



[Release Date]

June 1, 2009

[Applicable Hardware]

Thecus N7700 / N8800 IP Storage Server

[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 Thecus is not responsible for any data loss and recovery.
2. After firmware v2.01.09 installed, the new software doesn't allow users to downgrade to any firmware version below v2.01.09.
3. System Configuration Download/Upload does not support different software version.
Reminder : After upgrade to latest firmware, download configuration and save separately.
4. Stackable and iSCSI functions are available on N5200BPRO / N5200BRPRO / 1U4500 / N7700 / N8800 models. Standard N5200B / N5200BR won't have them.

[New Features/Changes]

- 1) Upgraded Samba version to 3.0.34 for Windows Vista clients with MS Hotfix KB955302 installed.
- 2) Added Secure FTP support.
- 3) Added two selectable modes for Nsync: Incremental and Synchronize.
- 4) Added two HDD test functions: SMART values checking and bad block scanning.
- 5) Added Bonjour service support (Zero-configuration networking by Apple).
- 6) Added RAID volume encryption support by AES 256 bits. (Owing to CPU power, N7700 and N8800 support this, but N5200PRO, N5200, 1U4500, and N4100PRO could not do it.)

Note.

1. NAS admin has to insert an USB flash disk to save encryption key file on it.
2. NAS performance will drop significantly while using encrypted RAID.
3. The USB flash disk (key file) should exist whenever the NAS reboots/boots up and doing RAID configuring.
4. Encrypted RAID doesn't support on-line Expansion, just off-line Expansion is doable.
5. Encrypted RAID doesn't support file system check.
6. 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.



7) Added support for iSCSI Expansion. (For N7700/N8800, N5200PRO and 1U4500 only)

Note.

1. The maximum iSCSI volume would be 16TB, and the minimum expansion size is 1GB.
2. iSCSI service will be stopped till the expansion completes.
3. iSCSI expansion just handles the volume size. The partition(s) inside the volume won't be adjusted.
4. iSCSI expansion just support local RAID, does not support add-on RAID by iSCSI stackable.

8) Added Samba Native/Compatible mode in Advanced option (Local Master).

[Bug Fixes]

- 1) Polished the language in web interface.
- 2) Fixed Link Aggregation / 802.3ad compatibility issue with Netgear GS724T switch.

[Limitations]

1. There is an 8 TB limitation for EXT3 file system. It means, if more than five 1.5 TB HDD installed in N7700/N8800, 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. N7700/N8800 supports up to three RAID volumes maximum. 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 Thecus recommends contacting Seagate if you plan to use Seagate 1.5 TB drives in N7700/N8800. Also, please back up RAID data regularly, no matter the HDD is in Thecus 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. Target USB function : once RAID created and Target USB capacity determined, you have to AC off and then on to make it works. In addition, the maximum capacity of Target USB is limited at 2TB.
5. Reset button : N7700/N8800 doesn't have a reset button like what N5200 has. So, in case the admin password or HTTP port lost, user LCM bottoms to load factory default please. In that case, user accounts and groups will be erased, but RAID data won't be affected.
6. iSCSI Target : up to 5 iSCSI target volumes are supported for each RAID.
 - a. For NAS admin without cluster based OS/applications to manage multiple initiators connected to the same iSCSI volume, we highly recommend every



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- 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 may exists **2TB volume capacity limitation** on some initiators running 32bit OS.
7. Stackable function : Support of stackable function across Thecus N7700/N8800 series NASes.
- a. **The concurrent connection on target iSCSI volume of Thecus NAS will be limited to 1 if the initiator comes from other Thecus NASes.**
 - b. The internal file system format of stackable target is ReiserFS
8. Active Directory Support behavior in ACL configuration page had been changed since firmware v2.00.08. 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.
9. 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.
10. 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, click on “Expand” button to resize the total capacity. Otherwise, you may see additional capacity was added into the snapshot partition.
11. 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)
12. Some attributes may not be included with files and folders when copying to a USB drive with FAT32 format.
13. If a USB hard drive is connected to NAS formatted as FAT16/32, the following restrictions apply:



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- 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.
14. 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.
 15. 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
 16. 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 rebooting or shutdown, administrator has to manually add spare in Admin Web GUI to start the RAID rebuilding.
 17. When adding an HDD into JBOD RAID, all services such as WebDisk, SMB/CIFS, and FTP will be temporarily disabled. Once the JBOD resizing completes, all services will be turned on according to original settings.
 18. To enable ADS support for Small Business Server 2003, we recommend do not install ISA server. Otherwise, N7700/N8800 may fail to join the AD.
 19. 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 support 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.
 20. NAS needs about 3~5 minutes to broadcast/register itself to other Mac OS through AppleTalk after booting up and service enabled.
 21. For Mac users, NAS user accounts created in old firmware may fail to log in before admin re-entering the user's password. SMB/CIFS users don't have this issue.



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22. WebDisk : Only UTF-8 file name is supported.
23. File size has to be less than 1GB to be uploaded to the N7700/N8800 from web browsers. FTP software has no such limitation.
24. 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.
25. The following characters are not allowed to be included in the name used for files or folders on the N7700/N8800.
/ \ : * ? " < > | [] = + ; ,
26. When copying a file that uses superscript in its file name (common with some international character sets), the date and time attributes may not be properly set on the N7700/N8800 for that particular file.
27. File and directory attributes can not be modified by an FTP client when the N7700/N8800 FTP server is enabled.
28. Anonymous FTP user could upload files into public folders but could not delete them.
29. File system check page is in English, no multilingual.
30. 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.
31. Stackable function : To avoid the RAID name confliction while combined different RAID sets in one NAS by using disk roaming, the target NAS should modify the RAID name first before inserting the roaming RAID set.
32. UPnP function only works on WAN interface.
33. The create date is the same with modify date for every file copied into the NAS.
34. Single file size upper limitation: 2TB
35. The file downloaded from N7700/N8800 via Microsoft IE might include extension index number in its file name.
36. Windows 95/98 clients can not display files with double-byte file name correctly.
37. Because of Windows 95/98 compatibility issues, share folder name may have a problem when it is longer than 12 characters.

[Known Problems]

1. Could not completely delete share folders if SMB/CIFS users are using the share files.
2. Web GUI : Can not login Web UI when the NetBIOS name is with an underscore.
3. Failed to edit or delete a folder that its folder name contains a superscript "".
4. MAC OS 9 Apple network browser sometimes freezes for 5~10 minutes after selecting N5200; however, using afp://IP always works fine on both MAC OS-9/X
5. FTP client can list up to 2000 files in a single folder.
6. Using samba protocol in MAC OS will not accept file names with blank characters in tail.
7. Nsync source cannot detect the shutdown or connection lost of target peer.
8. AD users cannot access file via AFP on MAC OS.
9. IE7 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 N7700/N8800 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. Thecus 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 Thecus is not responsible for any data loss and recovery expense.**
3. When installing the Windows Wizard program of N7700/N8800 on WinXP Professional SP1 or SP2, 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. Hardware reboot button at N8800 front panel just reboots the controller board. The NAS settings won't be reset.
6. Users should obey the international RF regulatory rules as they set up the wireless RF channel on the N5200. The RF operating channels for different regions have been specified as following. Thecus 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