaller disks to five bigger disks, you have to change one disk at a time and then rebuild the RAID. Lastly, utilize the newly added capacity from Space Allocation page.
8. ZFS limitations:
 - a. Share folders on ZFS RAID are only allowed to be access by Samba.



- b. ZFS does not support NFS
 - . When share folders created on ZFS RAID, NFS button in admin Web UI will be grayed out. [Storage > Folder]
 - . NFS clients could not showmount the share folders created on ZFS RAID.
 - c. ZFS does not support AFP
 - . Mac computers could not find the share folders created on ZFS RAID even if the AFP service had been enabled from the NAS. In case the NAS just has ZFS RAID, Mac computers will fail to connect to the NAS.
 - d. ZFS does not support FTP
 - . When FTP user login into the NAS, all folders created on ZFS RAID are invisible and inaccessible.
 - e. ZFS does not support ACL folder when doing Nsync in FTP mode
 - . When doing Nsync in “Legacy FTP Server” mode, the Nsync folder on Target NAS is inaccessible, so the Nsync task always fails.
 - f. ZFS does not need file system check
9. XFS limitations :
- a. XFS file system does not support folder quota.
10. iSCSI Target : the maximum numbers of iSCSI target volumes depend on the physical memory size and also the CPU power of each NASdeluxe system. So the following limit applies since FW 3.01.01. No matter one RAID or multiple RAID volumes exist in a NAS, the maximum limit will be the same.

Max. No of iSCSI Targets	Model Name
5	NDL-2500T, NDL-2400R
10	NDL-2550T, NDL-2450R
15	NDL-2700T, NDL-2700T+ NDL-2800R, NDL-2800R+
25	NDL-2700ST, NDL-2800SR

- a. For NAS admin without cluster based OS/applications to manage multiple initiators connected to the same iSCSI volume, we highly recommend every iSCSI volume is connected by single iSCSI initiator. However, in case NAS admin has cluster based OS/applications, up to 8 initiators is possible.
- b. Uncontrolled concurrent access to the same iSCSI target volume may result data corruption or un-predicable results.
- c. iSCSI target may be disconnected from initiator if other RAID settings on the same target NAS being altered.
- d. Verified iSCSI initiators:

Windows: Microsoft initiator v2.0.4
StarPort initiator 3.5.2



MAC OS: globalSAN iSCSI initiator version 3.0 (1150)

Linux: open-iscsi 2.0-865

- e. There is a system advanced option to choose 4K or 512 bytes block size for iSCSI volume, and the default is 4K bytes. 512 bytes block size may encounter **2TB volume capacity limitation** on some initiators running 32bit OS. Nevertheless, 4K block size could slice the iSCSI volume over 2TB, but, there might be compatibility issue. For VMware, we recommend using 512 bytes block size.
11. iSCSI Expansion : there are some limitations applied.
 - a. The maximum iSCSI volume would be 16TB, and the minimum expansion size is 1GB.
 - b. iSCSI service will be stopped till the expansion completes.
 - c. iSCSI expansion just handles the volume size. The partition(s) inside the volume won't be adjusted.
 - d. iSCSI expansion just support local RAID, does not support add-on RAID by iSCSI stackable.
 12. Stackable function: Support of stackable function across NASdeluxe NDL-2550T/NDL-2700 series/NDL-2800 series.
 - a. **The concurrent connection on target iSCSI volume of NASdeluxe will be limited to 1 if the initiator comes from other NASdeluxe.**
 - b. The internal file system format of stackable target is ReiserFS, and the maximum capacity is 16 TB.
 13. iSCSI Thin-Provisioning
 - a. The Thin-Provision capacity has to be determined first.
 - b. Up to five iSCSI Thin-Provision target can be created on the Thin-Provision capacity.
 - c. The total virtual size of iSCSI Thin-Provision targets could not exceed 16 TB in a RAID.
 - d. The virtual size should be larger than the real capacity and less than 16 TB.
 - e. When determine the virtual size, the minimum increase is 100GB.
 - f. When the total used capacity reaches 90% of real Thin-Provision capacity, NAS will send E-mail notifications out every 10 minutes until the capacity expanded. Also, system log will show capacity warning in admin web interface. The host server won't receive any notification before the iSCSI Thin-Provision target full.
 14. iSCSI LUN ID in admin web interface
 - a. The iSCSI LUN ID is between 0 and 254.
 - b. Duplicate ID is not allowed excepting ID 0.
 - c. Mac computer just recognized the first iSCSI volume.
 15. Active Directory Support behavior : before AD Sync is pressed, search criteria has to be



a fully match string to user account. After AD Sync is pressed, search criteria can be only beginning part of the user account. Only 1000 search results will be displayed.

16. To enable ADS support for Small Business Server 2003, we recommend do not install ISA server. Otherwise, NDL-2550T/NDL-2700 series/NDL-2800 series may fail to join the AD.
17. Target USB function: the maximum capacity of Target USB is limited at 2TB. Just NDL-2550T features target USB function; NDL-2700 series/NDL-2800 series doesn't have it.
18. Supports the following USB wireless dongles only. And it has to be installed before NAS booting up, no PnP.

[ZyDAS ZD1211]

- a. 3Com 3CRUSB10075 (Manufacture ID: 6891, Device ID: A727)
- b. Zyxel G220USB (Manufacture ID: 0586, Device ID: 3401)
- c. PCI GW-US54mini (Manufacture ID: 14EA, Device ID: AB13)

[ZyDAS ZD1211B]

- d. Zyxel ZyAIR G-220 V2 (Manufacture ID: 0586, Device ID: 340F)

19. Some attributes may not be included with files and folders when copying to a USB drive with FAT32 format.
20. If a USB hard drive is connected to NAS formatted as FAT16/32, the following restrictions apply:
 - Copy file with size greater than or equal to 2 GB to the NAS can not be performed due to FAT file system limitation.
 - Files created by Mac OS X like DS_Store can not be copied to the FAT16/32 USB drive.
21. NFS share is limited to public folders. In case you enable an NFS share on non-public (ACL) folder, the NFS client could successfully mount it but won't be able to read/write files. Currently we implemented NFS V3.
22. Reset button, if available (depends on model). So, in case the admin password or HTTP port lost, use LCM bottoms to load factory default please. In that case, user accounts and groups will be erased, but RAID data won't be affected.
23. HTTP and HTTPS ports should follow the rules given below.
 - Larger than 1024
 - Could not use 3169
 - Port 80 (HTTP) and 443 (HTTPS) are allowed
24. Mac OS Limitations
 - a. When using Mac OS X (post 10.2 with AppleTalk) without SMB, do not use Japanese characters in folder or file names to prevent errors accessing the data over a network.
 - b. Mac OS 9 and Mac OS X can not see files on the network with names made up of over 32 characters.



- c. Mac OS 8.x/9.x only supports local character encoding on file names (without Unicode support).
 - d. Occasionally, when a file is accessed by a Mac OS computer within a shared folder, an information file will be created in the same folder. If the file is then deleted by a Windows OS computer, the original file may no longer be accessible by Mac OS computers.
 - e. The following characters are not allowed to be included in the name used for a file or shared folder when using Mac OS (AppleTalk) devices.
? [] / \ = + < > ; : " , | *
 - f. Writing a file larger than 2 GB is not allowed by MAC OS-9.
25. NAS needs about 5 minutes to broadcast/register itself to other Mac OS through AppleTalk after booting up and service enabled.
26. While upgrade firmware to 3.00.06 and later, note the special relation between add-on modules and firmware:
- a. Owing to new UI design since FW 3.00.06, old modules installed in old FW version will not work properly. So, please uninstall every existing module and then find the latest version from NASdeluxe website.
 - b. DLM function in FW 2.x.x will no longer exist in new FW 3.00.06.
 - c. For NDL-2700ST and NDL-2800SR, the DLM2 module v1.0.5 will not work since new FW 3.00.06. Please do remove it before upgrading.
27. WebDisk : Only UTF-8 file name is supported.
28. File size has to be less than 1GB to be uploaded to NASdeluxe system from web browsers. FTP software has no such limitation.
29. File names and folder names should not contain more than 250 characters in their entire directory path to prevent errors occur in the file copy operations.
30. The following characters are not allowed to be included in the name used for files or folders on NASdeluxe system.
/ \ : * ? " < > | [] = + ; ,
31. File and directory attributes can not be modified by an FTP client when the FTP server of NASdeluxe system is enabled.
32. Anonymous FTP user could upload files into public folders but could not delete them.
33. FTP client can list up to 2000 files in a single folder.
34. NASdeluxe system could work as a TFTP server since firmware 3.04.00.3.
- a. TFTP service folder should be public and without any ACL rule.
 - b. Double byte file name (Chinese, Japanese, Korean, etc) may have problems in case the TFTP client doesn't support UTF8. Anyway we recommend using single byte characters as the file name.
 - c. TFTP service runs at port 69 by default. It is changeable from admin web interface. Please notify possible port conflicts, if any.
 - d. The biggest file size is 4GB while transferring thru TFTP.



- 35. NDL-2700T+ / NDL-2800R+ support specific GbE and 10 GbE NIC cards. There will be Additional LAN 1, 2, 3, and 4 to configure the network setting in admin web interface. However, the Link Aggregation functions will just work on original two on-board NIC, WAN/LAN1 and LAN/LAN2.
- 36. File system check page is in English, not multilingual.
- 37. Disk Power Management: some HDD may not respond to “idle spin down” command, and they won’t get into stand by mode even if the specified idle time had been reached. In addition, NDL-2700ST and NDL-2800SR do not support SAS HDD spin down at current moment.
- 38. Disk S.M.A.R.T. Test: NDL-2700ST and NDL-2800SR do not support Disk S.M.A.R.T. Test on SAS HDD.
- 39. UPnP function only works on WAN interface.
- 40. The create date is the same with modify date for every file copied into the NAS.
- 41. Single file size upper limitation: 2TB for EXT3 file system.

- 42. NASdeluxe system uses the following service ports by default.

Services	Default TCP port
iTunes	3689
iSCSI	3260
Media	8080
Twonky (UI)	9000/9001
Nfsd	111/2049
Nsync	2000
Rsync	873
Printer Server	631
Mysql	3306
mail server	995/25
Upnp	2689
DLM2 (bt)	10000~10200
DLM2 (amule)	4662
DHCP	67/68
SNMP	161/162
FTP	20/21
Apache module	10080
Samba	139/445
SSH	22



HTTP	80
HTTPS	443

Services	Default UDP port
iTunes	5353
Nfsd	111/2049
Printer Server	631
Mysql	3306
Twonky	1900/1030
Upnp	1900
Samba	138/137
NTP	123
Udpr	11000/11001
DHCP	67/68
SNMP	161/162
DLM2	4672
Syslog	514
TFTP	69
FTP	20/21

[Known Problems]

1. Using samba protocol in MAC OS will not accept file names with blank characters in tail.
2. AD users cannot access file via AFP on MAC OS.
3. IE7 / IE8 will show certification error alert while user access WEB admin UI via HTTPS.

[Attention]

1. **During firmware upgrade process, it is imperative that user DO NOT turn off the power to NASdeluxe system or closes the browser window. This will lead to catastrophic result. If your browser is set to cache the screen, after firmware upgrade has started for 5 minutes, please press CTRL-F5 to reload browser screen from server instead of from browser cache.**
2. **NASdeluxe strongly recommends NAS admin to backup the RAID data before doing the RAID Migration and Expansion. There is potential risk of permanent data loss when doing Migration/Expansion with disk drives having physical problems, and NASdeluxe is not responsible for any data loss and recovery expense.**
3. When installing the Windows Wizard program of NASdeluxe system on Windows XP Professional SP1 or SP2, Windows Vista, and newer OS, the firewall UDP ports 10000



and 10001 need to be opened.

4. Reset to factory default function automatically resets all the system settings including network settings, administrator password, user groups, language setting, system notification setting, and time zone setting.
5. Users should obey the international RF regulatory rules as they set up the wireless RF channel on the NAS. The RF operating channels for different regions have been specified as following. NASdeluxe has no responsibility for users attempting to violate the international RF regulation.

11 for N. America

14 Japan

13 Europe (ETSI)

2 Spain

4 France