[Release Date]

Jan 31, 2013

[Applicable Hardware]

Thecus N2200EVO N4100EVO IP Storage Serve

[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. Since new version firmware installed, the new firmware doesn't allow users to downgrade to any previous version firmware.

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. **Enhance auto file system check ability.**

[Bug Fixes]

1. -

[Limitations]

1. RAID rebuild: in case one HDD failed in RAID 1, and 5 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.

2. XFS file system is with 16 TB limit.

3. iSCSI Target: the maximum numbers of iSCSI target volumes is support up 2 targets.

   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.

4. iSCSI Target : Please notice the limitations of iSCSI initiators running in host platform; NAS admin may have to change the LUN ID to fit below conditions.

Host Platform	Allowed iSCSI LUN ID
Microsoft initiator in Windows XP	0 ~ 254
Microsoft initiator in Windows Vista / 7	0 ~ 7
VMware ESXi	0 ~ 254
Open iscsi (to stack two Thecus NAS)	0 ~ 1
MAC globalSAN	0
XenCenter	0 ~ 1

5. Stackable function: Support of stackable function across other Thecus N4100EVO.

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 XFS, and the maximum capacity is 16 TB.

6. 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.

7. Target USB function: the maximum capacity of Target USB is limited at 2TB. Just N2200EVO features target USB function; N4100EVO doesn't have it.

8. Some attributes may not be included with files and folders when copying to a USB drive with FAT32 format.

9. 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.

10. 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.

11. Reset button: N4100EVO doesn't have a reset button like what N2200EVO has. 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.

12. 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

13. 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.

  g. When using AFP or Samba to access NAS, please disable "Hide Temporary Files" option under Samba/CIFS.

  h. Hidden "_NAS_Piczza_" folder in AFP.

14. NAS needs about 5 minutes to broadcast/register itself to other Mac OS through AppleTalk after booting up and service enabled.

15. WebDisk: Only UTF-8 file name is supported.

16. File size has to be less than 1GB to be uploaded to Thecus NAS from web browsers. FTP software has no such limitation.

17. 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.

18. The following characters are not allowed to be included in the name used for files or folders on Thecus NAS.

    / \ : * ? " < > | [ ] = + ; ,

19. File and directory attributes can not be modified by an FTP client when the FTP server of Thecus NAS is enabled.

20. Anonymous FTP user could upload files into public folders but could not delete them.
21. FTP client can list up to 2000 files in a single folder.
22. TFTP server Limitations:
    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.
23. File system check page is in English, no multilingual.
24. 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.
25. UPnP function only works on WAN interface.
26. The create date is the same with modify date for every file copied into the NAS.
27. Thecus NAS 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

28. While the log folder for rsync is not exist, the log event will write to "nsync" folder.

[Known Problems]

1. Using samba protocol in MAC OS will not accept file names with blank characters in tail.
2. 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 Thecus NAS 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 Thecus NAS 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.