

Contents

1. Overview	2
2. Nsync from an N4100 (172.16.66.88) to another N4100 (172.16.66.99)	2
2-1. Setup Target N4100 (where backup data will be stored)	2
2-2. Setup Nsync N4100 (file source)	3
2-3. Restore Backup Data	7
3. Nsync from an N4100 (172.16.66.88) to an FTP Server (172.16.66.99)	8
3-1. Setup Target FTP Server (where backup data will be stored)	8
3-2. Setup Nsync N4100 (file source)	8
3-3. Restore Backup Data	12
4. Nsync Troubleshooting	13
4-1. Filename and FTP encoding	13
4-2. Incremental Backup	13
4-3. Restore Nsync Task	13
4-4. Data Security on Target Server	13



1. Overview

Nsync is a folder-to-folder level synchronization/backup function brought by Thecus NAS N4100. 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 N4100 or a traditional FTP server is okay.

2. Nsync from an N4100 (172.16.66.88) to another N4100 (172.16.66.99)

2-1. Setup Target N4100 (where backup data will be stored)

 The target N4100 should have RAID created. In addition, create a user account that will have writable permission of Nsync folder, say *john*. Then add *john* into the writable list of Nsync folder ACL. [Storage / Folder]

Thecus		IP Ste	orauja	Appl.	ieme	9
🗢 Status 🔻 🔇	Storage	≠ & Networ	k → ili Acc	ounts 🗕 🌱 S	ystem v	L Language
-	Disks	-	_	_	-	
	Folder	Folder				
	Nsync					
		Folder Name	Description	ACL Edit	Remove	
		nsync				
		aug			Del	
		iohn			Del	
		douid			Del	
		uavio				
			Ad	d		
						Protectyour Source Secure Your Data
_						
						www.thecus.com
	Folder	nsync		R	ecursive	
Local (Groups	Der	iy D	Read 0	nly	Writable
Local	Users					
AD	Users	Remo	ove	Remov	/e	Remove
users aaaa david yt	<					john
	الکر	L	Submit	Beset	رك.	
			Capinit	16361		



2) Nsync Target setting: leave Nsync Target Server as enabled. [Network / Target]

Thecus	IP Storage Applian	lee
🗢 Status 🔻 🔇 Storage	👻 🗇 Network 👻 🏙 Accounts 👻 🌱 System	▼ L Language
_		
	Nsync Setting	
	Nsync Target Server 💿 Enable 🔿 Disable	
	Apply Cancel	Ī
		Protect Your Source Secure Your Data
		www.thecus.com

2-2. Setup Nsync N4100 (file source)

1) Add a new Nsync task. [Storage / Nsync]

	Storage -	🖨 Netwo	ork 🔻 🏭 Accour	nts 🔻 🌱 Syster	n ▼ 🕒 Langua	ige
_	Disks	_			_	_
	RAID					
Nsync	Folder					
	Nsync					
	Task name	Server	Share Folder	Last Time	Last Status	Action
Bandw	ridth Setting	/	Apply			
				Restore	Del	ete
	Add	M	oaity	Restore		

2 Siteresters	A A DO LA DA A
Storage - 🗘 Network - 👪 Acc	counts - X System - I Langu
dd Nsync Task	
Task Name	Nsync_task_1
Target Server Manufacturer	💿 Thecus NAS 🔘 Legacy FTP Serve
Target Server IP address	172.16.66.99
Source Folder	david 💌
horized Username on Target Server	john
Password on Target Server	sociololook
Test Connection	Connection test on 10.1.4.1 success
chedule	
Time	3 💌 : 0 💌
Туре	ODaily 💿 Weekly OMonthly
	Saturday 💌
Apply	Cancel
	Storage V Vetwork V Accord dd Nsync Task Task Name Target Server Manufacturer Target Server IP address Source Folder horized Username on Target Server Password on Target Server Crest Connection Chedule Time

Task Name: give the task a name or use default Nsync_task_1.

- Target Server Manufacturer: Thecus NAS means the target file server is a Thecus N4100 and you prefer a secure transfer. In case you want to backup files to a traditional FTP server or to a Thecus N4100 with non-secure transfer, please choose Legacy FTP Server. Please note secure transfer takes about 4 times longer to complete the task, compared to non-secure transfer.
- **Target Server IP address:** 172.16.66.99 is the IP address of Target N4100, not Source N4100.
- Source Folder: since we want the share folder *david* on Source N4100 periodically backed up, we choose *david* as the Source Folder.
- Authorized Username on Target Server: to put files on to the Target N4100, you should have a user account that has writable permission to the Nsync folder on it. Please note that user account *john* is on Target N4100 (172.16.66.99), not on Source N4100 (172.16.66.88).
- **Test Connection:** to make sure the authorized FTP account works well.



Schedule: scheduling the task, if necessary.

2) Apply Bandwidth Limit to the task and start it.

Thecus'	15	Sto	rage A	سعتلامور	lce	
🗩 Status 🔻 🔇 Stor	age 🔻 🗳	? Network [.]	✓ III Accounts	- 🌱 System	▼ L Langua	ige
Nsync)		2)			
Task na	ame	Server	Share Folder	Last Time	Last Status	Action
Nsync_task_	1 172.1	6.66.99	david	~ (3)		Start
Bandwidth Se	tting [Unlimited Inlimited Mhits				
Add	4	Mbits Mbits Mbits		Restore	Del	ete
	5	12Kbits 56Kbits			Protec	tyour Source are Your Data
					www.th	ecus.com

Thec	us	12 Sto	rauje A	يعتلونو	nce	
Statu	s → 🕥 Storage	▼ 🞝 Network •	 III Accounts 	דיץ Syster	n ▼ L Langu	age
Ne	where a					
	Task name	Server	Share Folder	Last Time	Last Status	Action
	Nsync_task_1	172.16.66.99	david		in progress	Stop
Ba	undwidth Settin	g Unlimited 💌	Apply			
	Add	Modif	у	Restore	De	lete
					Prote	Ctyour Sourc
_					500	ure tourDa



In progress	
Task Name	Nsync_task_1
IP address	172.16.66.99
Start Time	2006/03/26 19:46
Processed Files	298 /298
Status	Ext_Dsk_Enable.PNG

ec	us	JP St	orage	سعتلووه	lce
atu	s 🔻 🥥 Storag	e 🔻 🖨 Netwo	rk v 🚻 Acco	unts 🛨 🌂 System	▼ 🗜 Language
				_	
Ns	sync				
	Task name	Server	Share Folder	Last Time	Last Status Action
	Nsync_task_1	172.16.66.99	david	2006/03/26 19:47	SUCCESS Start
Ba	andwidth Setti	ng Unlimite	d 💌 🛛 Apply		
	Add	Mo	dify	Restore	Delete
			_		Protectyour Se
					Secure rour
					www.thecus.c

Nsync Log

2006/03/26 19:47:15 N4100 : Network Synchronization: Task Nsync_task_1 has been SUCCESS.

2006/03/26 19:46:09 N4100 : Network Synchronization: Task Nsync_task_1 has started.



2-3. Restore Backup Data

1) Check the task you want to restore, and then click **Restore** button.

Nsync (1) Task name Server Share Folder Last Time Last Status Nsync_task_1 172.16.66.99 david 2006/03/26 19:47 SUCCESS Bandwidth Setting Unlimited Apply (2) Add Modify Restore Delet Protect	•••		יובוופפלא	orage	JP SC Theter	a - Ctorom
Nsync (1) Task name Server Share Folder Last Time Last Status Nsync_task_1 172.16.66.99 david 2006/03/26 19:47 SUCCESS Bandwidth Setting Unlimited Apply (2) Add Modify Restore Delet Protect	je	r L Languag	ints ▼ ¶ System •	rk 🔻 🚻 Accou	▼ 47 Netwo	s ▼ () Storage
Nsync Task name Server Share Folder Last Time Last Status Nsync_task_1 172.16.66.99 david 2006/03/26 19:47 SUCCESS Bandwidth Setting Unlimited < Apply (2) Add Modify Restore Delet						(1)
Indic Fonder Fonder Edst find Close status Nsync_task_1 172.16.66.99 david 2006/03/26 19:47 SUCCESS Bandwidth Setting Unlimited Apply (2) Add Modify Restore Delet Protect	Action	Last Status	Last Time	Share Folder	Server	Task name
Bandwidth Setting Unlimited Apply (2) Add Modify Restore Delet Protect	Start	SUCCESS	2006/03/26 19:47	david	172.16.66.99	Nsync_task_1
Add Modify Restore Delet Protect		(2)	/	d 💌 🛛 Apply	g Unlimite	andwidth Setti
Protect	te	Delet	Pastara	dify	Mo	Add
Protect		Deter	Restore	uny	1010	
	Your So	Protect				
	re Yo	Secure				

	sync						
	Task name	Server	Share Folder	Last Time		Last Status	Action
	Nsync_task_1	172.16.66.99	david	2006/03/26 20:03	RESTOR	E_SUCCESS	Start
						Dele	te
						Protect	te t Your So re Your
						Protect Secur	te t Your So re Your cus.co
						Protect Secur	te t Your So re Your o c u s . c o
51	inc Log					Www.the	te tyour So re Your ocus.co



3. Nsync from an N4100 (172.16.66.88) to an FTP Server (172.16.66.99)

3-1. Setup Target FTP Server (where backup data will be stored)

1) A user account that has full permissions to his FTP login folder is prerequisite. In case the permissions are incomplete, Nsync won't work well.

3-2. Setup Nsync N4100 (file source)

1) Add a new Nsync task. [Storage / Nsync]

Thecus		IP Sé	orage .	يعتلوونه	nce	
itatus ▼ Nsync	Storage Disks RAID Folder	r 🗢 Netwo	ork v 📫 Accour	its - Y Systei	m → [] Langua	ige
Bandw	Nsync Task name ridth Setting	Server	Share Folder Apply	Last Time	Last Status	Action
	Add	M	odify	Restore	Del	ete
					Protec	t Your Sou ure YourD

the Accounts - Y System - II Langua
M ACCOUNTS + System + E Langua
Name Nsync_task_1
turer 🔿 Thecus NAS 💿 Legacy FTP Server
dress 172.16.66.99
older david 💌
erver john
erver level
ction Connection test on 172.16.66.99 success
Time 3 💌 : 0 💌
Type ODaily OWeekly OMonthly
Saturday 💌
Cancel

Task Name: give the task a name or use default Nsync_task_1.

- Target Server Manufacturer: Legacy FTP Server means the target file server is a traditional FTP server. In case it's another N4100 but we want a non-secure transfer to speed up the task, click Legacy FTP Server too.
- **Target Server IP address:** 172.16.66.99 is the IP address of Target FTP Server, not Source N4100.
- **Source Folder:** since we want the share folder *david* on Source N4100 periodically backed up, we choose *david* as the Source Folder.
- Authorized Username on Target Server: to put files on to the FTP server, you should have a user account that has full permission to the login folder. Please note that user account *john* is on the FTP Server (172.16.66.99), not on Source N4100 (172.16.66.88).

Test Connection: to make sure the authorized user account works well.

Schedule: scheduling the task, if necessary.



2) Apply Bandwidth Limit to the task and start it.

Thecus ↓ Status ▼ Storage ▼	P Stor & Network •	age A	ریءالوں ۲ System	JCC ▼ 🛯 Langua	ge
Nsync (1)	(2	<u>2)</u>		_	(4
Task name ✓ Nsync_task_1	Server	Share Folder david	Last Time	Last Status	Action
Bandwidth Setting	Unlimited 🛩	Apply			
Add	8Mbits 4Mbits 2Mbits	F	lestore	Del	ete
	1Mbits 512Kbits 256Kbits			Protec	tyour Source are Your Data
				www.th	ecus.com

itatus → 🥥 Storage → 🖾 Network → 🏦 Accounts → 🦞 System → 上 Language									
Nsy	nc								
	Task name	Server	Share Folder	Last Time	Last Status	Action			
1	Nsync_task_1	172.16.66.99	david		in progress	Stop			
Ban	ıdwidth Settin	g Unlimited	Apply						
	Add	Modi	fy	Restore	De	lete			



In progress	
Task Name	Nsync_task_1
IP address	172.16.66.99
Start Time	2006/03/26 19:46
Processed Files	298 /298
Status	Ext_Dsk_Enable.PNG

The IP Storage Applance									
Status 👻 🧭 Storage 👻 Accounts 👻 🦿 System 👻 L Language									
Ns	sync								
	Task name	Server	Share Folder	Last Time	Last Status Action				
	Nsync_task_1	172.16.66.99	david	2006/03/26 19:47	SUCCESS Start				
Ba	andwidth Setti	ng Unlimite	d 💌 🛛 Apply						
	Add	Mo	dify	Restore	Delete				
					Protect Your Sou Secure Your D				
					www.thecus.co				

Nsync Log

2006/03/26 19:47:15 N4100 : Network Synchronization: Task Nsync_task_1 has been SUCCESS.

2006/03/26 19:46:09 N4100 : Network Synchronization: Task Nsync_task_1 has started.



3-3. Restore Backup Data

1) Check the box of the task you want to restore, and then click **Restore** button.

atus 🗸 🕥 Storag	JP Sit e → ⊄ Netwo	orauje rk + ili Accou	ستةالورولات unts → ۲ System	JCC • I Langua	je
			_	_	
Nsync (1) Task name	Server	Share Folder	Last Time	Last Status	Action
Nsync_task_1	172.16.66.99	david	2006/03/26 19:47	SUCCESS	Start
Bandwidth Setti	ng Unlimite	d 💌 🛛 Apply		(2)	
Add	Mo	dify	Restore	Dele	te
				Protec	t Your S ou re YourD
				w w w . the	cus.co

N	sync					/	
	Task name	Server	Share Folder	Last Time	L	ast Status A	ction
	Nsync_task_1	172.16.66.99	david	2006/03/26 20:03	RESTORE_	SUCCESS	Start
B	andwidth Se	tting Unlin	mited 💌 🛛 🗛	oply			
	Add		Modify	Resto	re	Delete	



Nsync Log

2006/03/26 20:03:28 N4100 : Network Synchronization: Task Nsync_task_1 has been RESTORE_SUCCESS.

2006/03/26 20:02:30 N4100 : Network Synchronization: Task Nsync_task_1 has started.

4. Nsync Troubleshooting

4-1. Filename and FTP encoding

Basically Nsync uses FTP to synchronize files and subfolders to another FTP server. So you have to make sure the file and folder names are without strange characters such as "/\: ? ? <> |[] = +;, '". In addition, both Nsync Source N4100 and Nsync Target server should have the same FTP encoding. In case not, the restored files and subfolders may have their names changed.

4-2. Incremental Backup

Nsync task will create an incremental backup backup on Target Server. It means if you deleted subfolder A and add B subfolder on the Source N4100 then executed the task, the backup subfolder A will existed still, and copy subfolder B on Target Server. Which means system would keeping all of data on Target Server, and copy new add or changed file while task executed to saving bandwidth & time, also a complete file back on the Target Server.

4-3. Restore Nsync Task

Restoring an Nsync task will restore the whole folder to the last status. It means all files synchronized to Target Server will be completely copied back to the source folder. Not only changed files are copied.

4-4. Data Security on Target Server

In case the synchronized files on Target Server were modified or deleted by other user accounts that have full permission to the backup folder, the Nsync restore process will copy modified files back and may miss some deleted files.

EOF