

Thecus N5200 FAQ

- Thecus N5200 FAQ 1
 - 1. NAS Management.....2
 - 1-1. Map a network drive in Windows XP2
 - 1-2. Could not map a network drive in Windows XP2
 - 1-3. Map a network drive in Mac OS X2
 - 1-4. Configure the firewall software such as Norton Internet Security3
 - 1-5. Firmware upgrade procedure3
 - 1-6. Time, Time Zone and NTP Server3
 - 1-7. Reset NAS IP and admin password.....3
 - 2. RAID Management4
 - 2-1. Hard disk drive compatibility4
 - 2-2. Rebuild a degraded RAID.....4
 - 2-3. Multiple RAID volumes4
 - 2-4. RAID volume expansion4
 - 2-5. RAID migration4
 - 2-6. SMART Info5
 - 2-7. eSATA and USB disk drives.....5
 - 3. Services & Functions5
 - 3-1. ADS support5
 - 3-2. NT4 Domain support6
 - 3-3. Link Aggregation (IEEE 802.3ad)6
 - 3-4. Wireless LAN.....7
 - 3-5. FTP user’s home7
 - 3-6. Nsync7
 - 3-7. NFS7
 - 3-8. Target USB7
 - 3-9. N5200 disappeared from My Network Places.....7
 - 4. Miscellaneous7
 - 4-1. Performance level.....7
 - 4-2. System memory size8
 - 4-3. Share the data over the Internet8

1. NAS Management

1-1. Map a network drive in Windows XP

Once you have successfully created the RAID on N5200, follow the steps below to map network drive.

- 1) Create a user *john*. [Admin Web GUI : Accounts / Users / Add / john]
- 2) Create a share folder on N5200 such as *Picture*. [Admin Web GUI : Storage / Folder / Add / Picture]
- 3) Set the folder ACL let user *john* become writable to folder *Picture*. [Admin Web GUI : Storage / Folder / Picture / ACL / Submit john into writable column]
- 4) Map a drive Z which is corresponding to the share folder *Picture* on N5200. [Windows XP : Right click *My Network Places* and select *Map Network Drive*]
- 5) Fill in the N5200 folder information such as [\\192.168.1.100\Picture](http://192.168.1.100/Picture) and click "using a different user name". Then fill in the user name john and the password.
- 6) Network drive Z will be successfully mapped.

Note: Mapping a network drive under DOS command line is also possible.

```
net use Z: \\192.168.1.100\Picture /user:john password
```

Z: is the drive letter

192.168.2.100 is the IP address of the NAS

Picture is the share folder's name

john is the user name

password is john's password

1-2. Could not map a network drive in Windows XP

You may have problems to map a network drive in below conditions.

- 1) The network folder is currently mapped using a different user name and password. To connect using a different user name and password, first disconnect any existing mappings to this network share.
- 2) The mapped network drive could not be created because the following error has occurred: Multiple connections to a server or shared resource by the same user, using more than one user name, are not allowed. Disconnect all previous connections to the server or shared resource and try again.

To check out existing network connections, use `net use` under DOS prompt.

1-3. Map a network drive in Mac OS X

Once you have successfully created the RAID on N5200, follow the steps below to map network drive.

- 1) Create a user *john*. [Admin Web GUI : Accounts / Users / Add / john]
- 2) Create a share folder on N5200 such as *Picture*. [Admin Web GUI : Storage / Folder / Add / Picture]
- 3) Set the folder ACL let user *john* become writable to folder *Picture*. [Admin Web GUI :

Storage / Folder / Picture / ACL / Submit john into writable column]

- 4) Find the share folder of N5200 by Finder. [Mac OS X : Network / Select the Group N5200 belongs to / Select N5200 / Click on Connect button]
- 5) Select the SMB/CIFS shared volume you want to connect to. [Picture]
- 6) Click on Authenticate button. [Authenticate]
- 7) Fill in the workgroup, name, and password. Then check "Remember this password in my keychain" and OK.
- 8) Folder Picture will be listed in Finder as an icon.

1-4. Configure the firewall software such as Norton Internet Security

- 1) Double click the NIS icon on system tray, and then configure the *Personal Firewall*.
- 2) On *Programs* page, find the *SetupWizard.exe* and change its permission to "Permit All". If it's not in the program list, use *Add* or *Program Scan* button to find it.
- 3) On *Networking* page, manually add N5200 IP address, say 192.168.1.100, to the *Trusted* list.

Note: Thecus Setup Wizard uses ports 11000 and 11001 to discover and communicate with the NAS. Please make sure the ports are not blocked by software or hardware firewalls.

1-5. Firmware upgrade procedure

For the details about firmware upgrade procedure, please refer to the document at http://www.thecus.com/Downloads/N5200_FWUPG_10004.pdf .

1-6. Time, Time Zone and NTP Server

NAS admin is able to set the NTP Server to keep the NAS time synchronized. However, if the NAS can not access the Internet, you may encounter a problem to set the Time and Time Zone. In case it happens, please do this way.

- 1) Click No NTP Server. [System / Time / NTP Server : No / Apply]
- 2) Set Date, Time, and Time Zone.
- 3) Click Apply button.

In addition, if the NAS is able to access the Internet and you want to keep the NTP Server clock.isc.org by default, please make sure the DNS Server is correctly set thus the NTP Server name could be correctly resolved. [Network / WAN / DNS Server]

1-7. Reset NAS IP and admin password

N5200 LCD will display WAN and LAN IP addresses; however, incase NAS admin wants to reset the networking defaults, follow the steps below.

- 1) Once the NAS boots up and get ready, LCD will rotate system information: Date & Time => WAN IP => LAN IP => RAID Status => System Fan Status => Date & Time. At this moment, press and hold the reset button at front panel for 5 seconds.
- 2) The NAS will beep, automatically restart itself, and then load networking defaults.
Default IP: 192.168.1.100 for WAN interface
192.168.2.100 or 192.168.2.254 for LAN interface

HTTP port: 80

HTTPS port: 443

Default admin password: admin

Jumbo Frame support: disabled

Note: Reset button doesn't work on old firmware v1.00.00.2a and v1.00.01.3

2. RAID Management

2-1. Hard disk drive compatibility

N5200 doesn't support hard disk drives that won't spin up before 'start unit' command receives; such as Seagate Barracuda 7200.9 series..

2-2. Rebuild a degraded RAID

In case one HDD failed in RAID 1 or RAID 5 configuration, 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.

1) Login into Admin Web GUI as admin.

2) Check new HDD as a spare and then rebuild the RAID. [Storage / RAID / Config / Check new HDD as a spare / Add spare]

2-3. Multiple RAID volumes

N5200 doesn't support multiple RAID volumes. It means the following configurations are not allowed.

- Configure HDD 1, 2, and 3 as RAID 5. Then set HDD 4 and 5 as RAID 0, 1 or JBOD.

- Configure HDD 1, 2, 3 and 4 as RAID 5. Then set HDD 5 as JBOD.

- Configure HDD 1, 2, 3 and 4 as RAID 6. Then set HDD 5 as JBOD.

- Configure HDD 1, 2, 3 and 4 as RAID 10. Then set HDD 5 as JBOD.

2-4. RAID volume expansion

N5200 supports RAID volume expansion. A RAID 5 with 160G disk drives could expand the capacity to RAID 5 with 500G disk drives by the following way.

1) RAID5 created by four 160G disk drives.

2) Replace one 160G drive by a brand new 500G drive. And then wait for the RAID rebuilding process done.

3) Replace another 160G drive and rebuild the RAID.

4) Replace the third 160G drive.

5) Replace the last 160G drive. Once the rebuilding process finishes, the RAID volume will automatically start expanding from 160Gx3 to 500Gx3. And original data still exist there.

2-5. RAID migration

N5200 allows below RAID migration cases.

To From	RAID 0	RAID 5
RAID 0	[RAID 0] HDDx2 to [RAID 0] HDDx3 [RAID 0] HDDx2 to [RAID 0] HDDx4 [RAID 0] HDDx2 to [RAID 0] HDDx5 [RAID 0] HDDx3 to [RAID 0] HDDx4 [RAID 0] HDDx3 to [RAID 0] HDDx5 [RAID 0] HDDx4 to [RAID 0] HDDx5	[RAID 0] HDDx2 to [RAID 5] HDDx3 [RAID 0] HDDx2 to [RAID 5] HDDx4 [RAID 0] HDDx2 to [RAID 5] HDDx5 [RAID 0] HDDx3 to [RAID 5] HDDx4 [RAID 0] HDDx3 to [RAID 5] HDDx5 [RAID 0] HDDx4 to [RAID 5] HDDx5
RAID 1	[RAID 1] HDDx2 to [RAID 0] HDDx2 [RAID 1] HDDx2 to [RAID 0] HDDx3 [RAID 1] HDDx2 to [RAID 0] HDDx4 [RAID 1] HDDx2 to [RAID 0] HDDx5	[RAID 1] HDDx2 to [RAID 5] HDDx3 [RAID 1] HDDx2 to [RAID 5] HDDx4 [RAID 1] HDDx2 to [RAID 5] HDDx5
RAID 5	X	[RAID 5] HDDx3 to [RAID 5] HDDx4 [RAID 5] HDDx3 to [RAID 5] HDDx5 [RAID 5] HDDx4 to [RAID 5] HDDx5

2-6. SMART Info

N5200 could display the SMART info of every disk drive on [Storage / Disks / Status] page; however, the information comes directly from the disk drive and NAS won't revise or repair them. In case you find a disk drive has abnormal SMART info, say more than 64 Reallocated Sectors and keeps growing, you may have to replace the drive with a brand new one.

2-7. eSATA and USB disk drives

Before attaching an eSATA or USB disk drive to N5200, you have to partition and format it on a desktop computer or a notebook first. The attached device will be located at <\\192.168.1.100\usbhdd\sdf1> where 192.168.1.100 means the IP address of N5200 and sdf1 stands for the first partition on disk #6, the eSATA or USB disk drive. In case it's NTFS partition, NAS users could open or copy files from <\\192.168.1.100\usbhdd\sdf1> but could not add new files or modify existing files. In addition, the external disk drive could not be added into the RAID. It just behaves as an extra disk space.

3. Services & Functions

3-1. ADS support

Here is an example for setting up an ADS support. [Accounts / Authentication / ADS/NT Support / Enable]

ADS/NT Support	
WINS Server	
Work Group/Domain Name	thecus
ADS/NT Support	Enable
Authentication Method	ADS
ADS/NT Server Name	adserver
ADS/NT Realm	thecus.com
Administrator ID	Administrator

Administrator Password	*****
Confirm Password	*****

In addition, you have to note something listed below.

- 1) The administrator password means that of ADS admin, instead of N5200 admin.
- 2) The DNS server of WAN configuration should be correct thus the ADS server name could be successfully resolved. In DOS prompt, `nslookup adserver.thecus.com` should show correct IP address. If possible, let ADS server provides the DNS service.
- 3) The time and time zone should be identical on both N5200 and ADS. In case the time shifts more than 5 minutes between N5200 and ADS server, the authentication will fail.

Note: N5200 just supports account authentication by ADS; it won't behave as an AD object.

3-2. NT4 Domain support

Here is an example for setting up an NT4 Domain support. [Accounts / Authentication / ADS/NT Support / Enable]

ADS/NT Support	
WINS Server	
Work Group/Domain Name	thecus
ADS/NT Support	Enable
Authentication Method	NT
ADS/NT Server Name	nt4pdc
ADS/NT Realm	thecus.com
Administrator ID	Administrator
Administrator Password	*****
Confirm Password	*****

In addition, you have to note something listed below.

- 1) The administrator ID/password should be the administrator of NT4 machine, instead of N5200 admin.
- 2) The DNS server of WAN configuration should be correct thus the NT server name could be successfully resolved. In DOS prompt, `nslookup nt4pdc.thecus.com` should show correct IP address.
- 3) The Domain Name on WAN Configuration page should be correct.

WAN Configuration	
Domain Name	thecus.com
DNS Server	IP address of NT4PDC

3-3. Link Aggregation (IEEE 802.3ad)

The Link Aggregation on WAN Configuration page specifies whether WAN and LAN ports will be aggregated and act as one port.

- 1) Failover : When one port fails, the other one will take over.

2) Load Balance : Ethernet traffic will flow alternative between two Ethernet ports.

Note: This feature is only available on N5200, not on N5200 RouStor.

3-4. Wireless LAN

N5200 supports the following wireless USB adapters; which are based on ZyDAS ZD1211 chip.

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

3-5. FTP user's home

Owing to the design concept of NAS is different from a traditional FTP server, FTP users won't enter their home directory when logged in. The FTP root folder is with read-only permission and FTP users have to manually change to sub-folders to put files or create subfolders. Of course they have to be in the writable list of the folder ACL.

3-6. Nsync

Nsync is a folder-to-folder level synchronization/backup function brought by Thecus NAS N5200. The backup task could be scheduled periodically or manually start it whenever you want. Basically you will need a target machine to store the backup data. Either another N5200 or a traditional FTP server is okay. For more details, please refer to Nsync quick guide.

3-7. NFS

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. In addition, the mount point of a share folder *Picture* is */raid/data/Picture*.

3-8. Target USB

Once RAID created and Target USB capacity determined, you have to AC off and then on to make the Target USB works. In addition, the maximum capacity of Target USB is limited at 2TB.

3-9. N5200 disappeared from My Network Places

In case the NAS users are accessing the NAS via the host name rather than its IP, the mapped network drives may occasionally disappear. At this moment, N5200 also disappears from My Network Places. This issue had been fixed since firmware v1.00.03.

4. Miscellaneous

4-1. Performance level

In general, the transfer rate of N5200 is around 30 ~ 50 MB/sec; it depends on RAID configuration and may vary a lot according to different network environment.

Jumbo Frame could significantly improve the performance. However, before enabling it, you have to make sure the Switch or Router in front of the NAS supports Jumbo Frame.

Otherwise, you may lose connection with the NAS. In case it happens, use reset button (FAQ 1-7) to disable Jumbo Frame.

4-2. System memory size

Some users are wondering if they could replace the memory module with bigger capacity. Firstly, N5200 features customized controller board and needs special memory timing. So, not all memory modules can work on it. In case customers replace the certified module with another one, either the same or different size, the NAS might be unstable or no boot. The worst case, some incompatible memory modules seem work fine at system booting, but suddenly cause NAS locked up at heavy loading.

System memory is not a user serviceable part. Please do not replace the memory modules. Changing memory modules might cause system instability and data loss.

4-3. Share the data over the Internet

You could share with friends the data on the NAS. Just refer to this case study: http://www.thecus.com/storage_case03.php

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