

QNAP Turbo NAS

(: 4.1)

Turbo NAS :TS-110, TS-112, TS-112P, TS-119, TS-119P+, TS-119P II, TS-120, TS-121, TS-210, TS-212, TS-212-E, TS-212P, TS-219, TS-219P, TS-219P+, TS-219P II, TS-220, TS-221, TS-239 Pro, TS-239 Pro II, TS-239 Pro II+, TS-259 Pro, TS-259 Pro+, TS-410, TS-410U, TS-412, TS-412U, TS-419P, TS-419P+, TS-419P II, TS-419U, TS-419U+, TS-419U II, TS-420, TS-420U, TS-421, TS-421U, TS-439 Pro, TS-439 Pro II, TS-439 Pro II+, TS-439U-RP/SP, TS-459 Pro, TS-459 Pro II, TS-459 Pro+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-509 Pro, TS-559 Pro, TS-559 Pro+, TS-559 Pro II, TS-639 Pro, TS-659 Pro, TS-659 Pro+, TS-659 Pro II, TS-809 Pro, TS-809U-RP, TS-859 Pro, TS-859U-RP+, TS-859 Pro+, TS-859U-RP, SS-439 Pro, SS-839 Pro, HS-210.





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1.

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- 
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1.1

QNAP

Turbo NAS()
Turbo NAS가

- !
- "Turbo NAS" "NAS"
- Turbo NAS

QNAP QNAP QNAP Systems, Inc.

™

QNAP

QNAP

QNAP

QNAP

/

QNAP

QNAP Systems, Inc. (QNAP)

QNAP

QNAP

QNAP

NAS

QNAP, QNAP, QTS, myQNAPcloud VioStor QNAP Systems, Inc.

1.2

F C C

QNAP NAS
가

FCC

A
FCC

15

- 1.
- 2.

: FCC 15 A

가

가

: QNAP Systems, Inc.
가

FCC가

FCC

B
FCC

15

- 1.
- 2.

: FCC 15 B

,

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가

).

(

-
-
- 가
- /TV

: QNAP Systems, Inc.
가

FCC가

C E

NAS	FCC	CE
TS-EC1679U-RP	A	A
TS-EC1279U-RP	A	A
TS-EC879U-RP	A	A
TS-1679U-RP	A	A
TS-1279U-RP	A	A
TS-879U-RP	A	A
TS-1270U-RP	A	A
TS-879U-RP	A	A
TS-1269U-RP	A	A
TS-869U-RP	A	A
TS-469U-RP/SP	A	A
TS-419U II	A	A
TS-412U	A	A
TS-420U	A	A
TS-421U	A	A
TS-1079 Pro	A	A
TS-879 Pro	A	A
TS-869 Pro	B	B
TS-669 Pro	B	B
TS-569 Pro	B	B
TS-469 Pro	B	B
TS-269 Pro	B	B
TS-869L	B	B
TS-669L	B	B

TS-569L	B	B
TS-469L	B	B
TS-269L	B	B
TS-419P II	B	B
TS-219P II	B	B
TS-119P II	B	B
TS-412	B	B
TS-212	B	B
TS-112	B	B
TS-120	B	B
TS-220	B	B
TS-420	B	B
TS-121	B	B
TS-221	B	B
TS-421	B	B

1.3

- : 가 .
- : , 가
- : 가 .

1.4

1. NAS 0 -40 0%-95%
2. NAS (100W, 90-264V)
3. 가 NAS 가
4. NAS NAS
5. NAS NAS
6. NAS NAS
7. NAS 가
8. NAS
9. NAS
- 10.
11. NAS
12. (IT 가) NAS

- 가
-

2.

NAS

[28]

QNAP NAS

NAS

QNAP NAS
NAS

NAS

:

1.

[14]

2.

[19]

3.

가

[23]

4.

[24]

5.

NAS

[27]

NAS

:

•

NAS

[28]

2.1

NAS

1.

(HDD)가 NAS

15

2. QNAP NAS PC
NAS가

LED

16

: QNAP (<http://start.qnap.com>)
(QIG)

2.1.1

(SSD) compatibility) . 2.5"/ 3.5" SATA QNAP (http://www.qnap.com/)

: "Device not found()" 가 :

1. NAS ,
2. NAS LAN ,
3. 가 .

: QNAP / / .

: NAS () 가 , 가 .

2.1.2

LED

LED		LED	
		0.5	가 1) NAS 가 2) NAS가 3) 가 4) RAID 5) RAID 6) RAID
	/		1) 가 2) 3) 4) 가 (TS- 119 .) 5) (/) 가 6) 가 7) NAS가 (2 가 RAID 5 RAID 6 가) 8) ()
		0.5	NAS가 (RAID 6 가 RAID 1, RAID 5)
		0.5	1) NAS가 2) NAS가 3) 가
		2	NAS S3 가 .
			NAS가
			NAS 가
1			NAS가 가 .
			NAS가 .
LAN			NAS가

10 GbE*			10GbE 가
			10GbE 가
HDD	/		가 / 가
			/ 가
			가
			가
USB	0.5		1) USB USB 가 2) USB USB 가 3) NAS USB USB 4) 가 USB/eSATA ()
			USB 가 ()
			1) USB 2) NAS가 USB USB ()
eSATA**			eSATA 가
			eSATA

* 10 GbE TS- 470 Pro, TS- 670 Pro, TS- 870 Pro, TS- 870U- RP, TS- 879 Pro, TS- 1079 Pro, TS- 879U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- EC879U- RP TS- EC1279U- RP

** TS- 210, TS- 212, TS- 219, TS- 439U- SP/RP, TS- 809 Pro, TS- 809U- RP eSATA

1 LED

"Control Panel()" > "System Settings()" > "Hardware()" > "Buzzer()"

(0.5)	1		1) NAS가 2) NAS가 () 3) 가 NAS 4) 가

2.2.1

1. http://start.qnap.com 가 "Start Now()"
2. HDD NAS "Next()"
3. NAS Turbo NAS "Next()"
4. 가
5. "Get Qfinder(Qfinder)" QNAP Qfinder (Mac 19 .)
6. QNAP Qfinder "Next()"
7. "I accept the terms of the License Agreement()" "Next()"
8. "Next()"
9. "Install()"
10. "Finish()"
11. QNAP Qfinder
12. 가 IP 가 Turbo NAS (QNAP Qfinder MAC IP .) "Yes()" Turbo NAS
13. "Quick Setup()"
14. Turbo NAS "Detect Again()"
15. "Next()"
16. 가
17. "Finish()" NAS 가
18. "Confirm the setup information()" ID
19. "Get Qfinder(Qfinder)" QNAP Qfinder . (19 - 23 Mac .)
20. QNAP Qfinder
21. QNAP Qfinder NAS
- 22.
23. "Confirm the setup information()" ID


2.2.2

1. NAS Turbo NAS PC "start.qnap.com" "Cloud Installation()"
2. (QNAP NAS) "Enter" myQNAPcloud 가 myQNAPcloud 가)
3. myQNAPcloud myQNAPcloud myQNAPcloud "I agree to myQNAPcloud Terms of Use and QNAP Privacy Policy(myQNAPcloud QNAP)" "Next Step()" myQNAPcloud "Sign in myQNAPcloud account(myQNAPcloud)" Turbo NAS "Register()" Turbo NAS "Begin()" Turbo NAS "Start()" "Proceed()" 9. "Connect and Login QTS(QTS)" ID Turbo NAS

: "Device not found()" 가 :
 1. NAS ,
 2. NAS LAN ,
 3. 가

2.2.3 CD

NAS CD

1. CD-ROM QNAP Qfinder
2. QNAP Qfinder . QNAP Qfinder가
3.  201

- TS-x12, TS-x20, TS-x21 NAS CD가
- NAS ID admin

2.3 가

QNAP NAS 가 . NAS

가

1: QNAP

<http://www.qnap.com/> > 가 (" ")
. PC

2: CD

CD-ROM QNAP Qfinder, myQNAPcloud Connect, NetBak Replicator, QGet
가

CD-ROM :

- : NAS
- QNAP Qfinder : QNAP Finder (Windows).
- myQNAPcloud Connect : myQNAPcloud Connect (Windows).
- NetBak Replicator : NetBak Replicator (Windows OS QNAP NAS Windows).
- QGet : QGet (Windows).
- : , Turbo NAS

2.4 NAS

NAS

- NAS
- Mac Linux NAS - Windows [25] [26]

2.4.1 Windows

Windows NAS 가 가
:

- 1: QNAP Qfinder** NAS
1. QNAP Qfinder NAS "Tool()" > "Map Network Drive()"
 2. NAS "Map Network Drive()"
 3. NAS "OK()"
 4. 2 OS "Finish()"
 5. File Explorer() 가

- Storage Plug & Connect NAS
1. QNAP Qfinder
 2. Connect Storage Plug & Connect
 3. "Login with username and password()"
 4. NAS
 5. "Map the Network Drive()"

- 2: My Network Places() Run() NAS**
1. My Network Places() NAS NAS NAS
 . \\ NAS_name \\ NAS_IP
 2. default administrator name() password() (default administrator name(): admin; default password(): admin).
 - 3.

2.4.2 Mac Linux

Mac

NAS 가 가 :

1: QNAP Qfinder

1. QNAP Qfinder , NAS "Connect()" > "Open in File Explorer()"
2. ID .
3. .
4. 가 .

2:

1. "Go(가)" > "Connect to Server()" .
2. NAS IP .
3. ID .
4. .
5. 가 .

Linux

Linux .

```
mount -t nfs <NAS IP>:/<Shared Folder Name> <Directory to Mount>
```

, NAS IP 가 192.168.0.1 /mnt/pub "

(public)" , .

```
mount -t nfs 192.168.0.1:/public /mnt/pub
```

id , .

```
: "root( )" .
```

2.5 NAS

NAS

1. http://NAS IP:8080 QNAP Qfinder NAS ,
NAS NAS 가 .

: NAS IP 169.254.100.100:8080 . NAS DHCP
QNAP Qfinder NAS IP . NAS가 QNAP Qfinder
. NAS IP , NAS
QNAP Qfinder .

2. "Secure login()"()
NAS . NAS
(default administrator name()): admin; default
password(): admin).

: NAS NAT NAS
, NAT 443 NAS LAN IP .

3. NAS .

2.6 NAS

() NAS () NAS QNAP NAS
 Turbo NAS NAS
 NAS 가
 가 NAS
 Restore Settings(/)" "System Administration()" > "Backup/
 NAS 가

NAS

NAS	NAS	
TS-x10, HS-210, TS-x12, TS-x19, TS-x20, TS-x21, TS-x39, TS-509, TS-809, SS-x39, SS-469, TS-x59, TS-x69, TS-x70, TS-x79	TS-x10, HS-210, TS-x12, TS-x19, TS-x20, TS-x21, TS-x39, TS-509, TS-809, SS-x39	
TS-x10, HS-210, TS-x12, TS-x19, TS-x20, TS-x21, TS-x39, TS-509, TS-809, SS-x39, SS-469, TS-x59, TS-x69, TS-x70, TS-x79	TS-x59, TS-x69, TS-x70, TS-x79, SS-469 Pro	가

- NAS NAS 가
- QNAP NAS HDD <http://www.qnap.com/>
compatibility
- SS-x39 SS-469 Pro 2.5- HDD
- NAS NAS
TS-110, TS-119, TS-210, HS-210, TS-219, TS-219P, TS-x20, TS-x21, TS-410, TS-419P, TS-410U, TS-419U, TS-119P+, TS-219P+, TS-419P+, TS-112, TS-212, TS-412, TS-419U+, TS-412U, TS-420U TS-421U
- -TS-x79 TS-x70U/TS-x79
iTunes, DLNA Multimedia/
Qmultimedia, Download/Qdownload
- NAS myQNAPcloud NAS
NAS myQNAPcloud
NAS MyCloudNAS NAS
myQNAPcloud QNAP

NAS		
1-	NAS	1-
2-	NAS	1 ~ 2- , JBOD, RAID 0, 2- RAID 1.
4-	NAS	1 ~ 4- , JBOD, RAID 0, 2- RAID 1, 3 ~ 4- RAID 5, 4- RAID 6, 4- RAID 10.
5-	NAS	1 ~ 5- , JBOD, RAID 0, 2- RAID 1, 3 ~ 5- RAID 5, 4 ~ 5- RAID 6, 4- RAID 10.
6-	NAS	1 ~ 6- , JBOD, RAID 0, 2- RAID 1, 3 ~ 6- RAID 5, 4 ~ 6- RAID 6, 4- 6- RAID 10.
8-	NAS	1 ~ 8- , JBOD, RAID 0, 2- RAID 1, 3 ~ 8- RAID 5, 4 ~ 8- RAID 6, 4- 6- , 8- RAID 10.

- NAS**
1. NAS HDD
 2. HDD NAS HDD
 3. HDD NAS() HDD가
 4. (QIG) NAS
 5. NAS (: admin, : admin).
 6. NAS ,
 7. "Start Migrating()" NAS가

: , 가 IT 가

NAS

- Windows AD
-

3. QTS

QTS NAS Turbo NAS

NAS 가 !

- QTS [32]
- QTS [34]

3.1 QTS

QTS Turbo NAS
 가 Turbo NAS
 Turbo NAS
 가
 QTS
 , iSCSI 가
 가
 가
 QTS
 가 QTS GUI
 App Center



*

가 Turbo NAS -

가 , , , 가
 QNAP Turbo NAS

가
 가
 가
 가 QNAP Turbo
 NAS가

- , , , 가 GUI
- ,
- ,
-
- Dropbox 가 가
- App Center 90 가
-

Turbo NAS - IT

TCO() IT
 QNAP Turbo NAS , , , IT ,
 , 가 가 . QNAP Turbo NAS가

- ,
-
- , SSD , JBOD
-
- 가 1 2 IP SAN (iSCSI)
-
- Dropbox 가 가
- App Center 90 가
- 가 Turbo NAS

3.2 QTS

NAS

NAS

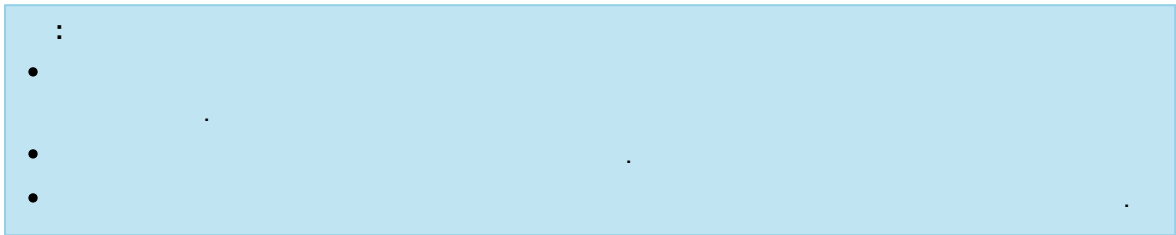


1	Main Menu ()	<p>(APPLICATIONS):</p> <p>1) QNAP NAS</p> <p>2) NAS</p> <p>3) QNAP가 NAS</p>
2	Show Desktop()	
3	Background Task()	(HDD SMART)

4	External Device()	<p style="text-align: center;">USB SATA NAS USB</p> <p style="text-align: center;">. External Device() , "External Device()" (File Station , File Station). ()</p>
5	Notification and Alert()	<p>"Clear All()" "Event Notifications()" System Logs() . System Logs() System Logs (107)()</p>
6	Admin Control()	<p style="text-align: right;">NAS</p> <p>/</p> <ul style="list-style-type: none"> • Options(): <ul style="list-style-type: none"> ○ Profile(): ○ Wallpaper(): ○ Change Password(): ○ Miscellaneous(): <ul style="list-style-type: none"> ▪ Warn me when leaving QTS(QTS): 가 QTS Desktop(QTS) (가) ▪ Reopen windows when logging back into QTS(QTS): 가 NAS ("windows opened before your logout()") ▪ (No. 12) 가 ▪ "QNAP Utility(QNAP)" : "QNAP Mobile App(QNAP)", "QNAP Utility(QNAP)" "Feedback()" (No. 14 ~ 16) ▪ : (NO.13) ▪ NAS : ▪ NAS : <p>/</p>

		<ul style="list-style-type: none"> • : . • : NAS . NAS 가 . 1) (가) 2) QNAP Qfinder Qmanager Wake-on-LAN (WOL) . WOL , "Control Panel()" > "Power()" > "Wake-on-LAN (WOL)" [84] ○ : • : NAS • : NAS • : • : NAS , , HDD 가 ()
7		QTS
8		Quick Start Guide(), QTS Help(QTS), Tutorials(), QNAP Wiki(QNAP) QNAP Forum(QNAP) , Customer Service(,) Feedback (, /)
9		UI
10		가 , , NAS Desktop(NAS) , NAS 가
11		가
12	/	
13		HDD , , , , , NAS

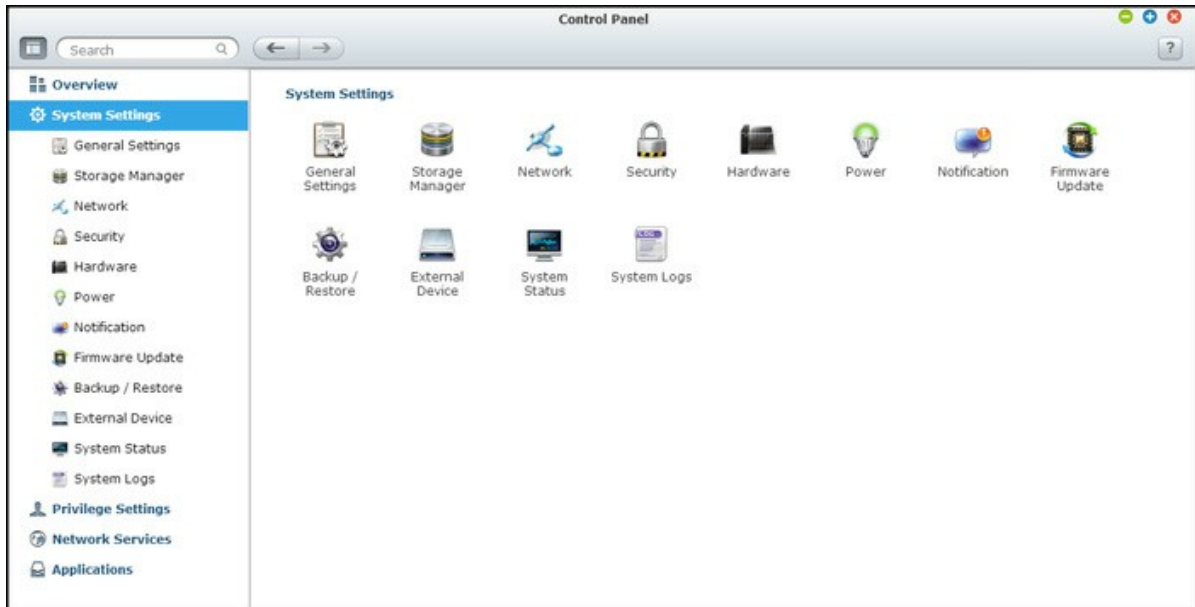
14	QNAP Mobile App (QNAP)	가 QNAP
15	QNAP	가 NAS
16		
17	myQNAPClo ud	myQNAPCloud ^[189]



: QTS 4.x is 1024x768

4.

"Control Panel()" > "System Settings()" 가 Turbo NAS



- [39]
- [41]
- [73]
- [81]
- [82]
- [84]
- [86]
- [88]
- / [90]
- [91]
- [105]
- [107]

4.1

Control Panel() > "System Settings()" > "General Settings()" 가 NAS

The screenshot shows the 'System Administration' tab selected. Under 'General Settings', the 'Server name' is 'My-NAS03' with an IP address of '172.17.32.148'. The 'System port' is '8080'. There are three checkboxes: 'Disable and hide the home/multimedia features...' (unchecked), 'Enable secure connection (SSL)' (checked), and 'Force secure connection (SSL) only' (unchecked). The SSL port is '443'. A note below states: 'Note: After enabling the "Force secure connection (SSL) only" option, the Web Administration can only be connected via https.' There are 'Apply' and 'Apply All' buttons.

- : NAS . NAS 14 (a-z, A-Z), (0-9) (-) () (.) 8080 , File Station, Multimedia Station Download Station.
 - (SSL): 가 https NAS (SSL) " (SSL) " https
 - Multimedia Station, Photo Station, Music Station, Surveillance Station, **Download Station, iTunes DLNA** / : Multimedia Station, Photo Station, Music Station, Surveillance Station, Download Station, iTunes , Media Library DLNA / SMB :
- x70U, x79 Pro, x79U.

- : 가 ,
- ,

-
- : "Update now()"
- : NTP () time.nist.gov, time.windows.com NTP IP NAS가

: NTP , 가

daylight saving time((DST) "Adjust system clock automatically for)" . "Apply()"
 . "Time()" DST 가 . DST
 saving time table() , "Enable customized daylight
 Data(가)" . "Add Daylight Saving Time
 . "Apply()"

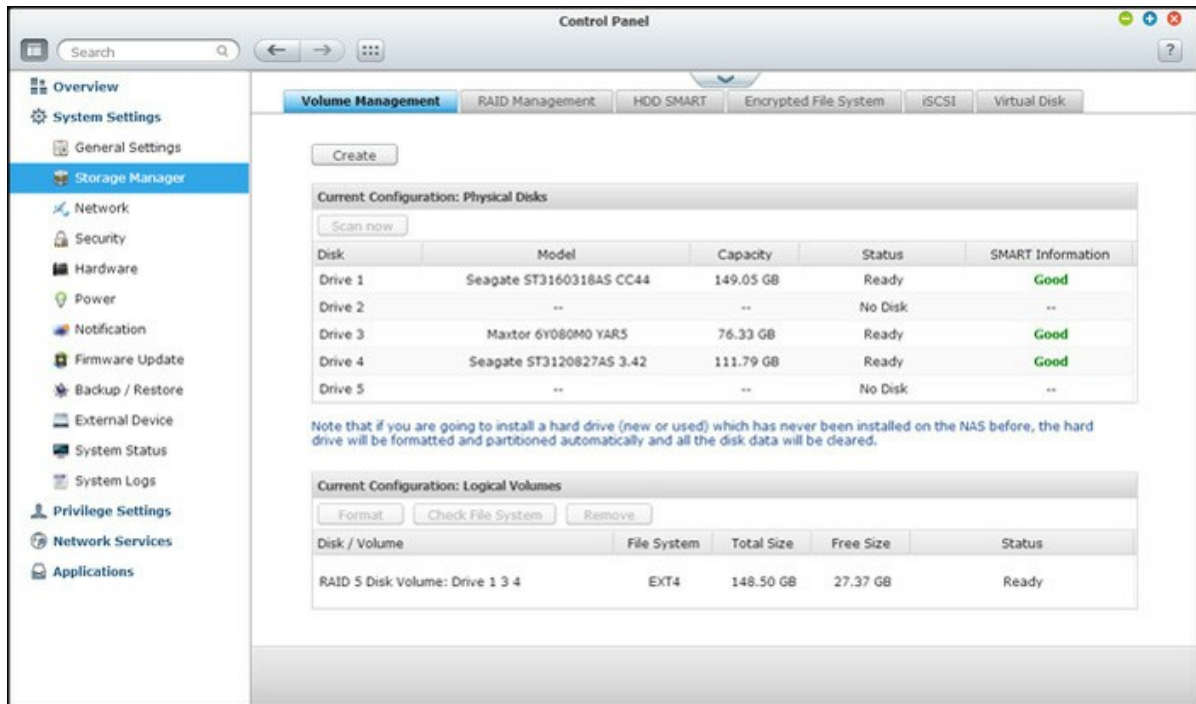
NAS가

: NAS . FTP
 PC OS(, Windows 95/98/ ME) ,
 가 OS

"Preview()"
 "Apply()"
 NAS 100 가
 . "Change Picture(
 . "Preview()"
)"
 "Apply()"
 Sharing Album()

4.2

Storage Manager() RAID iSCSI 가



- _____ [42]
- RAID _____ [44]
- _____ SMART [54]
- _____ [55]
- iSCSI [58]
- 가 _____ [72]

4.2.1

NAS SATA

가

NAS

- Public: 가
- Qdownload/Download:
- Qmultimedia/Multimedia:
- Qusb/Usb: USB
- Qweb/Web:
- Qrecordings/Recordings: Surveillance Station Pro

- NAS
- NAS NAS
- 2TB EXT4

RAID

- : 가
- JBOD (가): JBOD RAID
- RAID 0 : RAID 0() 2
RAID 0
- RAID 1 : RAID 1 2
RAID 1 , 2 가
- RAID 1 가
- RAID 5 : RAID 5 가 ,
가 가
- RAID 5 3 가
- RAID 5 (N-1) * (가) . N

- RAID 6** : RAID 6 가 RAID
 RAID 6 2 가 RAID
 5 2 RAID 6 (N-2) * (가
 , 4 가 . RAID 6
) . N
- RAID 10** : RAID 10 가 4
 . RAID 10 가 (4) . RAID 10
 (가) * N/2 . N

NAS

NAS

	NAS
RAID 1, JBOD ()	2-
RAID 5, RAID 6, RAID 5 +	4-
RAID 6 +	5-
RAID 10	4-
RAID 10 +	5-

4.2.2 RAID

RAID (RAID 1, 5, 6, 10) RAID (RAID 1, 5, 10), RAID 5, 6, 10 가, 가 (RAID 5, 6, 10), Bitmap, RAID



RAID 10 가 RAID

: RAID , RAID , RAID 1- NAS
TS- 210, TS- 212

RAID

TS- 509 Pro 가 250GB HDD HDD RAID 5
가 1.5 TB 가 NAS
1TB 가

- "Storage Manager()" > "RAID Management(RAID)"
- "Action()" > "Expand Capacity()"
- HDD "Change" ()
- Description() "Please remove this drive()"
가 NAS NAS가
 - Description() "Please insert the new drive()"
가 HDD
 - HDD NAS가
 - HDD
 - HDD "Expand Capacity()" RAID
 - "OK" ()
 - NAS가

: HDD () 가 "You can replace this drive" (HDD , HDD)

: 가 NAS /

. NAS

RAID "Ready" () 가 NAS . (1.8TB)

: Description() "You can replace this hard drive" () 가 "Ready" () RAID

- RAID , RAID 가
- ARM NAS (Intel NAS) , RAID 8TB

(RAID)

TS-509 Pro 가 250GB HDD . TS-509 Pro 가 RAID 5 . TS-509 Pro RAID HDD 1 . NAS 가

- RAID 1, RAID 5, RAID 6 RAID 10
- RAID 1 RAID 5, RAID 6 RAID 10
- 3 가 RAID 5 RAID 6
- HDD RAID
- RAID 5 . (4 HDD가 RAID)

1. "Storage Manager() > " (Volume Management) (250GB).
2. 250GB HDD NAS 2, 3 . NAS가 HDD "Unmounted()"
3. "Storage Manager()" > "RAID Management(RAID)" 가 , "Action()" > "Migrate()"
4. 가
5. HDD 가 "Migrate()" "OK()"
6. Description()
7. NAS 11%- 49% "Read only()" 가 RAID RAID 가
8. (RAID 5) 가

HDD

NAS

RAID

RAID

FTP 250GB HDD TS- 509 Pro TS- 509 Pro 3TB RAID 5 HDD TS- 509 Pro RAID 5 3TB

RAID RAID 750GB, RAID 5 (250GB HDD RAID5 250GB* 4가) 1TB HDD

RAID 250GB HDD 1TB HDD RAID5 750GB 3TB

가

1. RAID 5 HDD RAID 5 RAID 6 "Ready()" 가
2. NAS RAID 5 RAID 6 . NAS HDD가 HDD 가 RAID
3. "RAID Management(RAID)" "ADD HARD DRIVE(가)" RAID 5 RAID 6
4. "ADD HARD DRIVE(가)" 가

5. HDD 가 RAID 5 RAID 6
"OK()"
NAS

RAID 10 가 RAID 10 가
RAID 10

NAS

RAID

RAID 5, 6, 10 가

1. RAID 5, 6, 10 " " . NAS 가
2. NAS . NAS . RAID

3. RAID "CONFIGURE SPARE DRIVE()"
4. 가 "CONFIGURE SPARE DRIVE()"
5. "CONFIGURE SPARE DRIVE()" . "OK()"

RAID 5, 6, 10 " " 가

- RAID
- RAID
- RAID 5, RAID 6 RAID 10 가

RAID 가 RAID 가
()가
RAID "Enable Bitmap()"
, RAID "Action()" > "Enable Bitmap()"

: RAID 1, 5, 6 10

(RAID)

RAID : NAS가 RAID 1, RAID 5, RAID 6 가
 "Recover()"
 "Not active()" "Degraded mode()"

RAID 0 JBOD 가 NAS
 "Not active()" "Normal()"

	RAID	가
		-
	JBOD	1
	RAID 0	1
	RAID 1	1 2
	RAID 5	2
	RAID 6	3
	RAID 10	-

- RAID 1, RAID 5 RAID 6 RAID
- 가 RAID

	RAID 5	QNAP RAID 5	RAID 6	QNAP RAID 6
	N-1	N-1	N-1 N-2	N-1 N-2
(HDD)		N-1, 가		N-2, 가
RAID (RAID :)		NAS , HDD		NAS , HDD

RAID	N-2	N-2 HDD	가 HDD	N-3	N-3	HDD
		,	/		/	.

N =

/
 NAS RAID 1, 5, 6, 10 가
 가 RAID 가 NAS RAID ,
 "Action()"
 >"Set Global Spare()"

: RAID

"Action()" >"Cancel Spare Drive()"

NAS RAID :

* HDD	HDD	HDD 가	HDD *
RAID 5 * 3	1	HDD 가	RAID 5 * 4
RAID 5 * 3	2	HDD 가	RAID 5 * 5
RAID 5 * 3	3	HDD 가	RAID 5 * 6
RAID 5 * 3	4	HDD 가	RAID 5 * 7
RAID 5 * 3	5	HDD 가	RAID 5 * 8
RAID 5 * 4	1	HDD 가	RAID 5 * 5
RAID 5 * 4	2	HDD 가	RAID 5 * 6
RAID 5 * 4	3	HDD 가	RAID 5 * 7
RAID 5 * 4	4	HDD 가	RAID 5 * 8
RAID 5 * 5	1	HDD 가	RAID 5 * 6

RAID 5 * 5	2	HDD 가	RAID 5 * 7
RAID 5 * 5	3	HDD 가	RAID 5 * 8
RAID 5 * 6	1	HDD 가	RAID 5 * 7
RAID 5 * 6	2	HDD 가	RAID 5 * 8
RAID 5 * 7	1	HDD 가	RAID 5 * 8
RAID 6 * 4	1	HDD 가	RAID 6 * 5
RAID 6 * 4	2	HDD 가	RAID 6 * 6
RAID 6 * 4	3	HDD 가	RAID 6 * 7
RAID 6 * 4	4	HDD 가	RAID 6 * 8
RAID 6 * 5	1	HDD 가	RAID 6 * 6
RAID 6 * 5	2	HDD 가	RAID 6 * 7
RAID 6 * 5	3	HDD 가	RAID 6 * 8
RAID 6 * 6	1	HDD 가	RAID 6 * 7
RAID 6 * 6	2	HDD 가	RAID 6 * 8
RAID 6 * 7	1	HDD 가	RAID 6 * 8
RAID 10 * 4	2	HDD 가	RAID 10 * 6
RAID 10 * 4	4	HDD 가	RAID 10 * 8
RAID 10 * 6	2	HDD 가	RAID 10 * 8
RAID 1 * 2	1	RAID	RAID 1 * 2
RAID 5 * 3	1	RAID	RAID 5 * 3
RAID 5 * 4	1	RAID	RAID 5 * 4
RAID 5 * 5	1	RAID	RAID 5 * 5
RAID 5 * 6	1	RAID	RAID 5 * 6
RAID 5 * 7	1	RAID	RAID 5 * 7
RAID 5 * 8	1	RAID	RAID 5 * 8
RAID 6 * 4	1	RAID	RAID 6 * 4

RAID 6 * 5	1	RAID	RAID 6 * 5
RAID 6 * 6	1	RAID	RAID 6 * 6
RAID 6 * 7	1	RAID	RAID 6 * 7
RAID 6 * 8	1	RAID	RAID 6 * 8
RAID 10 * 4	1	RAID	RAID 10 * 4
RAID 10 * 6	1	RAID	RAID 10 * 6
RAID 10 * 8	1	RAID	RAID 10 * 8
* 1	1	RAID	RAID 1 * 2
* 1	2	RAID	RAID 5 * 3
* 1	3	RAID	RAID 5 * 4
* 1	4	RAID	RAID 5 * 5
* 1	5	RAID	RAID 5 * 6
* 1	6	RAID	RAID 5 * 7
* 1	7	RAID	RAID 5 * 8
* 1	3	RAID	RAID 6 * 4
* 1	4	RAID	RAID 6 * 5
* 1	5	RAID	RAID 6 * 6
* 1	6	RAID	RAID 6 * 7
* 1	7	RAID	RAID 6 * 8
* 1	3	RAID	RAID 10 * 4
* 1	5	RAID	RAID 10 * 6

* 1	7	RAID	RAID 10 * 8
RAID 1 * 2	1	RAID	RAID 5 * 3
RAID 1 * 2	2	RAID	RAID 5 * 4
RAID 1 * 2	3	RAID	RAID 5 * 5
RAID 1 * 2	4	RAID	RAID 5 * 6
RAID 1 * 2	5	RAID	RAID 5 * 7
RAID 1 * 2	6	RAID	RAID 5 * 8
RAID 1 * 2	2	RAID	RAID 6 * 4
RAID 1 * 2	3	RAID	RAID 6 * 5
RAID 1 * 2	4	RAID	RAID 6 * 6
RAID 1 * 2	5	RAID	RAID 6 * 7
RAID 1 * 2	6	RAID	RAID 6 * 8
RAID 1 * 2	2	RAID	RAID 10 * 4
RAID 1 * 2	4	RAID	RAID 10 * 6
RAID 1 * 2	6	RAID	RAID 10 * 8
RAID 5 * 3	1	RAID	RAID 6 * 4
RAID 5 * 3	2	RAID	RAID 6 * 5
RAID 5 * 3	3	RAID	RAID 6 * 6
RAID 5 * 3	4	RAID	RAID 6 * 7

RAID 5 * 3	5	RAID	RAID 6 * 8
------------	---	------	------------

4.2.3

SMART

HDD , HDD S.M.A.R.T.(가)

NAS

Hard disk information ()	
SMART information (SMART)	SMART
	SMART
	가 Summary()

-

NAS

1. NAS
2. NAS "Storage Manager() > " (Volume Management)
3. "Create()"
- 4.
- 5.
6. "Encryption()" "yES()"
"Create()"

가 !

NAS

) > " NAS "Storage Manager() (Volume Management)

NAS

- (1) "Save Encryption Key()"
- (4) "Save Encryption Key()"

NAS

가

가

- NAS NAS가
- NAS , NAS 가

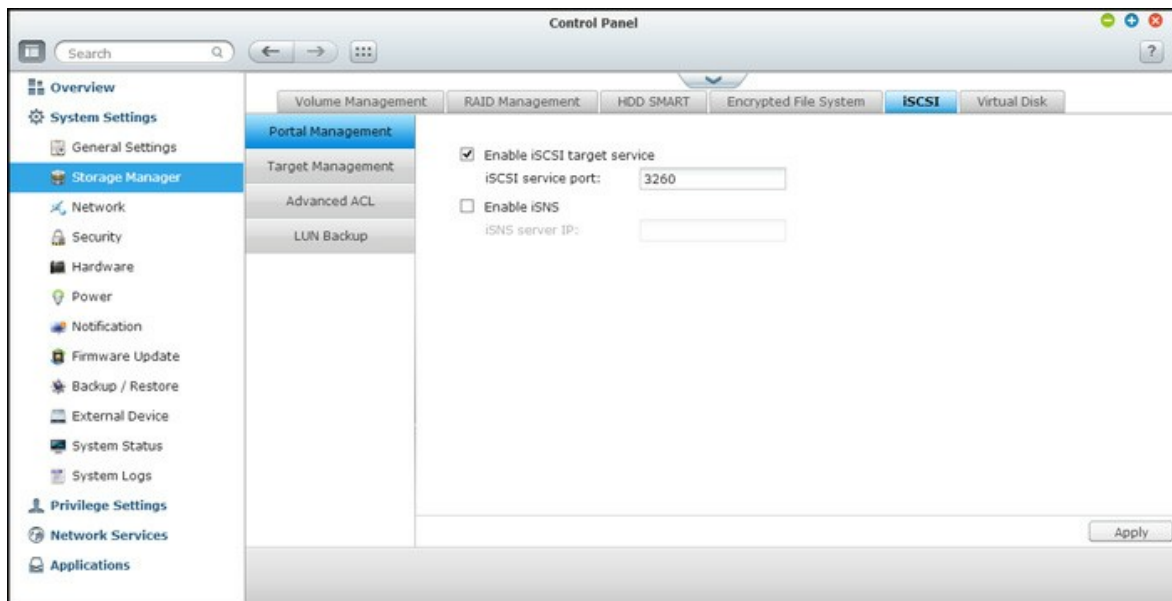
, NAS Storage Manager()" >
 "Encrypted File System()"
 가 .
 • : . (.
 .).
 • : .
 (" ").
 !
 • :
 • : NAS가
 NAS

NAS "Storage Manager()" >
 "Encrypted File System()"
 "Unlock this device(
)"

가 .

4.2.5 iSCSI

iSCSI , iSCSI ACL LUN ."Control Panel()" > "System Settings()" > "General Settings()"



- _____ 59
- _____ 61
- ACL 68
- LUN 69

4.2.5.1

NAS 가 iSCSI(Internet Small Computer System Interface)

iSCSI

- NAS iSCSI
1. iSCSI (Windows PC, Mac Linux).
 2. NAS iSCSI iSCSI
 3. iSCSI iSCSI (NAS)
 4. iSCSI (). NAS 가

: (iSCSI) iSCSI

iSCSI

256 iSCSI 4 LUN NAS 100
 가 LUN 156 LUN
 NAS가 iSCSI

NAS

- NAS iSCSI
1. "Portal Management()" iSCSI
 2. 가 "Target Management()" NAS iSCSI
 iSCSI 가 iSCSI /
 LUN () "OK()"
 3. 가 iSCSI LUN , iSCSI
 iSCSI LUN "Next()"
 4. iSCSI LUN
 5. "Next()"
 6. "Data Digest()" / "Header Digest
 ()" () iSCSI iSCSI 가
 가
 7. CHAP "Use CHAP authentication(CHAP)"
 , iSCSI

CHAP: iSCSI 가
 "Mutual CHAP

(CHAP)"

CHAP	<ul style="list-style-type: none"> • 0- 9, a- z, A- Z • : 256 	<ul style="list-style-type: none"> • 0- 9, a- z, A- Z • : 12- 16
CHAP	<ul style="list-style-type: none"> • 0- 9, a- z, A- Z, : (), . () - () • : 12- 16 	<ul style="list-style-type: none"> • 0- 9, a- z, A- Z, : (), . () - () • : 12- 16

iSCSI LUN

iSCSI LUN iSCSI 가

- - : . NAS
- NAS RAID

- : LUN LUN

1. LUN LUN (NAS) . LUN
2. "Next()"
3. LUN , "Finish()"
4. LUN "Target Management()"

		LUN
		LUN
		LUN LUN LUN "Un-Mapped iSCSI LUN List(iSCSI LUN)"
		LUN iSCSI "Un-Mapped iSCSI LUN List(iSCSI LUN)"
		iSCSI

LUN

:	3.3.0	NAS	NAS	3.2.0
---	-------	-----	-----	-------

1. iSCSI LUN ()
2. "Unmap()" LUN iSCSI LUN
3. LUN "Map()" LUN "Apply()"
4. LUN

NAS iSCSI LUN (Windows PC, Mac Linux) iSCSI LUN 가

iSCSI LUN

NAS iSCSI LUN

1. "iSCSI" > "Target Management()" iSCSI iSCSI LUN "Modify()"
2. LUN LUN
3. "Apply()"

:	iSCSI LUN iSCSI
•	LUN LUN 32TB 가

iSCSI

- 가 iSCSI NAS
- :iSCSI LUN "Instant Allocation()"
 - iSCSI LUN :NAS LUN "System Status()" > "Resource Monitor()" . NAS 4
 - 가 4 LUN iSCSI LUN : LUN / LUN
 - 가 가 2 가 가 NAS 2 LUNs
 - VM 가

Mac OS X에서 Xtend SAN iSCSI Initiator를 사용하여 iSCSI (QNAP NAS)에 연결하는 방법
 OS iSCSI . iSCSI NAS iSCSI LUN

Xtend SAN iSCSI Initiator :

ATTO Mac OS X Xtend SAN iSCSI Initiator Mac OS X 10.4.x - 10.6.x가 iSCSI

<http://www.attotech.com/products/product.php?sku=INIT-MAC0-001>

Xtend SAN iSCSI :

1. Xtend SAN iSCSI Initiator "Applications ()"
 2. "Discover Targets()" "Discover by DNS/ IP (DNS/ IP)" "Discover by iSNS(iSNS)" IP
 3. , iSCSI (: 3260), CHAP () "Finish()"
 4. NAS iSCSI "Add(가)"
- "Setup()" iSCSI "Status()" .
 . "Login()" . iSCSI
 가 "Initialize...(...)"
 "Disk Utilities()" .
 iSCSI Mac

Ubuntu Linux Open- iSCSI Initiator iSCSI (QNAP NAS) 가
 가 . iSCSI NAS iSCSI
 LUN OS iSCSI .

Linux Open- iSCSI Initiator :
 Linux Open- iSCSI Initiator Ubuntu 8.04 LTS()
 iSCSI . Ubuntu <http://www.ubuntu.com>
 Open- iSCSI
 : <http://www.open-iscsi.org>

: LUN Linux Open- iSCSI .

```

open-iscsi . Linux Open- iSCSI Initiator
# sudo apt-get install open-iscsi

Linux Open- iSCSI Initiator iSCSI (QNAP NAS)
node.session.auth.username & node.session.auth.password CHAP
iscsid.conf 가
# vi /etc/iscsi/iscsid.conf

open-iscsi
# /etc/init.d/open-iscsi restart

( QNAP NAS), 가 3260 10.8.12.31 iSCSI
# iscsiadm -m discovery -t sendtargets -p 10.8.12.31:3260

iSCSI
# iscsiadm -m node

** 가 :
# iscsiadm -m node --op delete --targetname THE_TARGET_IQN
  
```

```

open-iscsi 가
# /etc/init.d/open-iscsi restart

가 :
[ iface: , : iqn.2004-04.com:NAS:iSCSI.ForUbuntu.B9281B, :
10.8.12.31,3260] [ ]
  
```

```

dmesg
# dmesg | tail

./dev/sdb
# fdisk /dev/sdb
  
```

```
# mkfs.ext3 /dev/sdb1
```

```
# mkdir /mnt/iscsi
```

```
# mount /dev/sdb1 /mnt/iscsi/
```

I/O

```
# hdparm -tT /dev/sdb1
```

```
"iscsiadm"
```

```
:
```

```
# iscsiadm -m discovery --type sendtargets --portal HOST_IP
```

```
:
```

```
# iscsiadm -m node --targetname THE_TARGET_IQN --login
```

```
:
```

```
# iscsiadm -m node --targetname THE_TARGET_IQN --logout
```

```
:
```

```
# iscsiadm -m node --op delete --targetname THE_TARGET_IQN
```

4.2.5.3 ACL

3.3.0 NAS 3.2.0

3.3.0 NAS 3.2.0
 iSCSI LUN NAS LUN NAS
 "Advanced ACL(ACL)" "Add a Policy(가)"
 , IQN NAS LUN
 • : 가 LUN
 • / : 가 LUN
 • : 가 LUN
 iSCSI LUN
 iSCSI "Edit(
)"

LUN NAS LUN

IQN ?
 iSCSI "General()" IQN





4.2.5.4 LUN

NAS (Windows, Linux,) iSCSI LUN , NAS LUN ,
LUN iSCSI

iSCSI LUN

iSCSI LUN NAS iSCSI LUN . iSCSI
LUN "Storage Manager()" > "iSCSI" > "Target Management(
)"




- "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)"
- "Create a new job" ()
- "Back up an iSCSI LUN(iSCSI LUN)" "Next()"
- LUN LUN NAS가 LUN
- LUN . NAS Linux (NFS), Windows (CIFS/SMB) NAS
LUN "Test" ()
"Next()"
- LUN NAS
* " " (:
NAS CPU LUN
iSCSI LUN .)
6. (, ,) "Next()"
- NAS "Next
()"
- "Finish()"
- 9.

iSCSI LUN

- iSCSI LUN NAS
- "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)" . "
 - "Restore an iSCSI LUN(iSCSI LUN)" "Next()"
 - , IP / / "Test" ()
"Next()"
 - LUN "Next()"

5. "Next()"
6. NAS "
7. "Finish()"

- LUN : NAS iSCSI LUN LUN LUN
- LUN : NAS LUN iSCSI LUN LUN

iSCSI LUN

iSCSI LUN NAS iSCSI LUN iSCSI
 "Storage Manager()" > "iSCSI" >
 "Target Management()"

- iSCSI LUN
1. "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)"
 2. "Create a LUN Snapshot(LUN)" "Next()"
 3. NAS iSCSI LUN iSCSI LUN "
 4. LUN "Next()" NAS LUN iSCSI iSCSI
 - 5.
 6. NAS "
 7. "Finish()"
 - 8.
 9. "iSCSI" > "Target Management()" 가 LUN iSCSI iSCSI initiator LUN QNAP NAS iSCSI http://www.qnap.com/pro_application.asp?ap_id=135

:	LUN	LUN	Windows 7	Windows 2008 R2
NAS	.	.	LUN	NAS

LUN / /

QNAP NAS NAS iSCSI LUN ,

:	IT	.
---	----	---






1. "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)"
NAS iSCSI LUN ,
2. Putty SSH NAS .
3. NAS .
4. "lunbackup" .
5. lunbackup NAS iSCSI LUN ,

4.2.6 가

NAS QNAP NAS iSCSI 가
 NAS 가 . NAS 8 가 .

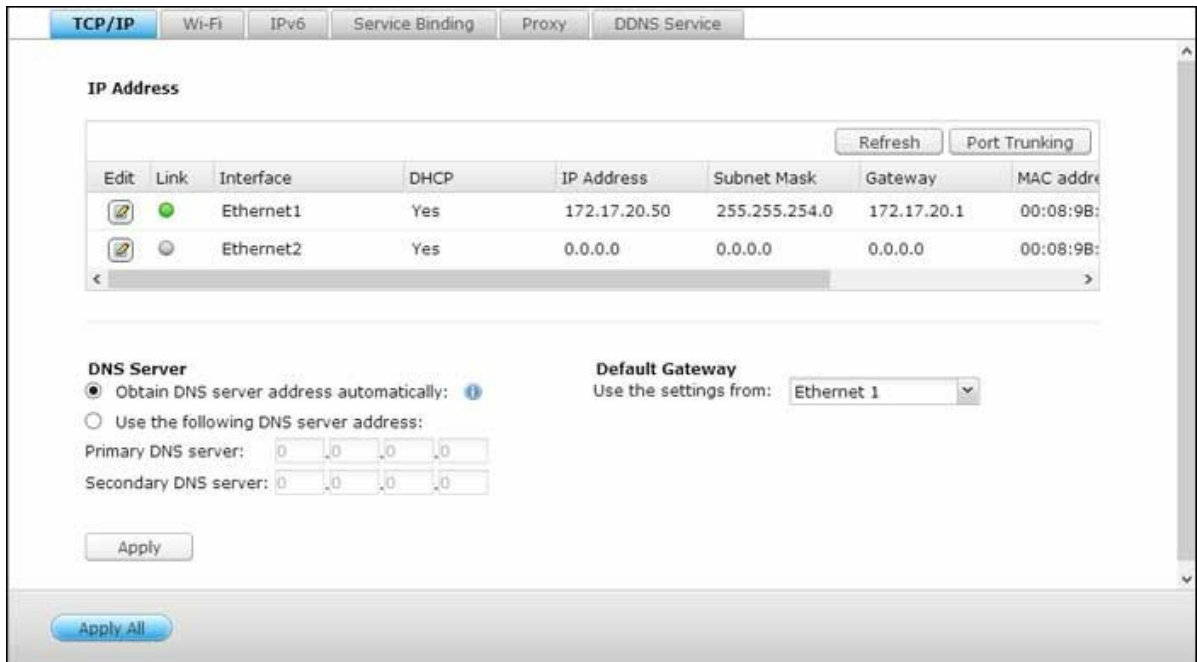
- NAS 가 16TB .
- 가 ((iSCSI)가 가 가 NAS NAS가 2 .
- 가 " " 가 .

- 가 NAS 가 , iSCSI
1. "Add Virtual Disk(가 가)"
 2. IP (: 3260). "Get Remote Disk(가)"
 . "Data Digest()" / "Header Digest()()"
 . iSCSI iSCSI 가
 "Next()"
 3. 가 LUN LUN
 . NAS LUN . NAS EXT3, EXT4, FAT32, NTFS, HFS+
 . LUN "Unknown()" "Format virtual disk
 now(가)" . 가 EXT3, EXT4, FAT32,
 NTFS, HFS+ . "Format virtual disk now(가)" , LUN
 4. "Finish()"
 5. NAS 가 . "Privilege Settings()" > "Share Folders()" 가 가

		iSCSI 가 .
		iSCSI .
		iSCSI .
		가 EXT3, EXT 4, FAT 32, NTFS, HFS+
		가 iSCSI .

4.3

"Control Panel()" > "System Settings()" > "Network()" 가 NAS



TCP/IP

(i) IP

NAS TCP/IP , DNS

"Edit()" "Edit()" ("Network Parameters()", "Advanced Options()" "DHCP Server(DHCP)")
 LAN NAS ,
 TCP/IP . NAS
 IP . IP * . Finder
 NAS IP , 1 IP LAN 1 2 IP LAN 2
 LAN (iii)

* TS- 110, TS- 119, TS- 210, TS- 219, TS- 219P, TS- 119P+, TS- 219P+, TS- 112, TS- 212
 가 LAN LAN

TCP/IP

- : NAS가 NAS가
- **DHCP** IP : 가 DHCP ,
 NAS IP
- **IP** : IP IP , ,

- **Jumbo Frame** (): TS-509 Pro, TS-809 Pro TS-809U-RP
 "Jumbo Frames()" 1,500
 가
 CPU (MTU)
 가 (:)
 NAS 1,500 가
 MTU . NAS MTU
 4,074, 7,418 9,000

: 가
 MTU

Virtual LAN (VLAN)

- . NAS VLAN NAS VLAN
- NAS VLAN "Enable VLAN(VLAN)" VLAN ID (0 4,094)
 . VLAN ID 가 VLAN
 . VLAN ID NAS NAS
 . NAS가 VLAN NAS가 2
 LAN VLAN 가
 NAS

:VLAN Intel NAS
<http://www.qnap.com>

DHCP

- DHCP () IP
 NAS가 가 "Enable DHCP Server (DHCP)"
 - NAS DHCP

:
 • 가 IP DHCP
 • DHCP LAN NAS LAN
 IP Ethernet 1

- IP, IP, : NAS가 DHCP IP
 IP가 IP
- **WINS** (): WINS (Windows Internet Naming Service) Windows
 (NetBIOS names) IP Windows
 . 가 WINS IP

- **DNS** (): DNS
- **TFTP** (): NAS PXE . TFTP
(TFTP) IP
, TFTP IP

(ii) DNS

DNS() (: google.com) IP (74.125.31.105)
. DNS NAS DNS IP

- 1 DNS : 1 DNS IP
- 2 DNS : 2 DNS IP

:
 • ISP 1 2 DNS IP
 NAS가 BT ,
 URL 1 DNS IP ,
 • DHCP IP 가 , 1 2 DNS 가
 "0.0.0.0"

(iii)

LAN (LAN NAS).

(iv)

2 LAN 가 NAS .

NAS

()
()가 ()
()가

NAS 2 LAN 가 NAS가 (i) (ii)

- NAS :
1. "Port Trunking()"
 2. (1+2, 3+4, 5+6, 7+8). ()
 3. . "Apply()"
 4. "here()"
 5. "Control Panel()" > "System Settings()" > "Network()" > "TCP/IP"
 6. "Edit()" "Edit()"

- :
가 NAS
- LAN 가 NAS

NAS :

Balance-rr (Round-Robin) (- rr(-))	Round-Robin(-) 가 Balance-rr(- rr)	
Active Backup ()	Active Backup() 가 MAC 가 () Active Backup()	
Balance XOR (XOR)	Balance XOR(XOR) 가 MAC 가 MAC 2 xmit_hash_policy Balance XOR(XOR)	
Broadcast()	Broadcast()	
IEEE 802.3ad (Dynamic Link Aggregation) ()	802.3ad Dynamic Link Aggregation() LACP 가 IEEE 802.3ad	802.3ad LACP




Balance-tlb (Adaptive Transmit Load Balancing)(-tlb())	Balance-tlb (-tlb) () 가 MAC 가 Balance-tlb(-tlb)	
Balance-alb (Adaptive Load Balancing)(-alb())	Balance-alb (-alb) Balance-tlb(-tlb) IPV4 () ARP 가 Balance-alb(-alb)	


Wi-Fi

NAS Wi-Fi NAS Wi-Fi NAS USB NAS가 가 가

- , USB
- USB Wi-Fi

1: Wi-Fi "Wi-Fi Network Connection(Wi-Fi)" Wi-Fi

		Wi-Fi
		Wi-Fi ;
		Wi-Fi 가
		Wi-Fi

		Wi-Fi
		Wi-Fi
		Wi-Fi

"Rescan()" 가 Wi-Fi Wi-Fi
 "Connect()" 가
 "NEXT()" NAS

	NAS가 Wi-Fi
	NAS Wi-Fi
SSID	가 SSID가 가
IP	NAS가 Wi-Fi DHCP IP
	NAS가 Wi-Fi
	가
	Wi-Fi Wi-Fi SSID가

2: Wi-Fi
 SSID()가 Wi-Fi "CONNECT TO
 A WIRELESS NETWORK(Wi-Fi)"

ad hoc

- (SSID) security type()
 - No authentication (Open)(): 가
 - WEP(): 4 WEP 1
 - WPA-Personal (WPA-): AES TKIP
 - WPA2-Personal (WPA2-):
-
- NAS Wi-Fi "FINISH()"
- IP , "Edit()" . DHCP IP
IP

Wi-Fi NAS / AP "Network()" > "TCP/IP" "WLAN1"
 NAS가

- WEP 5 13 ASCII 10 26 (0-9 A-F)
- 가 / AP "N-only (N-)"
- WPA2 "B/G/N mixed (B/G/N)"
- WPA2 Windows 7 NAS ad-hoc
- Windows 7 WEP
- ad-hoc IP

IPv6

NAS " " IPv6, RFC 2461 RADVD() IPv6
 가 IPv6 NAS 가 IPv6 NAS

- Remote replication
- FTP
- iSCSI (가)
- SSH (putty)

- "IPv6 " "Apply()" NAS가
 IPv6 IPv6
- "Edit()" NAS가 IPv6
- **IPv6** : IPv6 가 , NAS가 IPv6
 가
- **IP** : IP IP (: 2001:bc95:1234:5678),
 (: 64), NAS ISP
- (radvd) : NAS IPv6 IPv6 IPv6
- **IPv6 DNS** : DNS DNS
 ISP IPv6
 "::"

NAS ()가 , NAS 가 . NAS
 "Apply()"
 "Refresh()"

- ()가 NAS
- 가

, 가 NAS ,

DDNS

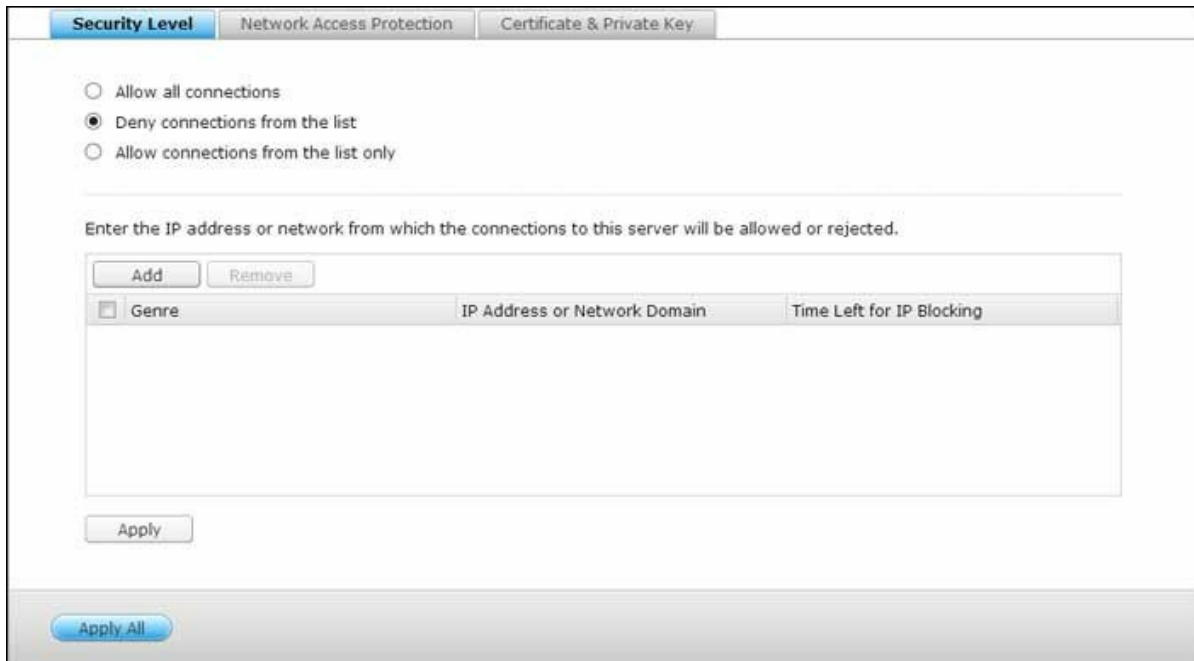
가 NAS , DDNS IP

NAS DDNS : <http://www.dyndns.com>, <http://update.ods.org>, <http://www.dhs.org>, <http://www.dyns.cx>, <http://www.3322.org>, <http://www.no-ip.com>.

: DDNS

4.4

"Control Panel()" > "System Settings()" > "Security()" 가 , NAS



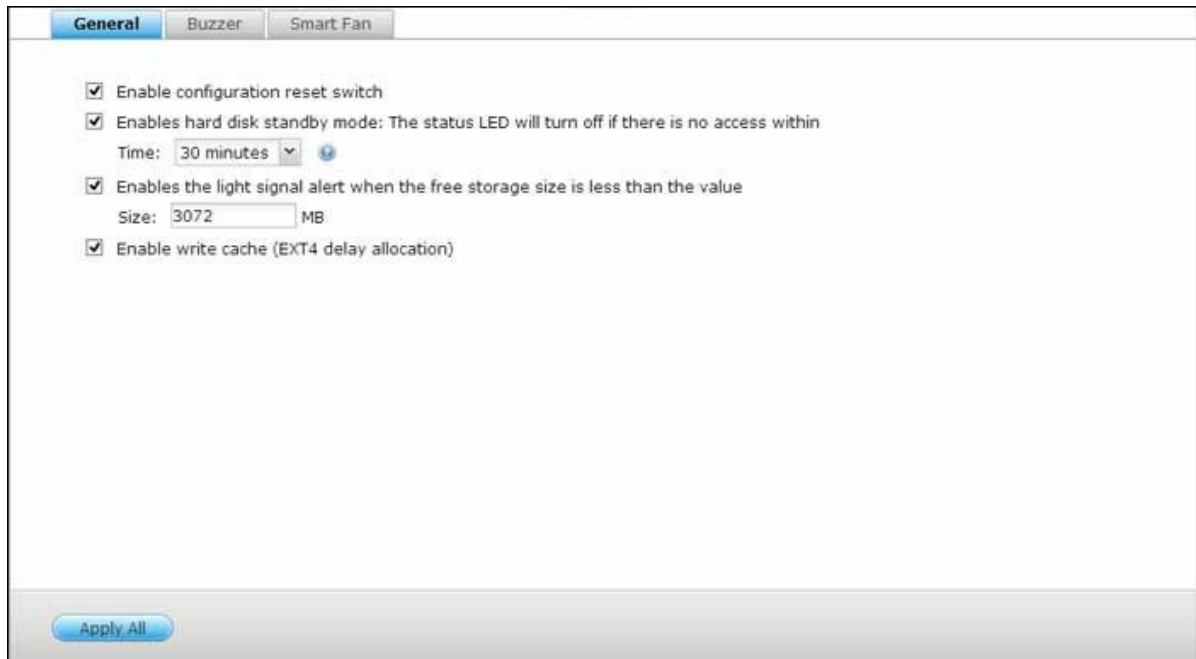
IP 가 , "Apply()" 가

IP가 , IP

&
(SSL) 가
SSL NAS 가
NAS X.509
• :
• :
• & :

4.5

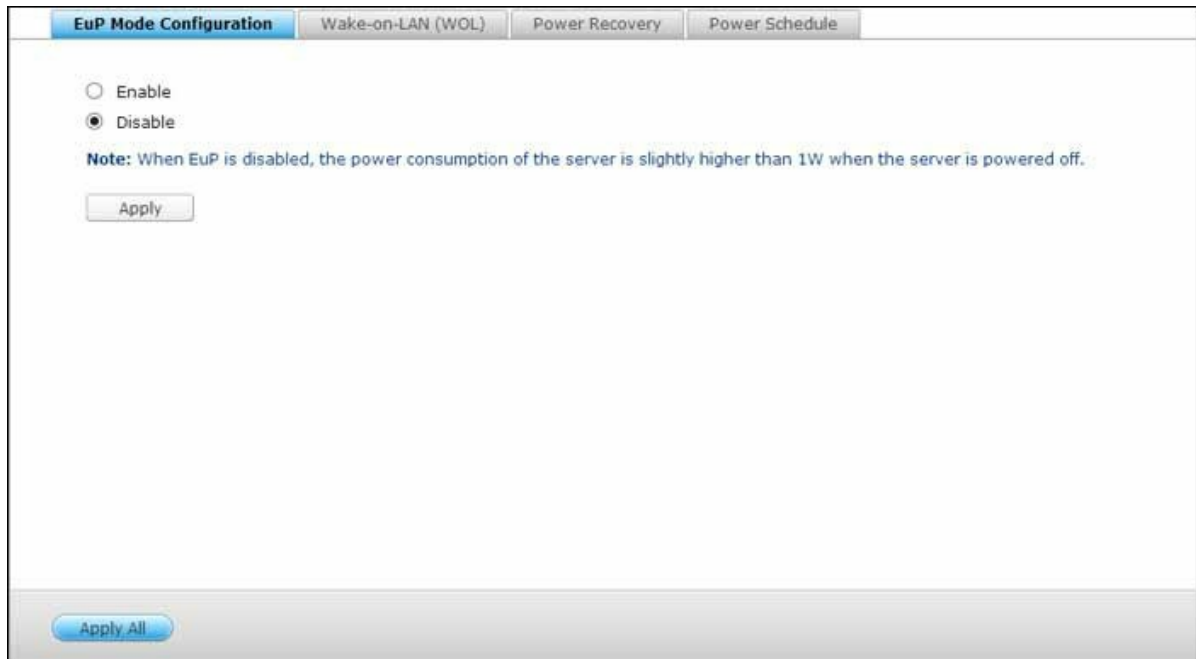
"Control Panel()" > "System Settings()" > "Hardware()" 가
NAS



- : 3
 - (3): 3
 - : admin.
 - TCP/ IP : DHCP IP
 - TCP/ IP :
 - TCP/ IP : (LAN), "
 - ()"
 - : 8080()
 - : ().
 - LCD : (); LCD NAS
 - <http://www.qnap.com>
 - VLAN
 - : 가 NAS 가
 - (10): 10 3 10
 - NAS "Administration()" > "Restore to Factory Default()"
- , NAS

- SATA 가 :
 SATA 가 LED
- (EXT4): NAS EXT 4
 1-51,200 MB
 : Download Station, MySQL , Surveillance Station. NAS가 가
- (PSU) : NAS
 2U). "System Settings(PSU NAS (1U
)" > "Hardware()"
 가 PSU가 NAS PSU "System Logs(
)" . NAS PSU
 : () ()가
 가
- ():
 , CPU , 가
 가
- :

4.6



EuP

EuP () , , 가,
(EU) .

EuP (1W)

- Wake on LAN: .
- AC : .
- / / : .

EuP 가 1W . EuP
Wake on LAN, AC

<http://www.qnap.com> .

Wake-on-LAN ()

NAS가 (Wake on LAN) NAS .
(Wake on LAN)

<http://www.qnap.com> .

AC가

NAS

가 ,

```
: X86 NAS . X86 NAS  
,"Control Panel( )" > "System Settings( )" > "Power( )" >  
"Power Recovery( )" "Turn on the server automatically( )"
```

15

"Postpone the restart/shutdown schedule when replication job is in process(
/)"

- :
-
- NAS QNAP 가 ,
가 .

4.7

"Control Panel()" > "System Settings()" > "Notification()" 가 NAS

S M T P

NAS

SMTP

-
- SMTP : SMTP . : smtp.gmail.com.
- : SMTP . 25 .
-
-
- : SSL TLS NAS SMTP . SMTP 가

S M S C

SMSC

Clickatell NAS SMS "Add SMS Provider(SMS 가)" SMS

SMS 가

"Add SMS service provider(SMS 가)" SMS URL

:	URL	가	SMS	SMS
---	-----	---	-----	-----

(/)가

NAS

- : NAS

(2)

- **SMS** : NAS

(2)

4.8

"Control Panel()" > "System Settings()" > "Firmware Update()" 가 NAS



"Automatically check if a newer version is available when logging into the NAS web administration interface(NAS)" NAS

가 NAS
"Check for Update()"
NAS

1. QNAP <http://www.qnap.com>

2. NAS IMG

3.

4. "Browse()"
"Update System()"

가 NAS가

가

QNAP Qfinder

QNAP Qfinder

NAS

1. NAS

"Update Firmware()"

2. NAS

3. NAS

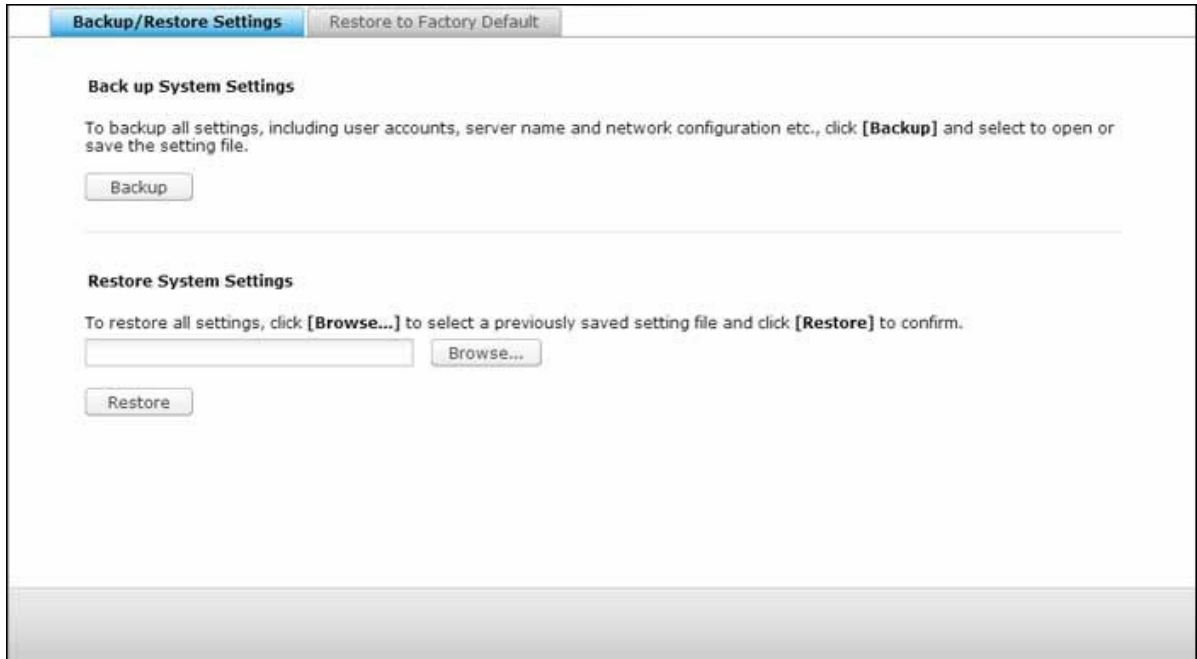
"Start()"

:

NAS

4.9 /

"Control Panel()" > "System Settings()" > "Backup/Restore(/)" 가
 NAS , , NAS .



/

"Backup()" : , ,
 : "Browse()"
 "Restore()" .

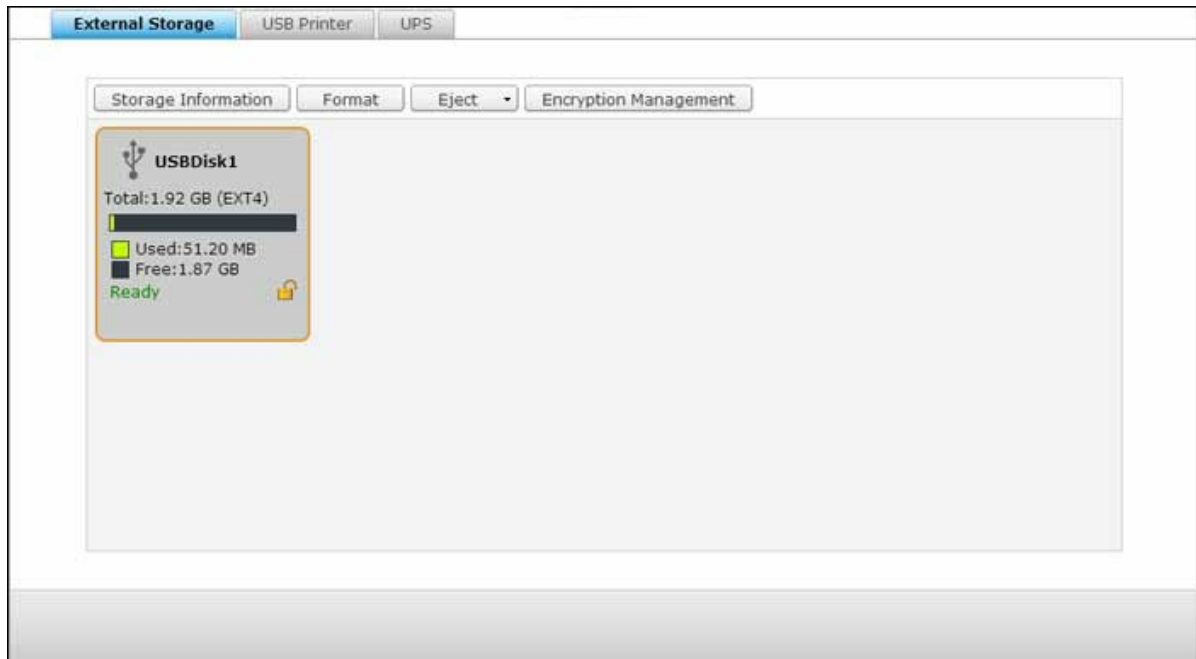
- : .
- : .
- **NAS** : NAS .




```

: NAS 3
( ). </
b> 10 ,
( ).
: " " " "
(NAS ).
  
```

4.10

"Control Panel()" > "System Settings()" > "External Storage()" 가
, USB UPS



-  92
- USB  94
- UPS  102

가 NAS , "Encryption Management()"

1. , "Encryption Management()"
2. "Lock this device()" "Next()"
3. "Next()"

: , "Control Panel()" > "Applications()" > "Backup Station" > "External Drive()"

1. , "Encryption Management()"
2. "Unlock the device()" " "
3. "Save encryption key()"
NAS NAS 가
" "

1. "Encryption Management()"
2. "Manage encryption key()" " "
3. " "

- 1- 가 NAS
- : NAS
 - Q- RAID 1: NAS Q- RAID 1 Q- RAID 1 NAS RAID Q- RAID 1 가 NAS NAS 가

- :
- Q- RAID 1
 - Q- RAID 1 2TB
 - NAS 가

4.10.2 USB

NAS Windows, Mac Linux (Ubuntu)
3 USB

NAS USB 가 NAS USB 가

USB "Printer Info()"

- : USB
- NAS
- IPP ()
- USB <http://www.qnap.com>

USB "Printer Info()"
"Clear()"

: 가 NAS

"Clean Up Spool Space()" 가

"Settings()"

- : 가
- **Bonjour** : Bonjour Mac 가
Bonjour가
"a-z", "A-Z", "0-9", dot (.), (,) (-)
- : 가
1,000

가

- IP : NAS
 , "Allow printing()" "Deny
 printing()" IP (*)
 "No limit()" . "Apply()"

: IPP Bonjour . Samba

4.10.2.1 Windows 7

Windows 7

- 1.
2. "Add a printer(가)"
3. 가 "Add a network, wireless or Bluetooth printer(, , , 가)"
4. Windows "The printer that I want isn't listed(가)"
5. "Select a shared printer by name()"
NAS_IP
http://NAS_IP:631/printers/ServernamePR.
http://10.8.13.59:631/printers/NASPR3
6. 가 . Windows
7. 가
8. "Finish()"
- 9.

4.10.2.2 Windows XP

1

1. Windows Explorer \ \ NAS IP
- 2.
- 3.
4. 가 NAS

2

- Windows XP
1. "
 2. 가
 3. " "
 4. " " 가
 5. PC
 - 6.
 7. " 가" " "
 8. " " " "
 9. " " " " " "
 10. , NAS IP= 192.168.1.1, NAS = myNAS \\
NAS IP\ NAS namepr , \ \ 192.168.1.1\ myNASpr
 - 11.
 - 12.

4.10.2.3 Mac OS 10.6

Mac OS X 10.6

NAS

1. NAS "External Device()" > "USB Printer(USB)" > "Settings()"
NAS Bonjour printer support (Bonjour)
Service Name()
2. Mac "System Preferences()" 가 "Print & Fax()"
3. + 가
4. USB 가 Bonjour
"Add(가)"
5. 가
"Continue()"
- 6.

4.10.2.5 Mac OS 10.4

Mac OS X 10.4

NAS

1. "Go()/ Utilities()"
2. "Printer Setup Utility()"
3. Add(가)
4. "alt" "More Printers()"
5. , "Advanced()" * "Windows Printer with SAMBA(SAMBA)"
URI (smb://NAS IP/printer name()"
) . "Device Configuration()" > "USB Printer page(USB)"
) , "Generic()" "Add(가)"
6. 가 가

- 5 "Advanced()" * , "alt" "More Printers()"
- NAS Mac OS

4.10.2.6 Linux (Ubuntu 10.10)

Linux (Ubuntu 10.10)

NAS

1. "System()" "Administration()" "Printing()"
2. "Add(가)" 가
3. "Network Printer()" "Internet Printing Protocol (ipp)(ipp)" "Host()" NAS IP "/printers" "Queue()" "printers/" "Verify()" .
- 4.
5. 가
- 6.
7. 가
8. 가 "Apply()" .
- 9.

4.10.3 UPS

UPS() NAS
 NAS UPS

- USB

USB :

1. USB UPS NAS
2. "Enable UPS Support (UPS)"
3. AC NAS가
 NAS가 NAS가 가
4. "Apply All()"

- SNMP

SNMP :

1. NAS가 SNMP UPS
2. "Enable UPS Support (UPS)"
3. "Protocol()" "APC UPS with SNMP management(SNMP APC UPS)"
4. SNMP UPS IP
5. AC NAS가
 NAS가 NAS가 가
6. "Apply All()"

- UPS 가 UPS UPS
 UPS가 NAS UPS
- USB NAS :
1. NAS("UPS ")가 UPS
 2. "Enable UPS Support (UPS)"
 3. "Enable network UPS Support(UPS)" NAS가
 4. AC NAS가
 NAS가 NAS가 가
 5. UPS "IP "
 6. "Apply All()" NAS

- UPS : UPS가
- NAS :
1. NAS가 UPS
 2. "Enable UPS Support (UPS)"
 3. "Protocol()" "Network UPS slave(UPS)"
 4. UPS IP
 5. AC NAS가 NAS가 NAS가 가
 6. "Apply All()"

: UPS 가 SNMP QNAP NAS , UPS
NAS IP

NAS UPS

가 "System Event Logs()"

NAS 가 "UPS Settings(UPS)"

, NAS

- NAS가
- NAS가

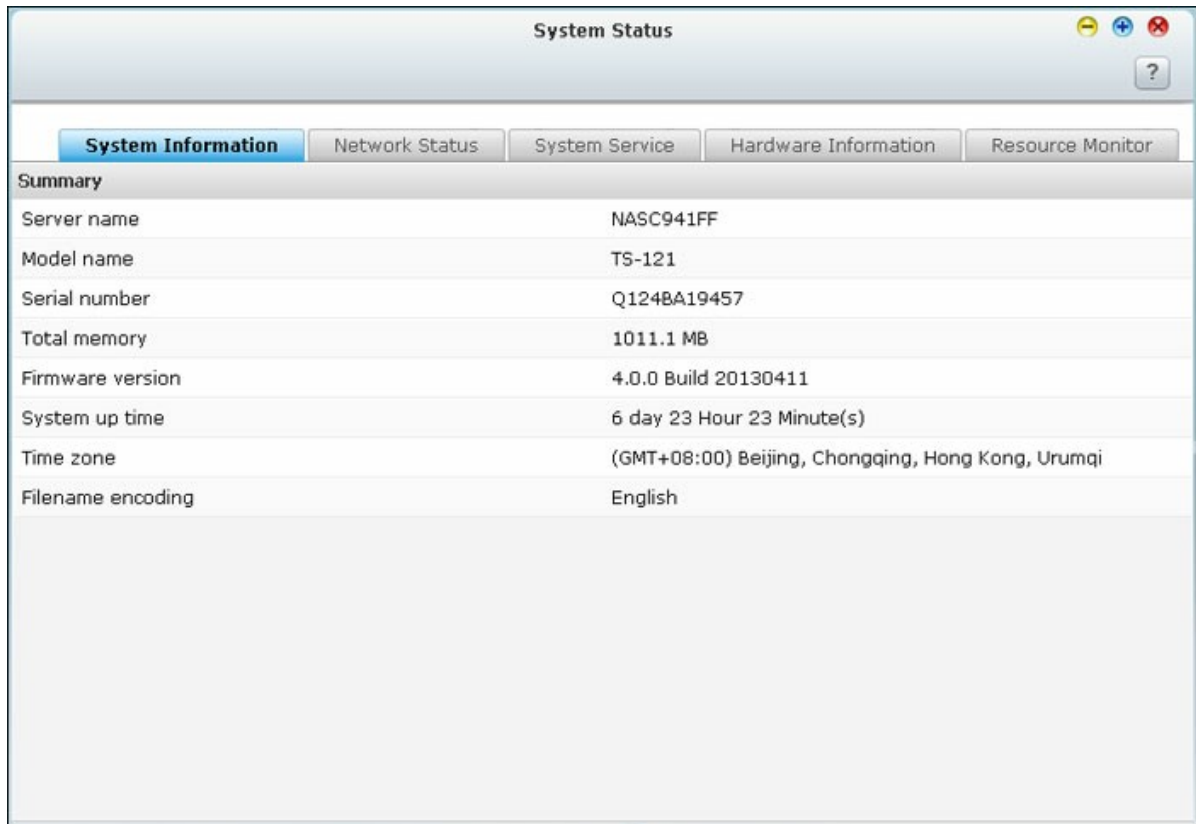
	NAS가	UPS가 , NAS가
	NAS가	NAS가

NAS가 UPS 가 , WOL(Wake on LAN)*
NAS (NAS UPS 가 WOL WOL NAS
) . NAS UPS 가 , NAS "System Settings()" >
"Power Recovery()"

* TS- 110, TS- 119, TS- 210, TS- 219, TS- 219P, TS- 410, TS- 419P, TS- 410U, TS- 419U,
TS- 112, TS- 212, TS- 412, TS- 412U <http://www.qnap.com>

4.11

"Control Panel()" > "System Settings()" > "System Status()" 가
NAS



NAS가

NAS

- CPU Usage(CPU): NAS CPU
- Memory Usage(): NAS
- Disk Usage():
- Bandwidth Usage(): NAS 가 LAN
- Process(): NAS

4.12

"Control Panel()" > "System Settings()" > "System Logs()" 가
NAS

System Event Logs						
Type	Date	Time	Users	Source IP	Computer name	Content
⚠	2013-05-07	17:07:04	System	127.0.0.1	localhost	[Drive 1] The scanning is stopped by user.
ℹ	2013-05-07	17:06:55	System	127.0.0.1	localhost	[Drive 1] Start scanning bad blocks.
ℹ	2013-05-06	08:04:00	System	127.0.0.1	localhost	[USBDisk2] Device detected. The file system is ntfs.
ℹ	2013-05-06	02:46:29	System	127.0.0.1	localhost	[USBDisk2] Device removed.
ℹ	2013-05-03	23:23:50	System	127.0.0.1	localhost	[Video Station] Video Station is enabled successfully.
ℹ	2013-05-03	17:40:41	admin	61.62.220.74	---	[VPN Service] PPTP started successfully.
ℹ	2013-04-30	22:52:30	System	127.0.0.1	localhost	LAN 1 link is Up.
ℹ	2013-04-30	22:44:18	System	127.0.0.1	localhost	[USBDisk3] Device removed.
ℹ	2013-04-30	22:43:43	System	127.0.0.1	localhost	[USBDisk3] Device detected. The file system is ntfs.
ℹ	2013-04-30	22:43:36	System	127.0.0.1	localhost	[USBDisk3] Device removed.
ℹ	2013-04-30	22:43:16	System	127.0.0.1	localhost	[USBDisk3] Device detected. The file system is ntfs.

NAS , 10,000

:"Clear()"

NAS HTTP, FTP, Telnet, SSH, AFP, SAMBA iSCSI . "Options()"

:"Clear()" IP IP

가 : . NAS CSV
 . NAS가 "Options()"
 , "Stop logging()"

NAS 가

: IP IP

Syslog

Syslog IP
 Syslog

CSV

0 - UNKNOWN	0 - UNKNOWN
1 - SAMBA	1 - DEL
2 - FTP	2 - READ
3 - HTTP	3 - WRITE
4 - NFS	4 - OPEN
5 - AFP	5 - MKDIR
6 - TELNET	6 - NFSMOUNT_SUCC
7 - SSH	7 - NFSMOUNT_FAIL
8 - ISCSI	8 - RENAME
	9 - LOGIN_FAIL
	10 - LOGIN_SUCC
	11 - LOGOUT
	12 - NFSUMOUNT
	13 - COPY
	14 - MOVE
	15 - ADD

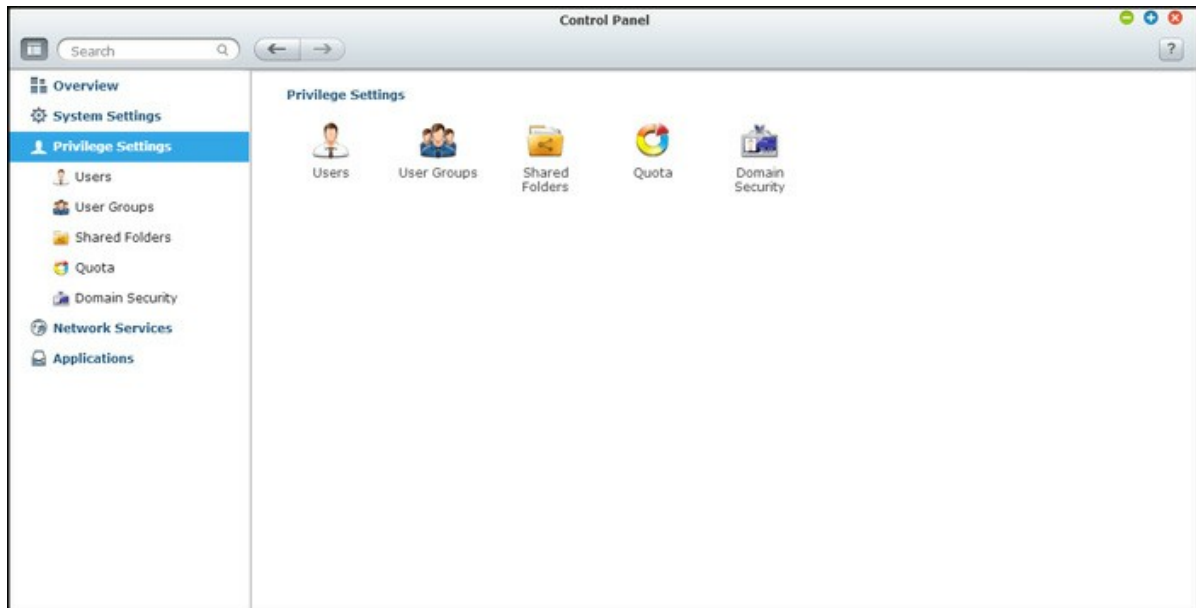
"Search()"

IP

IP

5.

"Control Panel()" > "Privilege Systems()" 가 NAS ,



- 110
- 113
- 114
- 121
- 122

5.1

NAS

가

- admin: " "
- : " " "guest"
- : " " . FTP

NAS

NAS

NAS

<http://www.qnap.com>

	NAS
1,024	TS-110, TS-210
2,048	TS-112, TS-119, TS-119P+, TS-212, TS-219P+, TS-410, TS-239 Pro II+, TS-259 Pro+
4,096	TS-412, TS-419P+, TS-410U, TS-419U, TS-412U, TS-419U+, SS-439 Pro, SS-839 Pro, TS-439 Pro II+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-459 Pro+, TS-459 Pro II, TS-559 Pro+, TS-559 Pro II, TS-659 Pro+, TS-659 Pro II, TS-859 Pro+, TS-859U-RP, TS-859U-RP+, TS-809 Pro, TS-809U-RP, TS-879 Pro, TS-1079 Pro, TS-879U-RP, TS-EC879U-RP, TS-1279U-RP, TS-EC1279U-RP

가

- : 32 . , , ,
."/ \ [] ; | = , + * ? < > ` ' `
- : 16 . 6

NAS

1. "Control Panel()" > "Privilege Settings()" > "Users()"
2. "Create()"
3. ."

NAS

1. "Control Panel()" > "Privilege Settings()" > "Users()"
2. "Create()" > "Create Multiple Users()"
3. "Next()"

4. test .0001 , test0001,
 10 . NAS가
 test0002, test0003...test0010

5. 가 NAS 가

6.

7. "Finish()"

8.

9.

가 /

NAS 가 /

:

NAS

1. "Control Panel()" > "Privilege Settings()" > "Users()"
2. "Create()" > "Import/Export Users(가 /)"
3. "Export user and user group settings()"
4. "NEXT()" (* .bin)
 NAS 가

가 :

NAS 가

NAS 가

1. "Control Panel()" > "Privilege Settings()" > "Users()"
2. "Create()" > "Import/Export Users(가 /)"
3. "Import user and user group settings(가)"
 "Overwrite duplicate users()" NAS
 "Browse()" 가 (* .txt, * .csv, * .bin)
 "Next()" 가
4. 가 "Finish()"
5. 가

- 가 , ()
- ""Privilege Settings()" > ""Quota()""

NAS TXT, CSV BIN

가

TXT

- 1.
 2. " : , , (MB),
 3. 가
 4. 가 UTF-8
- NAS

CSV (Excel)

1. Excel
2.
 - o A :
 - o B :
 - o C : (MB)
 - o D :
3. 가
4. 가 CSV CSV UTF-8

BIN (NAS QNAP NAS

가 BIN "Privilege Settings()" > "Quota()"

NAS

Microsoft Networking, FTP, AFP, File Station
"Homes"

" " "admin"

users ("Home Folders ()" "Enable home folder for all" . "Apply()")

5.2

. NAS

- : NAS
- :

NAS

NAS

NAS

<http://www.qnap.com>

	NAS
128	TS-110, TS-210
256	TS-112, TS-119, TS-119P+, TS-212, TS-219P+, TS-410, TS-239 Pro II+, TS-259 Pro+
512	TS-412, TS-419P+, TS-410U, TS-419U, TS-412U, TS-419U+, SS-439 Pro, SS-839 Pro, TS-439 Pro II+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-459 Pro+, TS-459 Pro II, TS-559 Pro+, TS-559 Pro II, TS-659 Pro+, TS-659 Pro II, TS-859 Pro+, TS-859U-RP, TS-859U-RP+, TS-809 Pro, TS-809U-RP, TS-879 Pro, TS-1079 Pro, TS-879U-RP, TS-EC879U-RP, TS-1279U-RP, TS-EC1279U-RP

256

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

5.3

"Control Panel()" > "Privilege Settings()" > "Shared Folders()" 가
NAS

Shared Folder							
Advanced Permissions							
Folder Aggregation							
Create Remove Restore Default Shared Folders							
Folder Name	Size	Folders	Files	Hidden	Volume	Action	
Download	5.04 GB	19	666	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
Multimedia	73.11 GB	180	18993	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
Public	27.95 GB	1737	7790	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
Recordings	620.13 MB	8	24	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
USBDisk1	8 KB	1	0	No	USB Disk 1	[Icons]	
Usb	6.11 GB	51	642	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
V II	16 KB	3	0	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
V IV	4 KB	0	0	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
V V	8 KB	1	0	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	
VIII	4 KB	0	0	No	RAID 5 Disk Volume: Drive 1 3 4	[Icons]	

Page 1 / 2 | Display item: 1-10, Total: 13 | Show 10 Items

NAS




NAS <http://www.qnap.com> NAS

	NAS
256	TS-110, TS-210, TS-112, TS-119, TS-119P+, TS-212, TS-219P+, TS-x20, TS-x21, TS-410, TS-239 Pro II+, TS-259 Pro+
512	TS-412, TS-419P+, TS-410U, TS-419U, TS-412U, TS-419U+, SS-439 Pro, SS-839 Pro, TS-439 Pro II+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-459 Pro+, TS-459 Pro II, TS-559 Pro+, TS-559 Pro II, TS-659 Pro+, TS-659 Pro II, TS-859 Pro+, TS-859U-RP, TS-859U-RP+, TS-809 Pro, TS-809U-RP, TS-x70, TS-879 Pro, TS-1079 Pro, TS-879U-RP, TS-EC879U-RP, TS-1279U-RP, TS-EC1279U-RP

1. "Create()" > "Shared Folder()"
2. "Next()"

3.
 - : " / \ [] : ; | = , + * ? < > ` ' "
 - :
 - :
 - : Microsoft Networking
 \\ NAS_IP \ share_name
 - (oplocks): 가
 (oplock) Windows
 . Oplocks , oplocks
 - : "
 - : NAS가

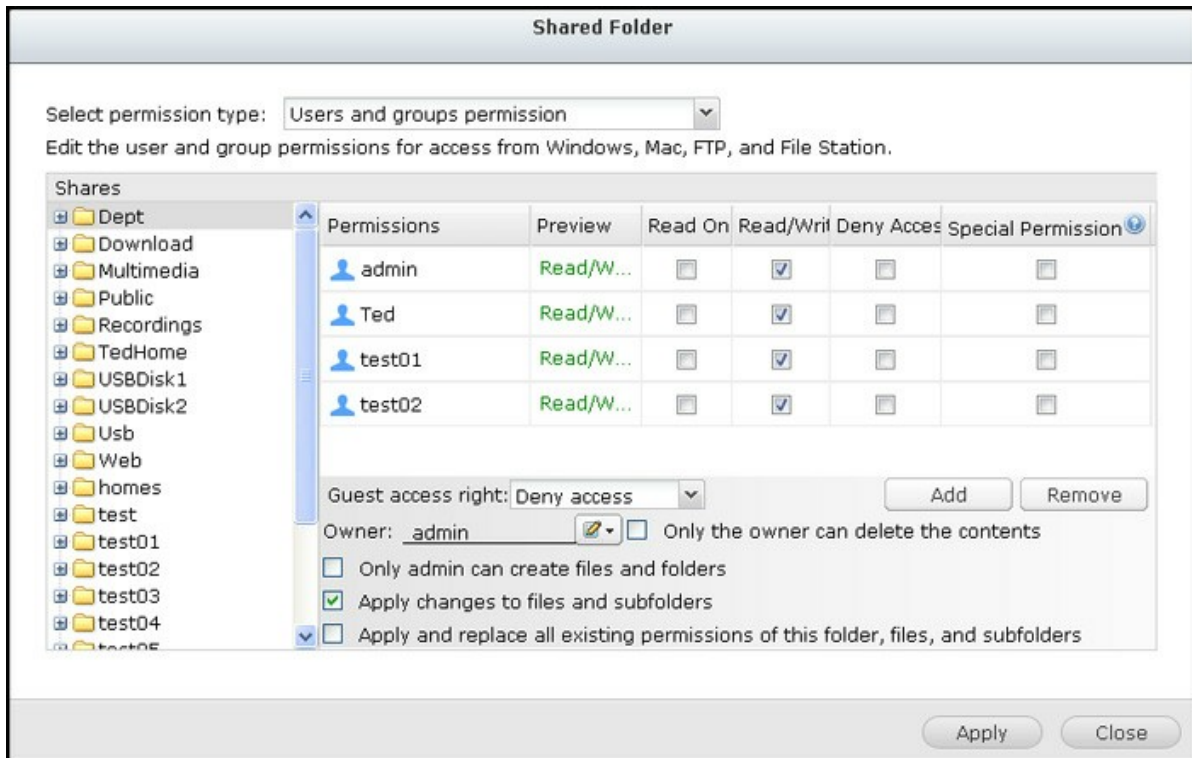
- 4.
5. , /
6. "Next()"
7. "Finish()"
- "Remove()" (
- ISO)"
- 가 NAS

		, oplock , FTP
		
		

NAS
) > "Shared Folders()"
 ,
 "Privilege Settings()"
 "Folder Permissions()"
 가
 . "Add(가)"
 . "Add(가)"
 . "Remove()"
 . Ctrl
 . "Apply()"

NAS

1. "Privilege Settings()" > "Shared Folders()" > "Advanced Permissions()"
 "Enable Advanced Folder Permissions()"
 "Apply()"
2. "Privilege Settings()" > "Shared Folders()" > "Shared Folders()"
 Dept , "Folder Permissions()"
 가
 가
 가 (Dept) "+ Add()"
 가)"
3. "Add()"
4.
 - o Guest Access Right():
 - o Owner():
5. "Folder Property()"



6. "Set()"

- Only the owner can delete the contents():
 - Dept / 가 , HR,
 - "Apply changes to files and subfolders()" "Apply and replace all existing permissions of this folder, files, and subfolders()"
 - Only admin can create files and folders():
 - 가 "Dept()" / 가 , HR, Admin01, Admin02, HR1, HR2
 - Apply changes to files and subfolders():
 - 가 "Only the owner can delete the contents(가)" "Only admin can create files and folders()"
 - Apply and replace all existing permissions of this folder, files, and subfolders(,):
 - 가)" "Only admin can create files and folders()"
 - Special Permission():
 - 가 "Read only()" "Read/Write (/)" 가 "admin()" "Read/Write(/)" Windows "admin()" 가 "admin()" NAS 가 가
7. , "Apply()" "YES()"

- 230
- "deny access()" /
- "read only access()" /

- / "Only admin can create files and folders()"
- " ">" ">" ">" " " " ID (500)가 ID " " ID

Microsoft

NAS Samba (Windows) . Microsoft
 NAS IP

1. "Folder Permissions()"
2. 가 "Microsoft Networking host access()"
3. IP IP
 - IP : 192.168.12.12 or 192.168.*.*
 - : dnsname.domain.local *.domain.local
4. "Add(가)" IP "Apply()"

- : IP
- (*): 0() (*) *.domain.local
 local a.domain.local, cde.domain.local
 test.domain.local
- (?): (?) , test?.domain.local
 : test1.domain.local, test2.domain.local testa.domain.local
- (.)
 , *.example.com "one.example.com" "one.two.example.com" 가

ISO

ISO NAS ISO
 . NAS 256 ISO

TS- 110, TS- 119, TS- 120, TS- 121, TS- 210, TS- 219, TS- 219P, TS- 220, TS- 221, TS- 410, , TS- 119P+, TS- 219P+, TS- 112, TS- 212 256 . (6) . ISO 256 (256 6 6) .

ISO NAS

1. NAS . "Share Folders()" > "Create()"
 - "Create an ISO Share(ISO)"
2. NAS IOS . " "
3. NAS
4. NAS
 - "Deny Access()" "Read only()" . " "
5. "Next()"
6. "Finish()"
7. "Action()" SMB, AFP, NFS, WebDAV

NAS File Station ISO File Station

- ARM NAS , ISO (). ISO
- Mac OSX WebDAV # 가

Microsoft NAS 10 NAS 가 NAS

- 1.
2. "Create A Portal Folder()"
- 3.
4. "Action()" "Link Configuration()"
5. NAS

- Folder Aggregation() AD
- 가 , NAS AD

"Advanced Folder Permissions ()" "Windows ACL"

	FTP, AFP, File Station, Samba	3 (, / ,)	NAS UI
Windows ACL	Samba	13 (NTFS)	Windows
	FTP, AFP, File Station, Samba	(http://www.qnap.com/index.php?lang=en&sn=4686)	Windows

- "Advanced Folder Permissions ()" NAS UI
- "Advanced Folder Permissions ()" , "Shared Folders()" "Folder Permissions()" "Shared Folders()" > "Folder Permission()"
- Windows ACL "Windows ACL" Windows Windows Windows ACL NTFS http://www.ntfs.com/#ntfs_permiss
- "Advanced Folder Permissions ()" Windows ACL Windows FTP, AFP File Station NAS NAS
- Windows ACL NAS UI . AFP, File Station, FTP Windows ACL (, / ,)

5.4

가

-
-

```
. "Generate ( )"      CSV  
"Download ( )"
```

5.5

NAS, Microsoft Active Directory (Windows Server 2003/2008/2012)

Lightweight Directory Access Protocol (LDAP)

Active Directory LDAP, AD LDAP NAS 가

- NAS : NAS
- **Active Directory** (): NAS Active Directory
 - NAS . NAS AD , NAS AD
 - / NAS :
 - Samba (Microsoft)
 - AFP
 - FTP
 -
- **LDAP** : NAS LDAP . LDAP NAS
 - . NAS LDAP , NAS LDAP Samba(Microsoft
 -) NAS . NAS LDAP
 - / NAS :
 - AFP
 - FTP
 -

5.5.1 NAS Windows Server 2003/2008/2012 Active Directory

Active Directory Windows Microsoft
 . NAS AD (Active Directory)
 . NAS AD
 가 . AD NAS
 Windows Server 2008 R2 NAS V3.2.0
 NAS AD

NAS Active Directory()

1. NAS "System Settings()" > "General Settings()" > "Time()"
 . NAS AD
2. "System Settings()" > "Network()" > "TCP/IP"
 . 1 DNS IP
 DNS 가 IP DNS
3. "Privilege Settings()" > "Domain Security()"
 . "Active Directory authentication (domain member) (Active Directory ())"
 , AD

:
 • qnap-test.com AD
 • AD AD
 • WINS : WINS WINS
 , NAS WINS IP (WINS)
).

Quick Configuration Wizard() NAS Active Directory(AD)

1. "Privilege Settings()" > "Domain Security()"
 . "Active Directory authentication (domain member) (Active Directory ())"
 "Quick Configuration Wizard ()"
2. " " "
3. (DNS) NetBIOS Active Directory
 DNS IP IP
4. DNS " " NAS
 "Join()"

5. , NAS가 . "Finish()"
6. "Privilege Settings()" > "Users()" "User Groups()" 가
NAS

Windows 2003

AD AD "System Properties()"
2003 "Full computer name
()" "node1.qnap-test.com"
AD
"node1" "node1.qnap-test.com" qnap-test.com.

Windows Server 2008

AD AD "Control Panel()" > "System()"
AD

- NAS Active Directory , AD
"NASname\ username (NAS \)" . AD
AD
- TS- 109/ 209/ 409/ 509 NAS AD Windows 2008
NAS 2.1.2

Windows 7

Active Directory 가 Windows 7 PC NAS가 AD 가
v3.2.0 , PC PC가 NAS

1. "Control Panel()" > "Administrative Tools()"
2. "Local Security Policy()"
3. "Local Policies()" > "Security Options()" . "Network security:
LAN Manager authentication level(: LAN Manager)"
4. "Local Security Setting()" "Send LM & NTLMv2 use
NTLMv2 session security if negotiated(LM NTLMv2 - NTLMv2
)" . "OK()"

NAS가 Active Directory "Privilege Settings()" >
"Users()" "User Groups()" "Domain
Users ()" "Domain Groups ()"

Active Directory NAS

5.5.2 NAS LDAP Directory

LDAP Lightweight Directory Access Protocol

LDAP, NAS, LDAP, Samba, QNAP, Linux, LDAP, NAS LDAP, LDAP 가

- LDAP
- LDAP
- LDAP

QNAP NAS LDAP

QNAP NAS LDAP

1. NAS
2. "Privilege Settings() > "Domain Security()"
 - "No domain security()" NAS NAS
3. "LDAP authentication(LDAP)"
 - o LDAP : LDAP IP
 - o LDAP : NAS LDAP
 - ldap:// = LDAP (: 389).
 - ldap:// (ldap + SSL) = SSL (: 686). LDAP
 - Ldap:// (ldap + TLS) = TLS (: 389). LDAP
 - o BASE DN: LDAP : dc=mydomain,dc=local
 - o DN: LDAP cn=admin, dc=mydomain,dc=local
 - o :
 - o DN: 가 (OU). : ou=people,dc=mydomain, dc=local
 - o DN: (OU). ou=group,dc=mydomain,dc=local
4. "Apply ()" , NAS LDAP
5. LDAP
 - o LDAP Microsoft (Network Services > Win/Mac/NFS > Microsoft Networking), Microsoft (Samba) NAS
 - : NAS Microsoft NAS
 - LDAP : LDAP Microsoft NAS

- NAS가 LDAP Microsoft , Microsoft
 - Standalone : NAS Microsoft NAS
 - LDAP : LDAP Microsoft NAS

6. NAS가 LDAP :

- "Privilege Settings()" > "Users ()" 가 , "Domain Users ()" . LDAP
- "Privilege Settings()" > "User Groups()" 가 , "Domain Groups()" . LDAP
- "Privilege Settings()" > "Shared Folders()" > LDAP "Access Permissions()" .

: LDAP NAS File Station, FTP, AFP NAS

LDAP

Microsoft (Samba) LDAP :

1. LDAP LDAP Samba
2. Samba LDAP 가

A. : 가 Samba LDAP

- LDAP Account Manager (LAM), : <http://www.ldap-account-manager.org/>
- smbldap-tools()
- webmin-ldap-useradmin - Webmin LDAP

B. Samba schema:

samba schema LDAP 가 LDAP FAQ
 samba.schema Samba examples/LDAP
 . LDAP 가 Linux open-ldap (Linux):

samba schema :

```
zcat /usr/share/doc/samba-doc/examples/LDAP/samba.schema.gz > /etc/ldap/schema/samba.schema
```

/etc/ldap/slapd.conf (openldap)

:

```
include /etc/ldap/schema/samba.schema
include /etc/ldap/schema/cosine.schema
include /etc/ldap/schema/inetorgperson.schema
include /etc/ldap/schema/nis.schema
```

LDAP

:

1. Linux OpenLDAP

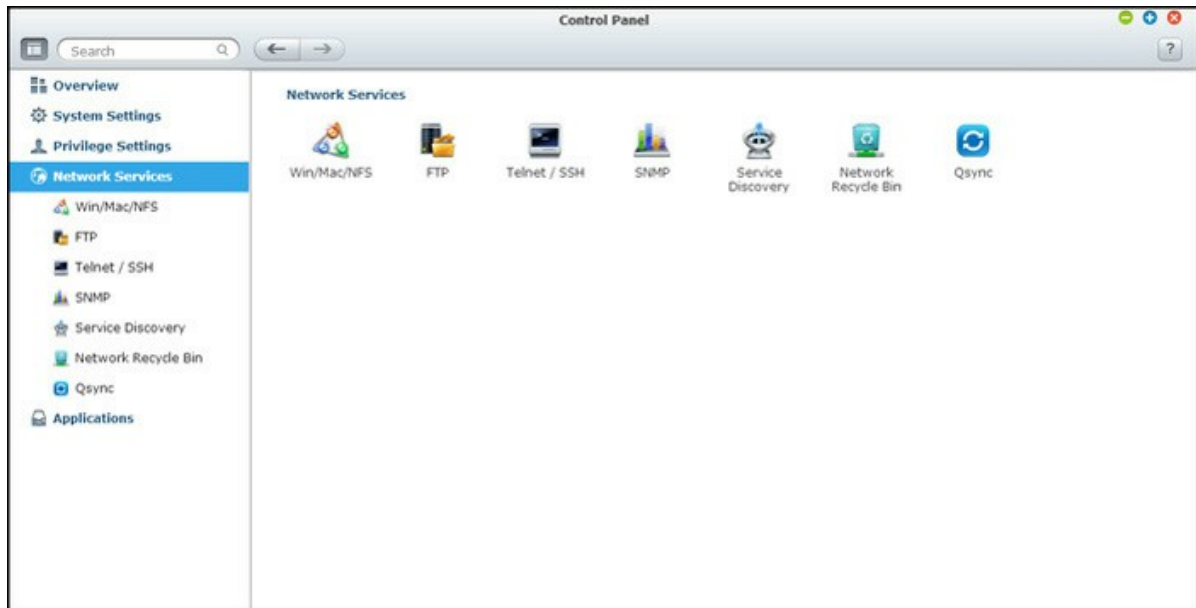
- DN: dc=qnap,dc=com
- DN: cn=admin,dc=qnap,dc=com
- DN: ou=people,dc=qnap,dc=com
- DN: ou=group,dc=qnap,dc=com

2. Mac Open Directory

- DN: dc=macserver,dc=qnap,dc=com
- DN: uid=root,cn=users,dc=macserver,dc=qnap,dc=com
- DN: cn=users,dc=macserver,dc=qnap,dc=com
- DN: cn=groups,dc=macserver,dc=qnap,dc=com

6.

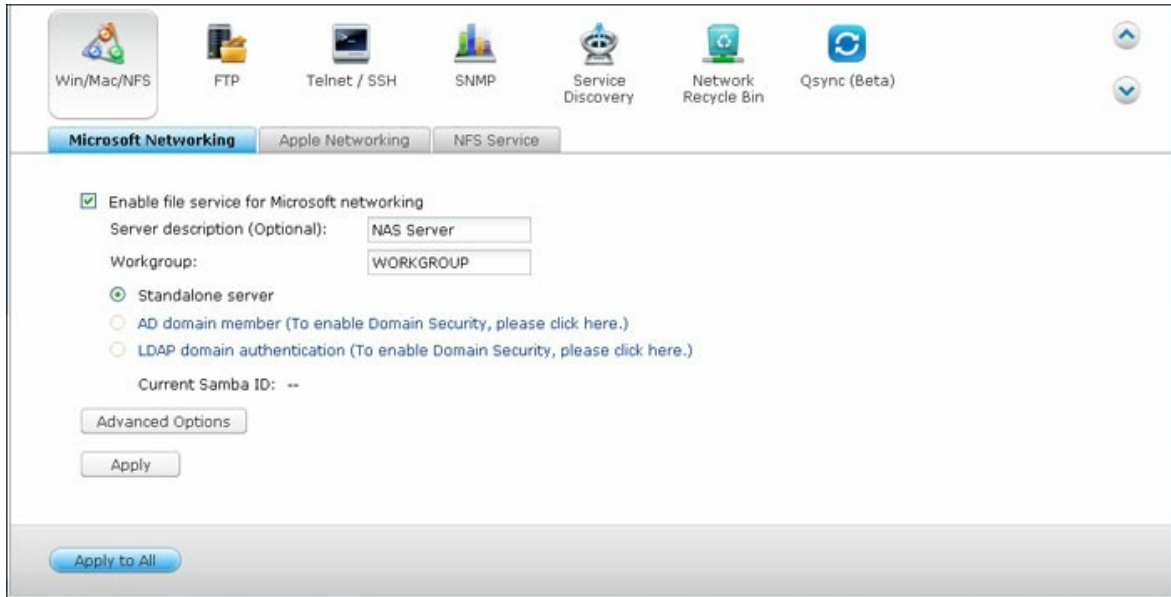
"Control Panel()" > "Network Services()" 가 NAS



- Win/Mac/NFS¹²⁹
- FTP¹³²
- Telnet/SSH¹³⁴
- SNMP¹³⁵
- ¹³⁶
- ¹³⁷
- Qsync¹³⁸

6.1 Win/Mac/NFS

"Control Panel()" > "Network Services()" > "Win/ Mac/NFS" 가



Microsoft

Microsoft Windows Network NAS Microsoft

- NAS "Privilege Settings()" > "Users()"
NAS
- (): 가 Microsoft Network NAS
- : NAS가 15
." + = / \ : | * ? < > ; [] % , `

AD

Microsoft Active Directory (AD) "Privilege
Settings()" > "Domain Security()" Active Directory
NAS Active Directory 가

LDAP

Lightweight Directory Access Protocol (LDAP)
LDAP "Privilege Settings()" > "Domain Security(
)" NAS LDAP
Microsoft NAS

- **WINS** : WINS , IP . NAS가 WINS 가
 WINS IP , WINS IP .
- : Windows PC
 가 , 가 가
 가 , "Domain Master()
 NAS .
- **NTLMv2** : NMLMv2 NT LAN Manager 2 ,
 Microsoft Networking NTLMv2
 NTLM(NT LAN Manager) NTLMv2
- : IP DNS WINS
 . NAS WINS WINS 가
 DNS WINS
 WINS "Try WINS then DNS(WINS DNS)"가
 DNS가
- : **FTP, AFP File Manager** + \
 : Active Directory
 - Windows : \
 - FTP: +
 - File Station: +
 - AFP: +
 (domain\ username) AFP, FTP
 File Manager NAS
- **Automatically register in DNS(DNS):** NAS Active
 Directory , NAS가 DNS
 DNS NAS DNS . NAS IP NAS가 DNS
 IP
- **Enable trusted domains():**
 Active Directory "Privilege Settings()" > "Share
 Folders()" NAS . (Active
 Directory . NAS .)

Apple

Mac OS X 10.7 Lion NAS "DHX2 Authentication Support(DHX2)"
 "Apply()"
 Mac OS X 10.7 Lion NAS "Go()" > "Connect to Server()"
 "Command+k" "afp://
 YOUR_NAS_IP_OR_HOSTNAME" "Server Address()"
 가

- afp://10.8.12.111
- afp://NAS-559
- smb://192.168.1.159

: Mac OS X Apple Filing Protocol Microsoft Networking Apple Filing Protocol NAS "afp://" Apple Filing Protocol NAS "smb://" Microsoft Networking

N F S

Linux NAS NFS NAS
 NFS "Privilege Settings()" > "Share Folders()"
 "Action()" Access Permission()
 NFS "No limit(IP
)" "Read only()" NFS
 • No limit(): 가
 • Read only(): 가
 • Deny access():

NFS NAS

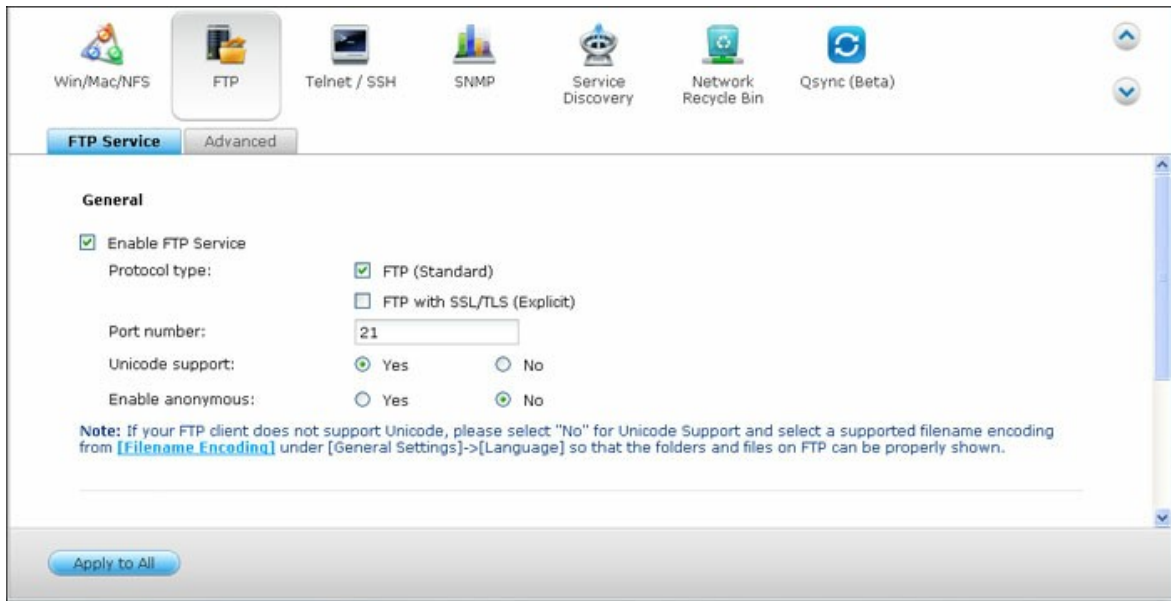
Linux
 mount -t nfs <NAS IP>:/<Shared Folder Name> <Directory to Mount>
 , NAS IP 가 192.168.0.1 /mnt/pub "public()"
 mount -t nfs 192.168.0.1:/public /mnt/pub

: "root()"

ID

6.2 FTP

"Control Panel()" > "Network Services()" > "FTP" 가 FTP



FTP

- FTP : NAS FTP . IE
- ftp://NAS IP : FTP SSL/TLS FTP
- FTP : / "General Settings()" > "Codepage()" OS FTP 가
- FTP : 가 NAS FTP 가 가
- FTP : NAS FTP "Enable FTP transfer limitation(FTP)"
- FTP : (55536- 56559) 1023
- FTP IP : FTP FTP 가

가 WAN

FTP

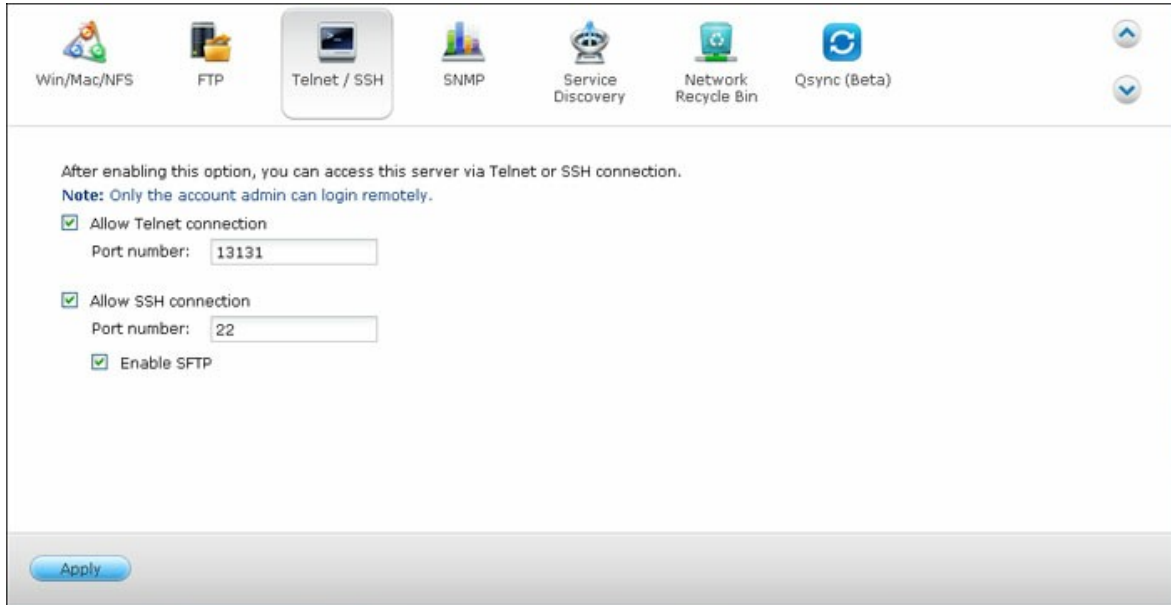
FTP 가

IP

가 FTP

6.3 Telnet/SSH

SSH
("admin"). SSH (: Putty)



SFTP(SSH File Transfer Protocol Secure File Transfer Protocol)
"Allow SSH connection(SSH)"

6.4 SNMP

SNMP (Simple Network Management Protocol) NAS SNMP
 가 PC SNMP (SNMP)
 . NAS , 가 NAS (SNMP) SNMP

SNMP	SNMP
	SNMP IP 3
SNMP MIB()	MIB SNMP NAS ASCII MIB SNMP (NAS) MIB
(SNMP V1/V2)	SNMP NAS SNMP SNMP
SNMP V3	NAS SNMP 3 가

6.5

"Control Panel()" > "Network Services()" > "Service Discovery()"
 가 UPnP Bonjour .



UPnP

UPnP 가 , UPnP 가 UPnP
 NAS . UPnP

Bonjour

Bonjour NAS , Mac IP DNS
 (FTP) .

: NAS가
 Bonjour .

6.7 Qsync

Qsync QNAP Turbo NAS

Qsync 가 Turbo NAS



Qsync

3

1. NAS

2. Qsync , Qfile

3. NAS(Qsync) ("Qsync ").

1. **NAS**

Qsync

NAS : " " > " " > " " > " "

NAS :

2. **Qsync**

Qsync

Qsync 가 " " (NAS > NAS) QNAP " " > " " > " " > " "

- Qsync (Windows)
- Qfile (iOS Android)

3. NAS

LAN ID NAS Qsync
 192.168.1.100 NAS " " IP (: IP : 10.8.1.20
 NAS () myQNAPCloud (:
 andy@myQNAPcloud.com).

: 가 NAS IP 가
 IP (: 8080)

Qsync

Windows Qsync 가 Qsync 가
 Qsync Qsync 가
 Qsync , (Qsync가 NAS
 가 PC 가

1. PC Qsync Qsync가
2. (Qfile), Qsync
3. NAS File Station Qsync ().

- Qsync " " Qsync , Qsync 가
 Windows File
 Explore
- Qsync가 LAN 50G
- Qsync SAMBA, FTP AFP File Station
- Qsync
- Qfile

가 Qsync가

Qsync

Qsync

Windows :

1. Qsync " "
- 2.
3. SSL , "

NAS , File Station Qsync " "

, Qfile Qsync
" "

가

1. NAS
2. Qsync
3. Qsync "
4. "

- : 가
- 가 가

NAS
 () NAS "myQNAPCloud" NAS
 (NAS > NAS > myQNAPcloud 가).
 myQNAPcloud myQNAPCloud
 NAS (: andy@myQNAPcloud.com).

- : NAS LAN
- NAS가 LAN ,
myQNAPcloud LAN

- 가

Qsync

Qsync

Qsync

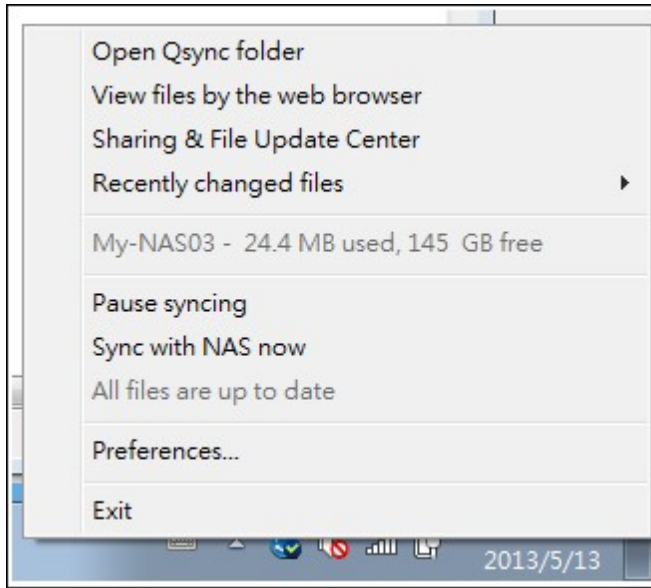
1. NAS Qsync APP Store Qfile Qfile
2. Qfile
3. " "
4. " " "
5. NAS
- 6.
7. " "(/Qsync/) " "
- 8.
9. "WiFi" Wifi 3G
10. Qsync Qsync

:

Qfile

Qsync





1. 가 NAs :
 - a. Qsync : Qsync 가) . NAS Qsync
 - b. : File Station() NAS Qsync

2. :
 - a. / :
 - b. NAS : Qsync가

3. :
 - a.
 - i. :
 - ii. : 가
 - b. :

4. :
 - a. :
 - i. : " "
 - ii. : Qsync
 - b. :
 - i. : NAS
 - ii. NAS Qsync . NAS
 - c. :
 - i. : 가 Qsync (NAS)
 - 1).
 - 2). NAS
 - 3). NAS
 - 4). NAS
 - ii. : Qsync 가 :

- 1).
- 2).
- 3).

iii. : Qsync

d. :

i. : . NAS SMTP
(NAS) SMTP

e. :

i. 가 : USB 가
USB DCIM

가

File Station . File Station Qsync
"Previous Versions()" . "More
Action(가)" > "Previous Versions()"
"Show Right Panel()" > "Version()"
. Qsync . Qsync
"Previous Versions()"
"Restore()"
• "Download()"
• "Delete All()"
• "Refresh()"

Qsync "More
Action(가)" > "Show Deleted Files()"
Qsync "Previous Versions()"
"More Action(가)" > "Previous Versions()"
"Show Right Panel()" > "Version()"

"Restore()"

- "Download()"
- "Delete All()"
- "Refresh()"

: "Delete All()" "Refresh()"

"More Action(가)" > "Hide Deleted Files()"

"Version Control()", NAS Qsync

"Enable version control()" 가 "Enable version for my Qsync folder(Qsync 가)"

Qsync "Assign specific subfolder under the Qsync folder(Qsync)"
 "Add(가)" 가 5 가 "Apply()"
 "Delete()" "Apply All()"

가 "Disk Used for Version Control()"
 "Check()"

:
 • "Apply()" "Apply All()"

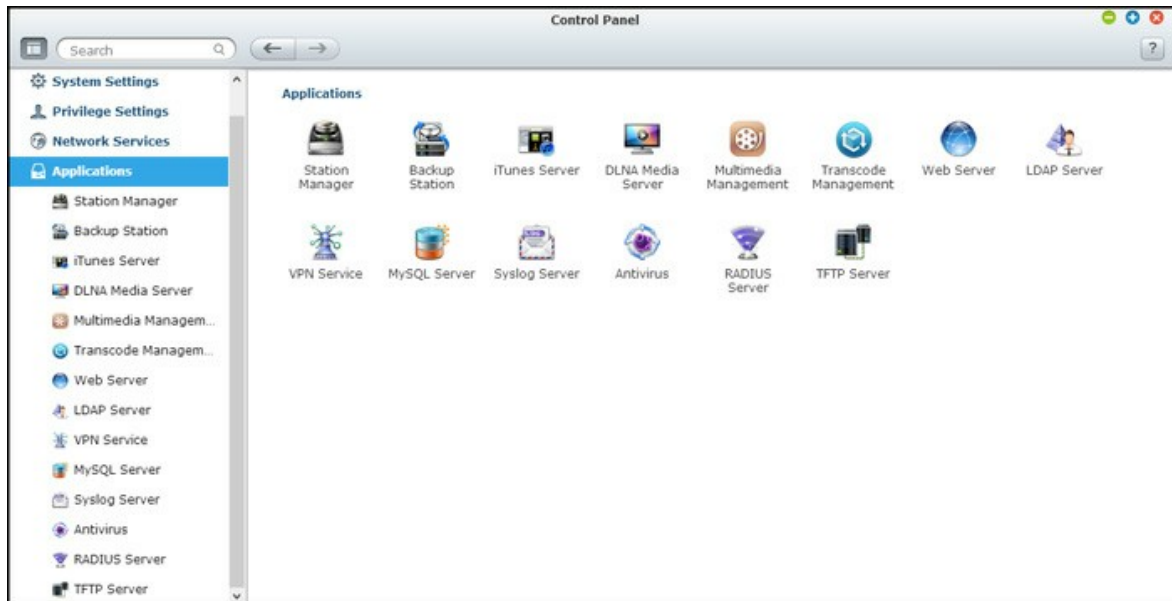
Qsync

NAS Qsync

1. : File Station , ().
2. : Qsync Qsync ().
3. : 가
- a. PC
 - b. Qfile "Qfile- Android" "Qfile- iPhone"
 - c. File Station Qsync Qsync- File Station
4. :
5. : 가 가
6. :

7.

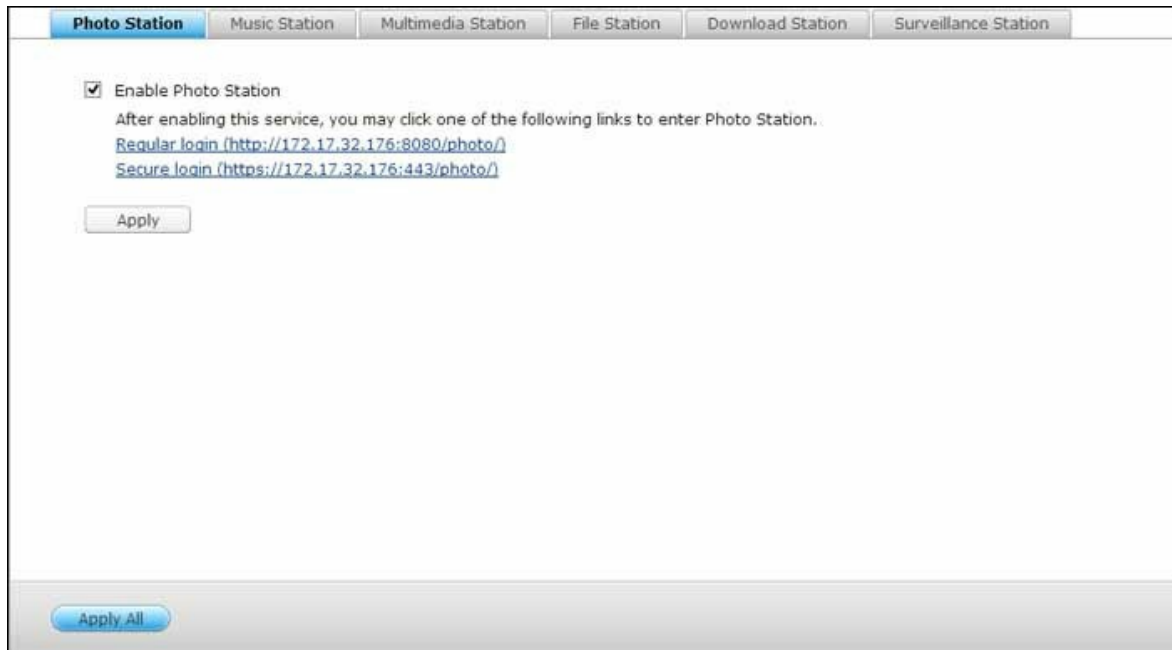
"Control Panel()" > "Applications()" 가 NAS



- [147]
- iTunes [149]
- DLNA [150]
- [151]
- [153]
- [155]
- LDAP [160]
- VPN [162]
- MySQL [165]
- Syslog [166]
- [169]
- RADIUS [172]
- TFTP [173]

7.1

QNAP



"Enable Photo Station()"

Sharing Management on the login screen(

. "Show the photos of)"

가

207

: NAS

QTS 4.0

2

"Enable Music Station()"

217

"Enable Multimedia Station()"
 , "Rescan Media Library()"

"Enable File Station()"

192

"Enable Download Station()"

223

Surveillance Station

"Enable Surveillance Station (Surveillance Station)"

Surveillance Station 가 QNAP
 (http://license.qnap.com)

:
 • NAS NAS
 QNAP License Store (http://license.qnap.com/)

• NAS IP ,

• 가 QNAP (> >
 "Surveillance Station Pro 가 ?").

• Windows IE 10, Chrome Firefox

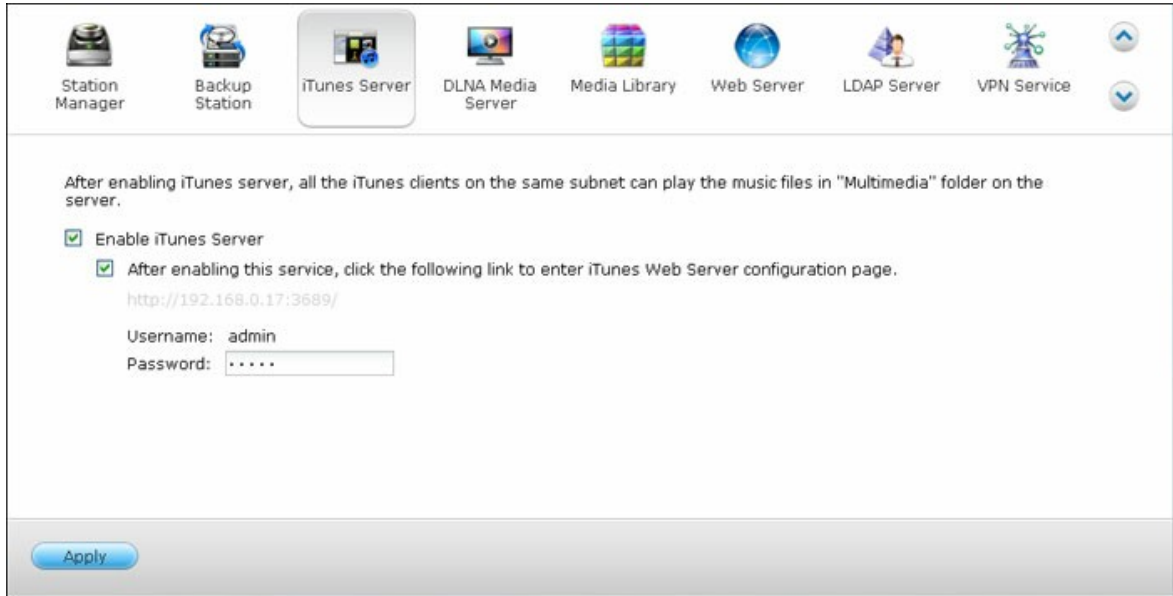
• Mac QNAP Surveillance Client for Mac(Mac QNAP
) QNAP Surveillance Client for Mac(Mac
 QNAP) http://www.qnap.com/download

"License Management()"

7.2 iTunes

NAS Qmultimedia/ Multimedia mp3 iTunes
 . LAN iTunes가 NAS , ,

iTunes , iTunes(www.apple.com/itunes/)
 NAS Qmultimedia/ Multimedia



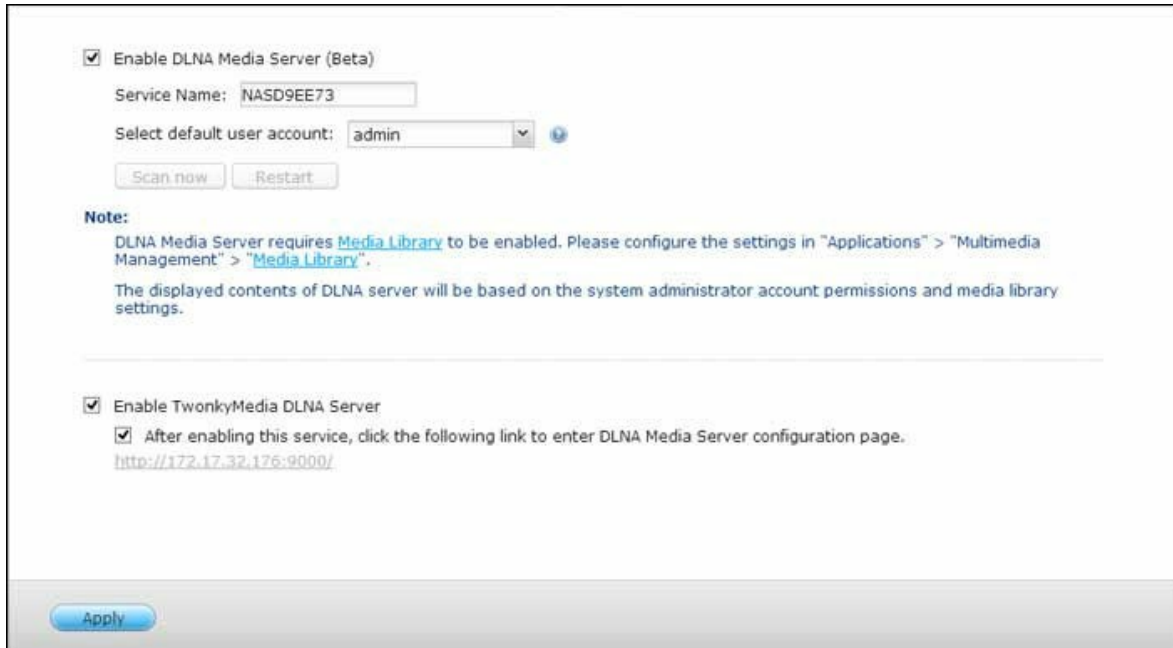
Pro : iTunes 가 : x70U, x79
 x79U. iTunes "System Administration(
)" 391

iTunes 가 , iTunes

<http://NAS-IP:3689/index.html>. PC NAS LAN PC iTunes
 . "SHARED()" NAS

7.3 DLNA

QNAP Turbo NAS 가 DLNA : QNAP
Twonky DLNA .

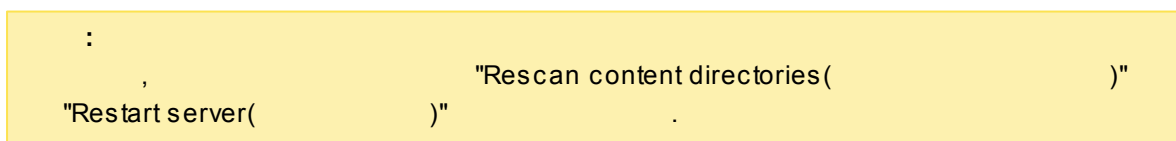


QNAP DLNA Media Server QNAP가 , Twonky Media DLNA Server 3
. DLNA 가 QNAP DLNA Media Server NAS
, QNAP DLNA Media Server

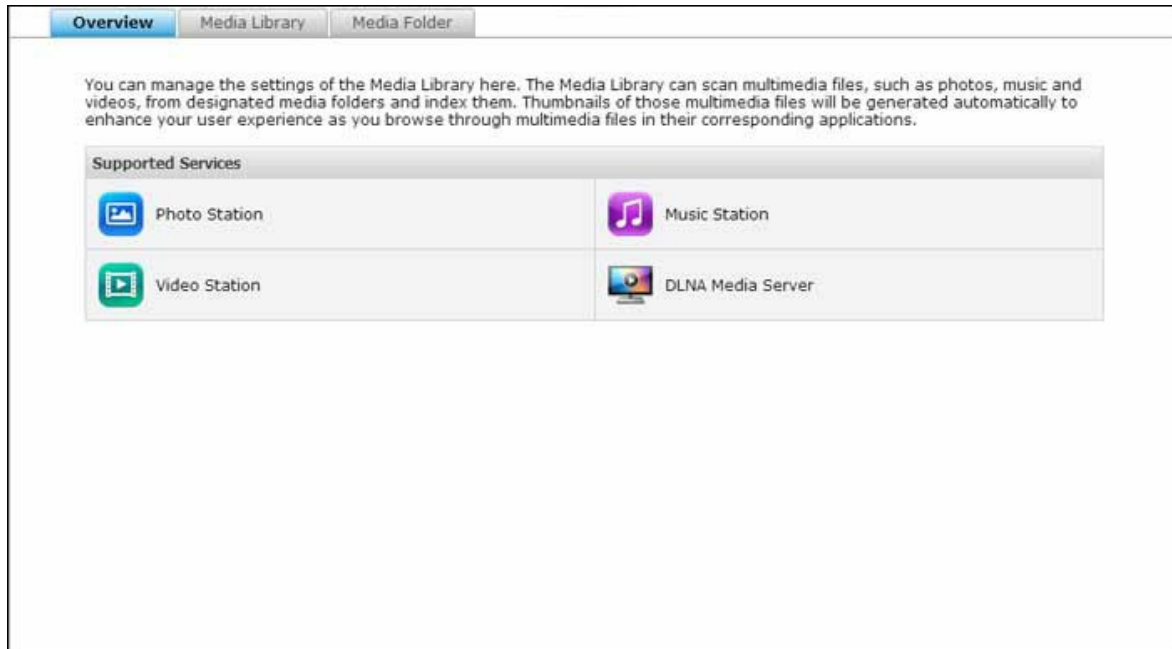
Media Library .



DLNA Twonky DLNA NAS
(http://NAS IP:9000/) TwonkyMedia DLNA
http://NAS IP:9000/ . "TwonkyMedia Settings
(TwonkyMedia)" > "Basic Setup()" 가 . NAS
Qmultimedia Multimedia
. "Basic Setup()" > "Sharing()" > "Content Locations()"
)" 가 가
mp3, NAS .



7.4



- : 가
 - : 가
 - :
 - : "Scan now()"
 - : - UTF
 - : NAS
- 가 (, NAS).
- , "Deactivate Media Library()"
- Photo Station, Video Station, Music Station
- , DLNA Media Server가
- , "Activate Media Library()" (
- 가 "Deactivate Media Library()" "Activate
- Media Library()".

- x70U, x79 Pro x79U iTunes Server
 . iTunes , 391 " "
- Photo Station Music Station
 DLNA Media Server가 .
- : 가 400 .

```

Multimedia( , ,
NAS )" "/Home( )" NAS
NAS (QTS 4.1
). 가 , "Add( 가)"
, "Add( 가)"
"Apply( )"
"Delete( )" "Apply( )"

```


7.5

(240p, 360p, 480p, 720p and 1080p) . NAS File Station, Photo Station, Video Station
 H.264 (MP4)
 가



Transcode Task
Folder Monitoring

Transcode function provides video conversion for you to play videos smoothly from different devices. You can convert a video through File Station, Photo Station, or Video Station.

File name	Resolution	Status	Action	Finish Time ^
/movie/TEST/The Hobbit.mp4	240p, 360p, 720p	Succeeded		2013/10/30 14:25
/movie/TEST/The Dark Knight Rises.mp4	240p, 360p, 720p	Succeeded		2013/10/30 14:37
/movie/TEST/Sucker Punch.mp4	240p, 360p, 720p	Succeeded		2013/10/30 14:46
/movie/TEST/Star Trek Into Darkness, 2...	240p, 360p, 720p	Succeeded		2013/10/30 14:53
/movie/TEST/hddvd_demo_1080p.mkv	240p, 360p, 720p	Succeeded		2013/10/30 15:09
/movie/TEST/big_buck_bunny_1080p_h...	240p, 360p, 720p	Succeeded		2013/10/30 16:12
/movie/TEST/Gi Joe 2 Retaliation Trailer ...	240p, 360p, 720p	Succeeded		2013/10/30 16:28
/Download/1/John Carter.mp4	240p, 360p, 720p	Succeeded		2013/10/30 18:10
/Download/1/Jack the Giant Killer.mp4	240p, 360p, 720p	Succeeded		2013/10/30 18:21
/Download/1/Inception.mp4	240p, 360p, 720p	Succeeded		2013/10/30 18:33
/Download/1/Iron Man 3.mp4	240p, 360p, 720p	Succeeded		2013/10/30 18:53
/movie/Jack the Giant Killer.mp4	240p, 360p, 480p, ...	Succeeded		2013/11/18 16:23

Stop Transcoding
Remove All Incomplete Tasks
Remove All Complete Tasks
Refresh

- Stop Transcoding():
- Remove All Incomplete Tasks():
- Remove All Complete Tasks():
- Refresh():

	Priority()	
	Remove()	

: File Station, Photo Station Video Station

가

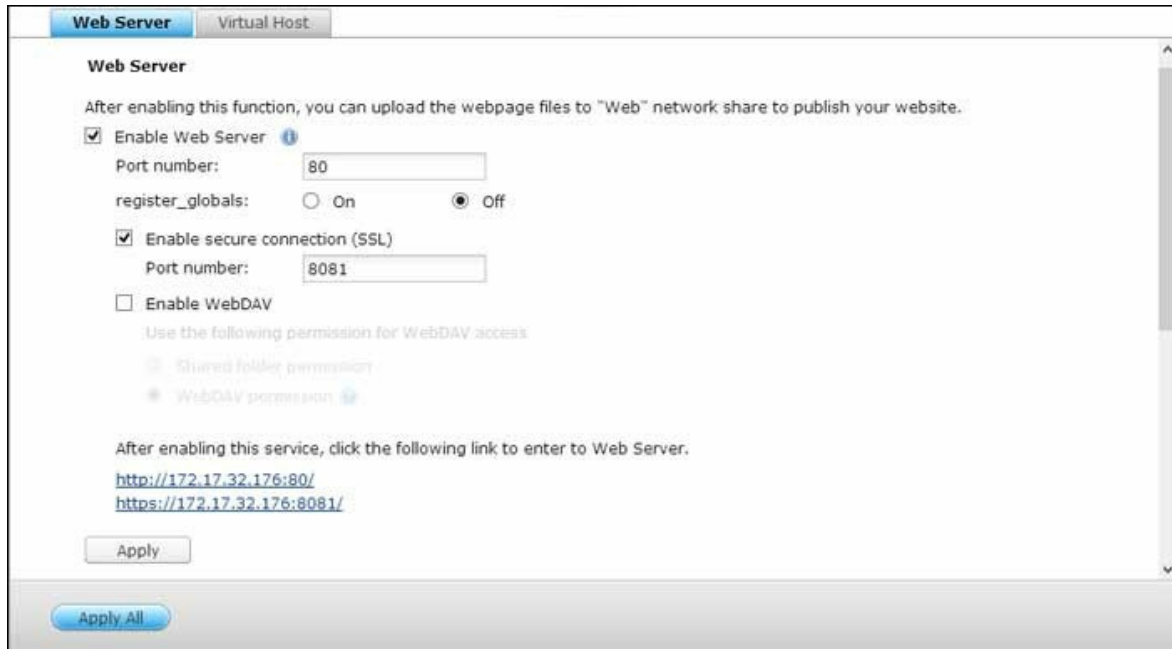
()

. "Add(가)"
가 .

가

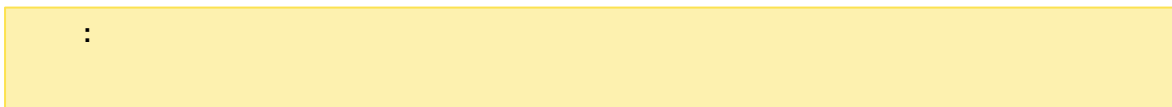
7.6

"Control Panel()" > "Applications()" > "Web Server()" 가
가



NAS . NAS 가
Joomla!, PHP MySQL

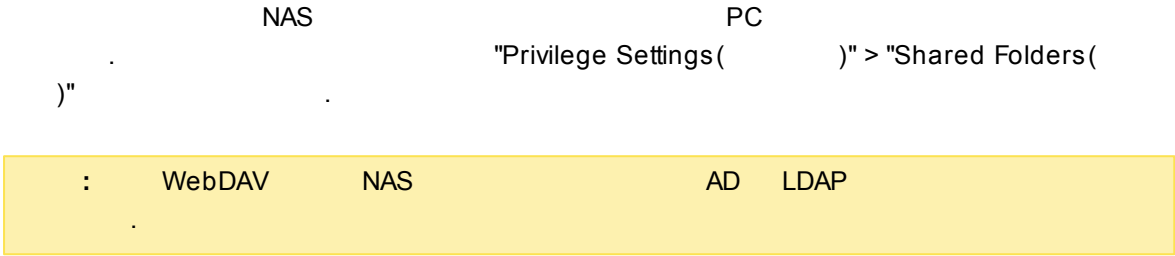
1. 80
2. :
 - a. register_globals : register_globals
php register_globals
 - b. : "Restore()"
 - c. php.ini : "php.ini Maintenance(php.ini)" php.ini
3. (SSL): SSL
4. HTML NAS (Qweb/ Web) . index.html, index.htm
index.php 가
5. http://NAS IP/
http://NAS IP:8080 NAS



- Music Station, Photo Station, Happy Get, QAirplay
- PHP mail() "System Settings()" > "Notification()" > "SMTP Server(SMTP)" SMTP

WebDAV

WebDAV(Web-based Distributed Authoring and Versioning) HTTP(S)



- NAS PC , WebDAV
1. "Privilege Settings()" > "Shared Folders()" > "Action()" "Access Permissions()"
 2. "WebDAV access(WebDAV)"
 3. "Apply()" WebDAV NAS

Windows XP

1. " ..."
2. "Sign up for online storage or connect to a network server()"
3. "Choose another network location()"
4. NAS URL URL "#" "Next()" : http://NAS_IP_or_HOST_NAME/ SHARE_FOLDER_NAME/#
5. WebDAV
- 6.
7. 가
8. WebDAV 가 "

Windows Vista

Windows Vista , "Software Update for Web Folders (KB907306)" 32 Windows OS <http://www.microsoft.com/downloads/details.aspx?FamilyId=17c36612-632e-4c04-9382-987622ed1d64&displaylang=en>

1. " ..."

2. "Connect to a Web site that you can use to store your documents and pictures()"
3. "Choose a custom network location()"
4. NAS URL : http://NAS_IP_or_HOST_NAME/SHARE_FOLDER_NAME
5. WebDAV
- 6.
7. 가
8. " " " "
9. HTTP/WebDAV

Mac OS X

- Mac OS X WebDAV NAS
: Mac OS X Snow Leopard (10.6.1)
1. "Finder()" > "Connect to Server()" URL
: http://NAS_IP_or_HOST_NAME/SHARE_FOLDER_NAME
 2. WebDAV
 3. HTTP/WebDAV
 4. " " "
- Mac OS X 10.6 10.4

Ubuntu

- Ubuntu WebDAV NAS
: Ubuntu 9.10
1. "Places()" > "Connect to Server...()"
 2. NAS "WebDAV (HTTP)" "Secure WebDAV (HTTPS)"
WebDAV
 3. WebDAV "Connect()" 가

MySQL

phpMyAdmin NAS MySQL
URL

: MySQL "root" "admin" phpMyAdmin

SQLite

SQLiteManager SQLiteManager-*.tar.gz?

1. SQLiteManager-*.tar.gz
2. SQLiteManager-* \\NAS IP\Web\ or \\NASIP\Qweb
3. http://NAS IP/SQLiteManager-*/
 - o ? : "*" SQLiteManager

7.6.1 가

가 ()
 가
 (32) NAS

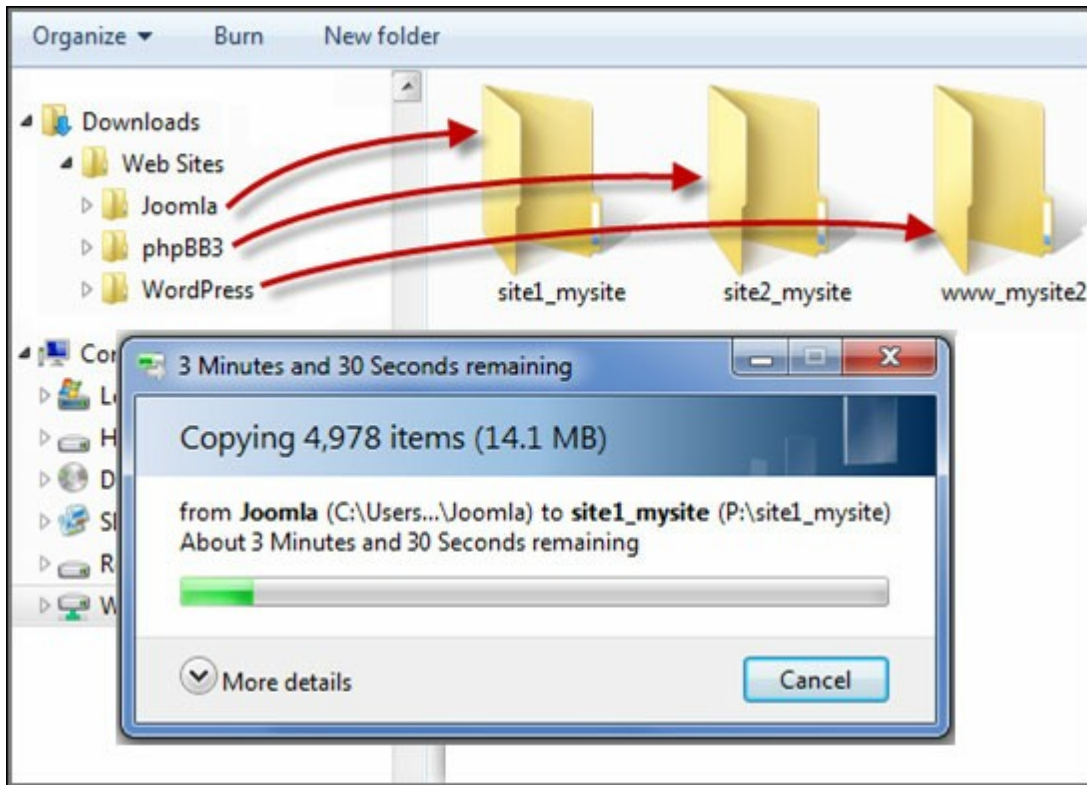
	WAN/ LAN IP		
site1.mysite.com	WAN IP: 111.222.333.444	/Qweb/site1_mysite	Joomla!
site2.mysite.com	LAN IP: 10.8.12.45	/Qweb/site2_mysite	WordPress
www.mysite2.com	(NAS) : 80 (NAS)	/Qweb/ www_mysite2	phpBB3

- : "Applications()" > "Web Server()"
- DNS : NAS WAN IP 가 DNS
- " 80 , 80 NAS LAN IP (10.8.12.45) 가
- SSL 가 : SSL SSL
 , "System Settings()" > "Security()" > "Certificate & Private Key()" 가

가

가

1. "Enable Virtual Host(가)" "Apply()"
2. "Create Virtual Host(가)" .
3. (Web Qweb)
4. (HTTP HTTPS) . HTTPS , "Enable Secure Connection (SSL)((SSL))"
- 5.
6. "Apply()"
7. NAS
8. (site1_mysite, site2_mysite, and www_mysite2)



https://NAS_host_name 가 http://NAS_host_name
 가 URL

<http://site1.mysite.com>
<http://site2.mysite.com>
<http://www.mysite2.com>

 Joomla!, phpBB3 WordPress

7.7 LDAP

NAS LDAP

NAS

LDAP

LDAP

1. LDAP :NAS "admin" . "Applications()" > "LDAP Server(LDAP)" LDAP . LDAP LDAP , "Apply()" .
2. LDAP : "Users()" , "Create a User()" "Create Multiple Users()" "Batch Import Users(가)" LDAP . LDAP , NAS 가 . LDAP NAS
3. LDAP NAS 가 LDAP NAS , NAS LDAP 가 . "Privilege Settings()" > "Domain Security()" . "LDAP authentication(LDAP)" "LDAP server of local NAS(NAS LDAP)" "Apply()" NAS가 LDAP 가 . , "Privilege Settings()" > "Users()" "User Groups()" "Domain Users()" "Domain Groups()" .

4. LDAP 2 NAS 가 : NAS
 LDAP 가 LDAP 가 NAS . NAS
 LDAP 가 , NAS "Privilege Settings()" > "Domain
 Security()" . "LDAP authentication(LDAP)" ,
 "LDAP server of a remote NAS(NAS LDAP)" .
 NAS DNS IP , LDAP LDAP
 . "Apply()" .

LDAP

NAS LDAP , "Back up Database()" , * .
 , NAS . LDAP
 exp "Import(가)" . "Apply()" .

- LDAP , NAS
- , LDAP NAS

7.8 VPN

NAS 가 NAS 가
(VPN)

NAS VPN

- 1.
2. PPTP OpenVPN
- 3.
4. myQNAPcloud
5. VPN 가
6. VPN

VPN

1. ".admin" NAS "Applications(
)" > "VPN Service(VPN)" > "VPN Server Settings(VPN)"
"General Settings()" , NAS가
2. PPTP OpenVPN :NAS VPN PPTP OpenVPN
 - PPTP: (PPTP) VPN 가
Windows, Mac, Linux, Android iPhone
 - OpenVPN: OpenVPN SSL VPN
OpenVPN , PC OpenVPN

- "Download Configuration File()" NAS VPN
OpenVPN
- 3. :NAS UPnP(. "myQNAPcloud" > "Auto Router Configuration()" UPnP PPTP OpenVPN
- 4. myQNAPcloud :WAN IP myQNAPcloud NAS
. myQNAPcloud myQNAPcloud <https://www.myqnapcloud.com>
- 5. VPN 가:"VPN Service(VPN)" > "VPN Client Management(VPN)" "Add VPN Users(VPN 가)" NAS 가
. VPN (PPTP, OpenVPN)
. "Add(가)"
- o VPN : VPN VPN
NAS

- NAS IP PPTP VPN 10.0.0.1
- OpenVPN , myQNAPcloud
OpenVPN
- PPTP , PPTP
. PPTP TCP- 1723 가 UPnP

VPN

Windows 7 PPTP

1. "Control Panel()" > "Network and Sharing Center()" "Set up a new connection or network()" .
2. "Connect to a workplace()" "Next()" .
3. "Use my Internet connection() (VPN)" .
4. MyQNAPcloud NAS WAN IP
"Next()" .
5. VPN NAS 가 . "Connect()" .

Mac OS X 10.7 PPTP

1. "Apple menu(Apple)" > "System Preferences()" "Network()" .
2. "Add(가) (+)" "VPN" .
3. NAS VPN .
4. "Server Address()" myQNAPcloud NAS WAN IP
"Account Name()" , NAS 가 .
5. "Authentication Settings()" , 가 .

6. "OK()" , "Connect()"

iOS 5 PPTP

1. "Settings()" > "General()" > "Network()" > "VPN"
2. "Add VPN Configuration(VPN 가)"
3. "PPTP"
4. "Settings()" > "General()" > "Network()" > "VPN" 가 "VPN"

Windows OpenVPN

1. <http://openvpn.net> OpenVPN
2. Windows OpenVPN C:\ Program Files\ OpenVPN
3. OpenVPN GUI
4. NAS OpenVPN ("Application Servers()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN)").
5. openvpn.ovpn "OPENVPN_SERVER_IP" OpenVPN IP
6. "ca.crt" "openvpn.ovpn" OpenVPN (C:\ Program Files\OpenVPN\config).

: OpenVPN 가 Windows 7 , OpenVPN 가

Linux OpenVPN

1. <http://openvpn.net/index.php/open-source/downloads.html> OpenVPN
2. Linux OpenVPN
3. NAS OpenVPN ("Application Servers()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN)").
4. openvpn.ovpn "OPENVPN_SERVER_IP" OpenVPN IP
5. "ca.crt" "openvpn.ovpn" OpenVPN
6. OpenVPN

Mac OpenVPN

1. <http://code.google.com/p/tunnelblick/> OpenVPN
- 2.
3. NAS OpenVPN ("Application Servers()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN)").
4. openvpn.ovpn OPENVPN_SERVER_IP(alfred.myqnapnas.com) OpenVPN IP
5. "ca.crt" "openvpn.ovpn" OpenVPN
6. OpenVPN

7.9 MySQL

MySQL

MySQL Server

You can enable MySQL server as the website database.

Enable MySQL Server
 Enable this option to allow remote connection of MySQL server.

Enable TCP/IP networking
 Port number:

Note: You can install the phpMyAdmin package to manage your MySQL server. To install the phpMyAdmin, please click [here](#).

Database Maintenance

You can reset the database password or re-initialize the database.

- **TCP/IP** : NAS MySQL
 - MySQL NAS
 - , MySQL
 - 3306 . NAS Qweb/ Web phpMyAdmin 가
 - http://NAS IP/phpMyAdmin/ phpMyAdmin 가
 - MySQL
- :
 - : MySQL 가 "admin"
 - : MySQL 가

• TS- x39/ 509/ 809 CD (http:// www.qnap. com).

• phpMyAdmin MySQL Server

http://NAS IP/

• phpMyAdmin 가

7.10 Syslog

NAS Syslog

, Syslog

Syslog

The screenshot shows a configuration window with three tabs: "Server Settings" (selected), "Filter Settings", and "Syslog Viewer".

Server Settings

- Enable Syslog Server
 - Enable TCP
 - TCP port:
 - Enable UDP
 - UDP port:

Log Settings

- Maximum log size (MB):
- Log file: /

Email Notification

If the severity of a received log message is higher the selected severity level, the system will send an alert email automatically.

- Enable the email notification
 - Severity level:

Note: The SMTP server must be configured first for alert mail delivery. [Click this to configure the SMTP server](#)

Buttons: "Apply" (bottom left), "Apply All" (bottom center)

- : NAS Syslog syslog (TCP / UDP) 514

Syslog . NAS가

syslog . "Apply()" . NAS syslog ,

syslog NAS IP syslog server IP syslog
- : Syslog (1- 100 MB), (NAS),

가 , MyLogFile_yyyy_mm_dd,

MyLogFile_2011_12_31 가 ,

MyLogFile_yyyy-mm-dd, MyLogFile_2011- 12- 31




MyLogFile_yyyy_mm_dd.[]가

, MyLogFile_2011_12_31.1, MyLogFile_2011_12_31.2, . "Apply()"

- : NAS syslog 가
 (2 , "System Settings()" > "Notification()" > "Alert Notification
 ()") "System
 Settings()" > "Notification()" > "SMTP Server(SMTP)" SMTP
 "Applications()" > "Syslog Server (Syslog
)" > "Server Settings ()"
 "Apply()"

	(가 가)	
0	:	0-4 syslog
1	:	가 1-4 syslog
2	:	2-4 syslog
3	:	3-4 syslog
4	:	4 syslog

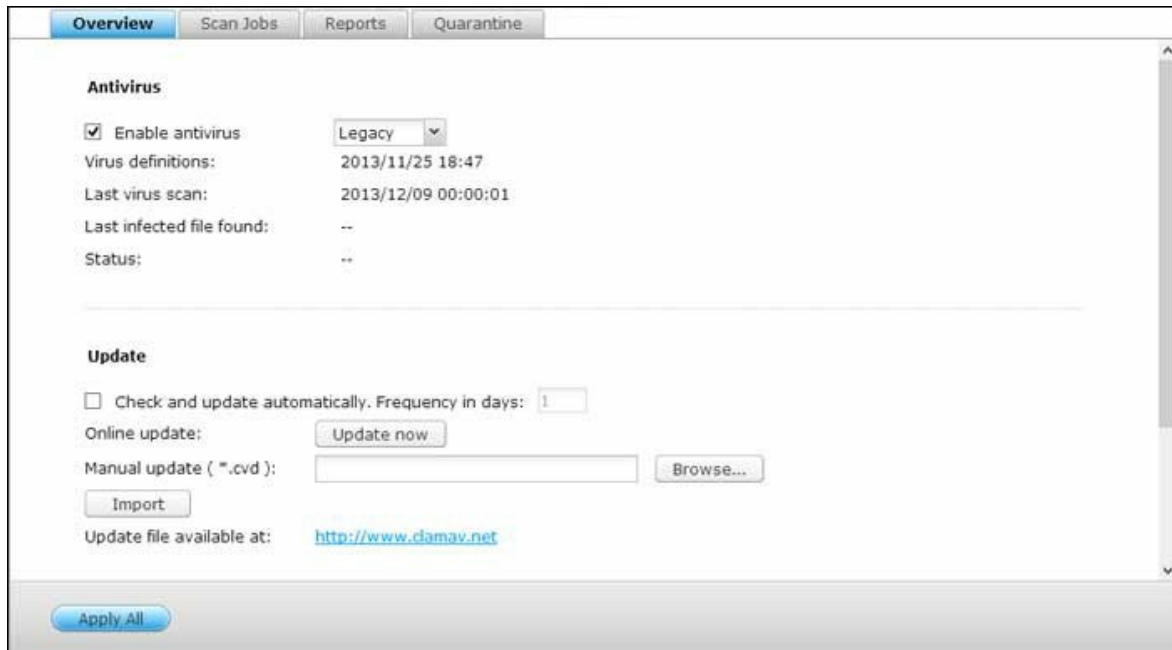
- syslog syslog NAS syslog
- "Add a New Filter(가)"
 - "Add (가)" 가 ,
"Manual Edit()" "Apply ()"
 - 가 . NAS syslog

Syslog

NAS 가 syslog syslog
"Server Settings ()" > "Log Settings ()"
"Syslog Server (Syslog)" >

7.11



- : NAS , ,
 "Enable antivirus()" "Apply()"
- : "Check and update automatically()"
 "Update Now()"
<http://www.clamav.net>
 NAS가
- : NAS "Application Servers()"
)" > "Antivirus()" > "Quarantine()"






: "Enable antivirus()"
 App Center^[24] QTS

NAS 64 5



1. "Application Servers()" > "Antivirus()" > "Scan Jobs()"
 "Add a Scan Job(가)"
2. "Add(가)"

- 3. "Delete (X)"
"Next()"
- 4. "Exclude files or folders()"
 - o /Public/testfile.txt
 - o /Download
 - o *.log
 - o *.exe *.com
 - o *.txt; "Next()"
- 5. "Next()"
(1- 4096 MB)
 - o , "Scan compressed files()"
(1- 4096 MB)
 - o MS Office Mac Office , RTF, PDF, HTML , "Deep scan for document files()"
- 6. "Finish()"
 - o 가 "Reports()"
 - o "Reports()" "Quarantine()"
 - o "System Settings()"> "Notification()"> "SMTP Server(SMTP)" SMTP
"Finish()"

7.

		
		
		
		WordPad
		




NAS

		WordPad
		

- (1-999)
- "Archive logs after expiration()"
- "Apply All()"

NAS

가

		
		
		가 ()

7.12 RADIUS

NAS
Authentication Dial In User Service)

RADIUS (Remote

The screenshot shows the 'Server Settings' tab for RADIUS configuration. It includes an 'Enable RADIUS Server' checkbox, a checked 'Grant dial-in access to system user accounts' checkbox, a note about supported authentication schemes (PAP, EAP-TLS/PAP, EAP-TTLS/PAP), and 'Apply' and 'Apply All' buttons.

1. "RADIUS Server (RADIUS)" > "Server Settings ()" NAS RADIUS
"Apply()"
2. "RADIUS Server (RADIUS)" > "RADIUS Clients (RADIUS)" NAS Wi-
Fi VPN RADIUS 가 RADIUS 10
"Create a New Client()"
3. "Apply()"
4. 가
5. "RADIUS Server(RADIUS)" > "RADIUS Users(RADIUS)" RADIUS
RADIUS
NAS가 RADIUS NAS
Users() " "
6. (a-z A-Z) (0-9)
8-32 (a-z, A-Z, 0-9 가) "Apply()"
7. NAS NAS 가 NAS
RADIUS
"Apply()"

: RADIUS NAS PAP, EAP- TLS/ PAP, EAP- TTLS/ PAP

7.13 TFTP

NAS

TFTP (Trivial File Transfer Protocol)

.TFTP

FTP

. TFTP

FTP

. TFTP

FTP

Enable TFTP Server
 UDP port:
 You need to specify a root directory for the TFTP server.
 Root directory:
 Enable TFTP logging
 The log file(s) will be saved in the selected folder. If the size of a log file exceeds 1MB, the file will be archived automatically.
 Save log files in:
 Access right:
 Allow TFTP access from:
 Anywhere
 Certain IP range only
 Start IP address:
 End IP address:

1. "Enable TFTP Server(TFTP)"
2. UDP 69
3. NAS TFTP
4. TFTP : TFTP (opentftpd.log)
 . Windows Microsoft Excel, WordPad Mac
 TextEdit
- 5.
6. IP TFTP "Anywhere(
)" TFTP
7. "Apply()"

: NAS PXE , NAS IP , DHCP
 , "Control Panel" > "Network" > TFTP IP , LAN
 > "DHCP server(DHCP " "Edit()"
 Server(DHCP) DHCP

8. QNAP

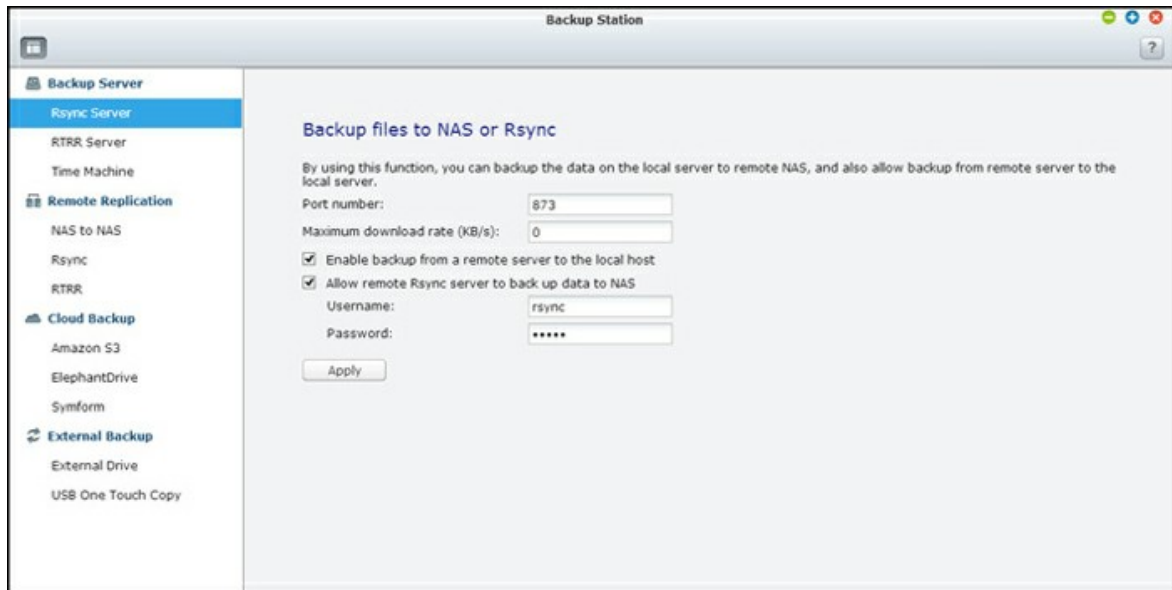
QNAP

- [\[175\]](#)
- myQNAPcloud [\[189\]](#)
- File Station [\[192\]](#)
- Video Station [\[199\]](#)
- Photo Station [\[207\]](#)
- Music Station [\[217\]](#)
- Download Station [\[223\]](#)
- HD Station [\[229\]](#)
- Surveillance Station [\[238\]](#)
- App Center [\[241\]](#)

8.1

NAS

Backup Station



- _____ 176
- _____ 178
- _____ 183
- _____ 185

8.1.1

Rsync

Rsync NAS Rsync NAS
 . Rsync 873
 . 0

- **Enable backup from a remote server to the local host():** (NAS) (NAS)
 - **Allow remote Rsync server to back up data to the NAS(NAS):** Rsync (NAS) Rsync (NAS) Rsync
- NAS

RTRR

NAS "Enable Real-time Remote
 Replication Server()"
 . 8899
 . 0 NAS
 . RTRR NAS 가

NAS 가 IP . 10
 "Allow all connections()"
 . IP "Allow connections from the list only(
)" "Add(가)"
 IP IP IP "Read Only(
)" "Read/Write(/)" "Read/Write(/)" .
 가 NAS "Finish ()"
 "APPLY()" NAS가

Time Machine

OS X NAS Mac

- NAS :
- 1.
 - 2.
 3. NAS

4. 4095GB

0()

5. "Apply()"

가

Mac

1. Mac "Select Backup Disk()"

2. NAS TMBBackup "Use for Backup()"

3. QNAP NAS "Connect()"

○ : TimeMachine

○ : NAS

4. "ON()" 가

120

Mac

Mac OS

, <http://www.apple.com>

- (): Time Machine
- : Time Machine (Time Machine)
- Size(): Time Machine
- Date Modified(): Time Machine
- Delete(): Time Machine

8.1.2

NAS NAS Rsync

Rsync NAS NAS Rsync

NAS "Main Menu()" > "Backup Station()" > "Rsync Server(Rsync)"

1. "Create a Replication Job()"

2. NAS Rsync " "

3. IP , , / 가
873 . "Test()" "Apply()"

4.

5. "Add(가)" 가

6. "Backup frequency()"

7. "Options()"
"Apply()"

- : "Allow SSH connection" in "Network Services(SSH)" > "Telnet/ SSH(/SSH)" SSH
- Activate file compression(): WAN
- Perform incremental replication(): NAS , ,
- Delete extra files on remote destination(가): (). 가
- Handle sparse files efficiently(): 가

8. "Apply()"

NAS

: 5

		Rsync ().

"Options()"

- Timeout (second)(()):
가

- Number of retries(): NAS가

- Retry intervals (second)(()):

, 600 가 , 3 , 60 . NAS가 60
NAS가 60

R T R R

(RTRR)

(NAS NAS, NAS FTP , NAS
)

가

Station(NAS) > "RTRR Server(RTRR)" FTP ("Main Menu()" > "Backup ("Main Menu()" > "Control Panel()" > "Network Services()" > "FTP").

NAS			
Intel	NAS	v3.5.0	64*
		v3.5.0	32*
ARM	(Intel) NAS	v3.5.0	RTRR

	v3.5.0	8*
--	--------	----

* 5

NAS

<http://www.qnap.com>

Intel NAS	TS- x39 , TS- x59 , TS- x69 , TS- 509, TS- 809, TS- 809 Pro, TS- 809U- RP, SS- 439 Pro, SS- 839 Pro, TS- x59 Pro+, TS- 879 Pro, TS- 1079 Pro, TS- 879U- RP, TS- EC879U- RP, TS- 1279U- RP, TS- EC1279U- RP
ARM (Intel) NAS	TS- x10, TS- x12, TS- x19

1. "Create a Replication Job()"
2. 가 "NEXT()"
3. "Next()" 가 가
 - , 가 가
 - (NAS FTP)
 - (NAS FTP)
 -
 - , 가
 -
4. IP (FTP RTRR) 가 가 NAS ; NAS 가 (FTP RTRR).
 - **FTP** : SSL/TLS() FTP
 - **RTRR** **NAS** : RTRR 가 IP
 - RTRR 8899 . RTRR . " "
- 5.
6. 5 가 "Add(가)"
7.
 - Replicate Now():
 - Periodically():
 - Hourly():
 - 1:01, 2:01, 3:01...

- Daily(): , 2 2 02:02
- Weekly():
- Monthly():
- 1 : 1 1

- 가
- QTS 4.1 , RTRR FTP FTP 가 FTP
- 가
- 7 " " "1 "
- RTRR Rsync Bandwidth Control() () 가 NAS 가 QNAP NAS 3.6 가

8. "Configure policy and filter()" "NEXT()"

- Delete extra files(가): 가
- Detect sparse files():
- Check file contents():
- Compress files during transmissions(): CPU
- Ignore symbolic links():
- Extended attributes():
- Timeout and retry settings():







9. / , /

- File size(): /
- Include file types():
- Exclude file types():
- File date/time(/):

10. " "

11. "Next()"

12. "Finish()"

		
		
		
		; download logs().
		
		

"Options()"

"Event Logs()"

"Download Detailed Logs()"

가 SMTP NAS ("System Settings()" > "Notification()")

"Policy()"

"Filter()"

RTRR

"Action()"

"View()"

"Download Logs()"

Microsoft Excel

Logs()"

"Options()" > "Event Logs()"

"Download Detailed

8.1.3

Amazon S3

Amazon S3 (Simple Storage Service) AWS(Amazon Web Services)가

Amazon S3 NAS Amazon S3
Amazon S3 NAS <http://aws.amazon.com>
AWS Amazon S3 가 , Amazon S3
Amazon S3 () 가
Mozilla Firefox 가 "S3Fox"

Amazon S3 NAS Amazon S3

1. "
- 2.
3. "Upload()" "Download()"
Amazon S3 "Test()"
4. NAS
- 5.
6. "Finish()"

ElephantDrive

ElephantDrive "Enable ElephantDrive Service(ElephantDrive)"
ElephantDrive
"Create()" "OK()" "OK(
)"
"APPLY()" NAS가
ElephantDrive NAS ElephantDrive
ElephantDrive 가 (<http://www.elephantdrive.com/qnap>)
ElephantDrive (
<https://www.elephantdrive.com/qnap>).

Symform

Symform , "Backup Station > Cloud Backup() >
Symform" "Get Started Now()" Symform
NAS가 , "Configure()"
"Sign- In()" NAS Symform
가
Symform
가 , 가 Symform . Symform
"Cloud Dashboard()"
Symform Symform

Symform

- TCP : 59234
- TCP : Symform
- TCP 가
- Symform ,
NAS
- Symform
, NAS Symform

8.1.4

NAS NAS USB/eSATA






: NAS "External Device()" > "External Storage()"

1. NAS USB eSATA (가)
2. "Create a new job()"
3. 가 , "NEXT()"
4.
 - a. * . NAS EXT3, EXT4, FAT, NTFS, HFS+ 가
 - b. "Map this backup job to the volume ID only(ID)" . NAS가 USB/eSATA
 - c. NAS
 - d. "Next()"
5. "ADD(가)" 5

:
 •
 • /

6.
 - Replicate Now(): .
 - Periodically(): 5 .
 - Hourly(): , 01 01 , 1:01, 2:01, 3:01...
 - Daily(): , 2 2 02:02
 - Weekly(): .
 - Monthly(): .
 - : NAS가
7. "Next()" , "Configure policy and filter()" " " :

- Delete extra files(가): 가
 - Detect sparse files():
 - 가
 - Check file contents(): 2 , , ,
 - Ignore symbolic links():
8. :
- File size():
 - File date/time(/):
 - Include file types():
 - Exclude file types():
9. 63
10. "Next()"
11. "Finish()"
12. 가

		
		
		
	/	
		

- "Schedule Type()" , "Edit()" "Settings()" > "Disabled()" "OK()"
1. , "Options()"
2. "Event Logs()" "Download Detailed Logs()" . SMTP "System Settings()" > "Notification()"
3. "Policy()" "Filter()"
1. , "Options()" > "Event Logs()" "Download Detailed Logs()"가

2. "Action()" "View / Download(/)"
3. "Job Logs()" 가 "Download Logs()"
 Microsoft Excel "Options()"
 ">"Event Logs()" "Download Detailed Logs()"

USB

USB NAS , USB
 TS- 809U- RP, TS- 879U- RP, TS- EC879U- RP, TS- 1279U- RP, TS- EC1279U- RP

가 ()
 USB "Copy()"
 NAS 가 . 가
 가
 "USB One Touch Copy(USB)"

USB

- "USB "
- : USB NAS ,
- :
 - : 가 가
 (YYYYMMDD)
 YYYYMMDD- 1, YYYYMMDD- 2...
 - Copy():
 - Synchronize():
- Handle sparse files efficiently():
- : "Add (가)" 9
 가
- : "Options ()" , SMS, (IM)
- USB : USB LED NAS USB
 8- 10
- :
 - :
 - : USB 가

: , 가
 1
 YYYYMMDD- 1, 2 YYYYMMDD- 2...
 YYYYMMDD

USB

- NAS USB USB NAS
1. 가 NAS Qusb/ Usb가
 2. NAS
 3. "Backup Station > USB One Touch Copy(USB)"
 4. USB NAS USB
 5. NAS 가

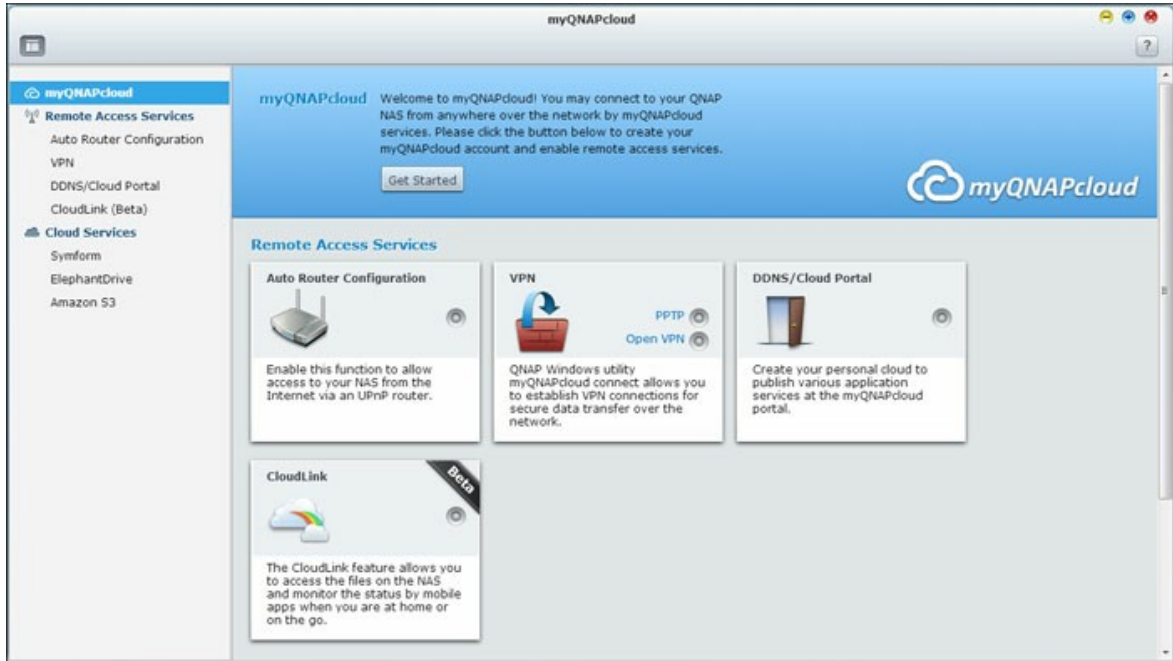
: , NAS

: ,

가 USB ,

8.2 myQNAPcloud

myQNAPcloud , NAS IP , NAS
 UPnP . myQNAPcloud NAS
 UPnP
 NAS



MyCloudNAS NAS가 UPnP

myQNAPcloud

myQNAPcloud myQNAPcloud

1. "Get Started()"
2. "Start()"
3. "Next()" myQNAPcloud
 "("Sign in myQNAPcloud account(myQNAPcloud myQNAPcloud .)"
4. QNAP NAS "Next()"
5. 가
6. "Finish()"
7. 가
 "Confirm Registration()"

myQNAPcloud

myQNAPcloud "Manage myQNAPcloud Account(myQNAPcloud)"
 http://www.myqnapcloud.com ._ "Enter device name(
)" ID "My Devices()"
 , DDNS , LAN WAN IP . "My Account()"

myQNAPcloud

NAS

myQNAPcloud NAS NAS "Go(
)!" NAS 가

: NAS DDNS/

"Remote Access Services()" > "Auto Router Configuration (UPnP / NAS UPnP

: 2 가 NAS

UPnP "Rescan()"
 "Diagnostics()" . UPnP 가 NAS
 (!) "UPnP Router Compatibility Feedback..(UPnP
 ..)" (http://www.qnap.com/go/
 compatibility_router.html) 가 가 NAS
 "Apply to Router()" . NAS가 UPnP
 NAS

- 3 NAS가 UPnP NAS
 가 UPnP 가
- : http://www.qnap.com/go/notes.html
- : http://www.qnap.com/faq
- UPnP : http://www.qnap.com/UPnP_Router_Compatibility_List

DDNS/Cloud Portal

, , File Station NAS
 http://www.myqnapcloud.com

NAS 가
 "Remote Access Service()"
 My DDNS NAS
 WAN IP 가 NAS myQNAPcloud . myQNAPcloud
 NAS가 UPnP

- QNAP NAS myQNAPcloud myQNAPcloud
 NAS
- myQNAPcloud NAS 120
 가

1. "Remote Access Services()" > "DDNS/ Cloud Portal()" >
 "Cloud Portal()"
 NAS 가 "Publish()"
 NAS myQNAPcloud "Private()"
 NAS
 myQNAPcloud myQNAPcloud (http://www.myQNAPcloud.com)
 NAS 가
2. myQNAPcloud : 6-16 (a-z, A-Z, 0-9 가)
 NAS 가 myQNAPcloud NAS
3. "Add Users(가)" myQNAPcloud NAS
 가 9 NAS
4. myQNAPcloud (VPN) /
 myQNAPcloud "Apply()" "Apply()"
5. myQNAPcloud "Send
 Invitation()"
6. "Send()"

:
 Server(SMTP)", "System Settings()" > "Notification()" > "SMTP"

C l o u d L i n k ()

CloudLink UPnP가

QNAP NAS

QNAP

"Enable CloudLink (Beta) service("CloudLink())"

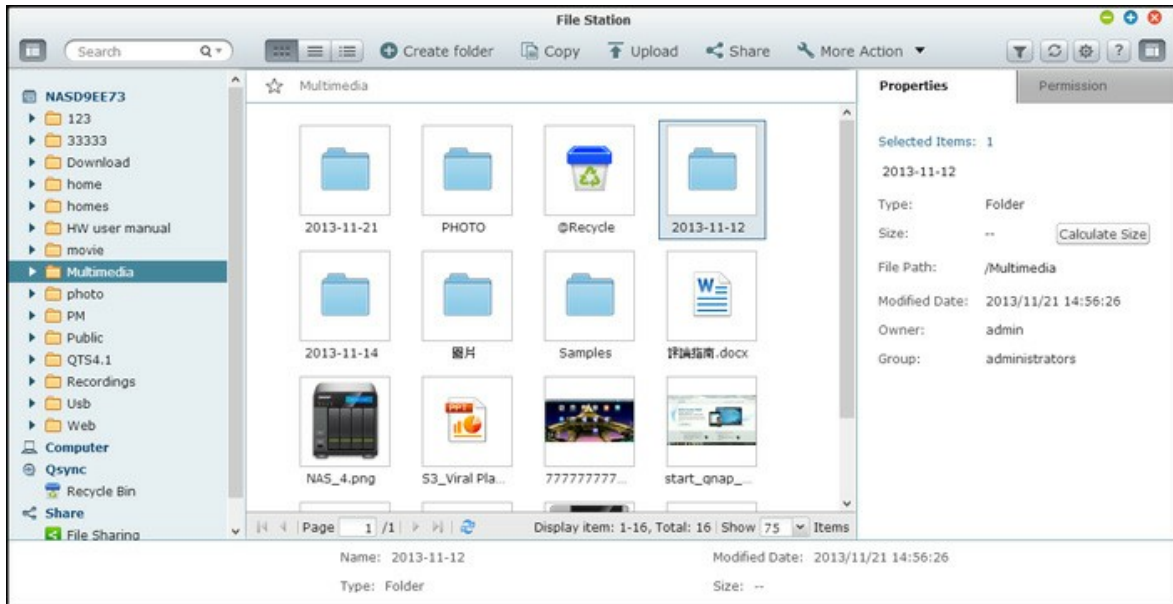
8.3 File Station

File Station

. File Station

NAS

NAS



File Station

(File Station 가 File Station File Station
http://NAS_Name_or_IP/cgi-bin/filemanager.html).

File Station



1		(, ,)
2		(/ / :)
3		.

4	/	/ / .
5		.
6		/ , / / .
7		<ul style="list-style-type: none"> • "Favorites()" () •) • () • , NAS ()
8		가
9		.
10		<ul style="list-style-type: none"> • PC / • / .

- NAS . NAS , "Download()", "home()", "Multimedia()", "Public()", "USB" "Web()"

- : PC Java JRE
- Qsync: Qsync
- 가
- :
- :

- : "Calculate Size()"
- : "Set file/folder level permission(/)"

File Station

, NAS() "+" , "Create()"

/	
	<ul style="list-style-type: none"> • • •
	NAS
/	
가()	
/	/
가	"Favorites()"
(Zip)	

- : 가
- Ctrl + C: /
 - Ctrl + V: /
 - Ctrl + X: /
 - Ctrl + A: /
 - F2: /
 - F5:

/	
	<ul style="list-style-type: none"> • • •
	PC
VLC	(VLC).
	NAS
/	
가()	
/	/
(Zip)	
ISO	iso iso iso가 "Unmount()"

:

- IE 8 , JAVA File Station NAS
2GB , JAVA IE 9, Firefox
3.6, Safari 5 Chrome
- Chrome File Station
- ARM NAS , ISO
(). ISO
- Mac OSX WebDAV # 가

File Station , File Station (,)
. Media Viewer(NAS)가 .



1	/	/
2		90 / ().
3		.
4		.
5		.
6		.
7		/
8	/	/
9		.
10		.
11		.

: NAS
x69 x70

/
File Station NAS
(,) (, AVI, MP3.)
가 . 1)
2)
• "Advanced Search(
)" (, , /)
"Search()"
• "Smart File Filter(
)" (, , /)
"OK()"
가

: NAS , "Location()" "..."

/
File Station NAS
"Properties()"
"Privilege Settings()" > "Shared Folder()" > "Advanced Permissions()"
"Advanced Folder Permissions()"
• :
• :
• : ()
"Apply changes to folder(s), subfolder(s) and file(s)(,
)" "OK
()"
"Privilege Settings()" > "Shared Folder()" > "Advanced Permissions()"
"Enable Advanced Folder Permissions()"
+
"Add(가)"
"
"Set()"

- "Privilege Settings()" > "Shared Folders()"
- 1
- "Only the owner can delete the contents()"
- "Only the owner can delete the contents()"

File Station NAS

1. / "Share()"
2. "Settings()"
 - NAS IP
 - "Allow file upload to this folder()" 가
 - SSL() (
 - "Include the password in the email if the link is sent via email()"
3. "Send()" 가
4. WAN IP "Publish()"

- "System Administration()" > "Notification()" > "Configure SMTP Server(SMTP)"
- 1000
- IE 9, Firefox 3.6, Safari 5, Chrome.
- ()가

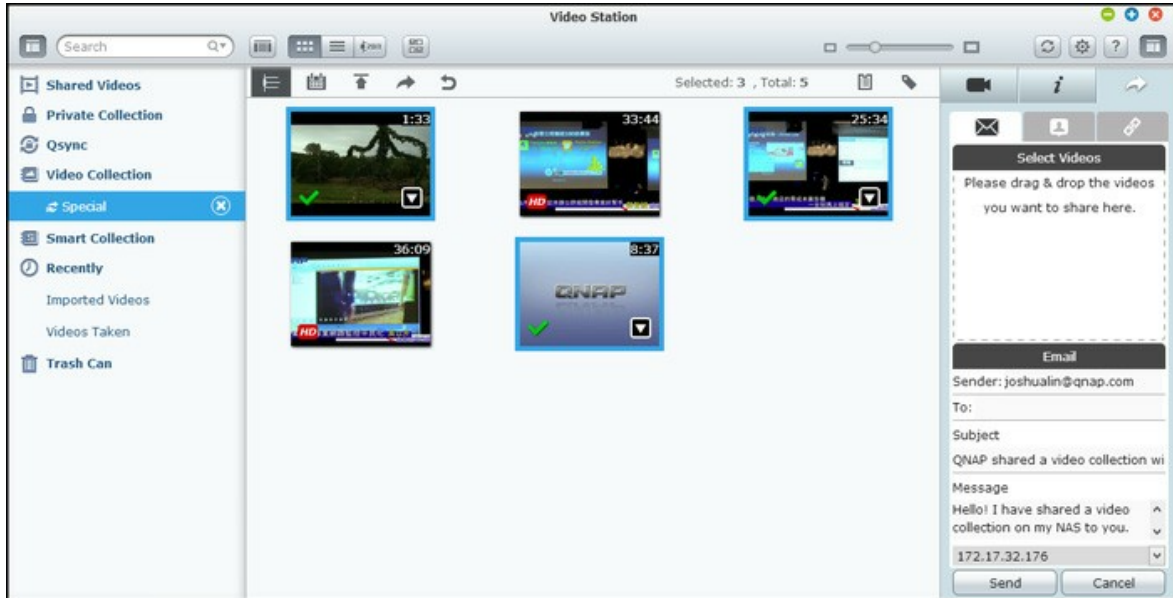
8.4 Video Station

Video Station(2.0) Turbo NAS
가

()

. Video Station

가 , , TV



Video Station

App Center 가 , Video Station

(QTS 4.1

)
1. NAS

Video Station

. NAS

가

. 1) PC Mac

NAS

[24]

; 2) "Shared Videos()" "Private
Collection()" , "Import(가)"()
PC 가 Turbo NAS 가 ("Shared
Videos()" , "/multimedia()" ("Shared
); "Private Collection()" "/home()")
. "Video Collection()" 3)

가

NAS

- : 2GB
- 2GB

2. Video Station 가 Video Station Video Station
 Station (http://NAS_Name_or_IP/video/) .

- Video Station NAS .
- Video Station : MP4(H.264)(mt2s, avi, mpg, wmv, ts, asf, mtd, mov, m2v, mpeg, 3gp, mkv, mts, tod, mod, trp, m1v, m4v, divx, flv, rmvb, rm MP4)

Video Station



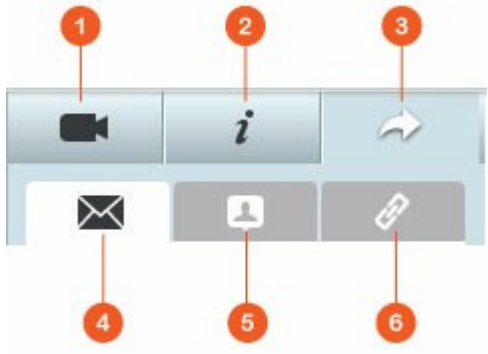
1		, , , .
2		(/ / : /), .
3		.
4		.
5		.
6		<ul style="list-style-type: none"> • : 가, Home Videos(), Movies(), TV Shows(TV), Music Videos() . • Video Station () .

		<ul style="list-style-type: none"> • : "Always ask me to enter my password when accessing Private Collection and Qsync (Qsync)" 가
7		
8		
9	가	가
10		
11		
12		

- : Turbo NAS ("/home()" "Qsync")
- : "/home()"
- Qsync: Qsync
- : 가
- : 가
- : NAS Video Station Home Videos(), Movies(), TV Shows(TV) Music Videos() 가
- : Video Station () 가
- : (가 가)

- "/home()" NAS "/home()"
- Multimedia Management() Privilege Settings() "User()"

• Video Station Multimedia Management



1		
2		
3		(가).
4		"Send()" "Control Panel()" > "System Settings()" > "Notifications()" > "SMTP Server(SMTP)"
5		

NAS (NAS 가
 /),
 가 ()
 , "Email()" , "Publish()"
 "Sharing Links()"
 ,
 ,
 "Sharing()" "Select
 Videos()" "Email()", "Social Sharing()", "Link(
)" Video
 Station
 , "Sharing History()"

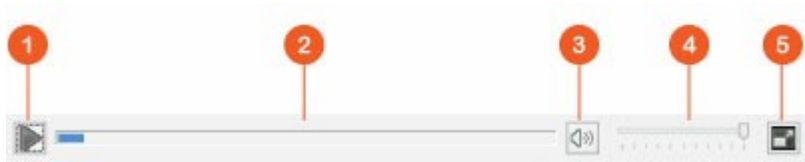
Play()	
VLC	VLC (VLC).
가	. 240P, 360P, 480P SD, 720P HD 1080P Full HD.
	90
가	가
/	
	(, ,)
가	

:

- 가 "Movies()"
- 가

, "Multi- select()"

Ctrl



1	/	/
2		
3	/	
4		
5		

Video Station Media Library()

가 Video Station

/

- x86 NAS , "/recording()" "/web()"
 - 가 ARM NAS
 - "/multimedia()" "/homes()"
 - 가

- 가 , "/home()" NAS (NAS) "/home()" "Private Collection()" Video Station .

가 , "Control Panel()" > "Multimedia Management()" > "Media Library()" Multimedia Management()

: Photo Station, Music Station, Video Station DLNA Media Server가 가

8.5 Photo Station

Photo Station(4.0) Turbo NAS ()
 가 . 가
 Photo Station , 가 , NAS
 가
 가

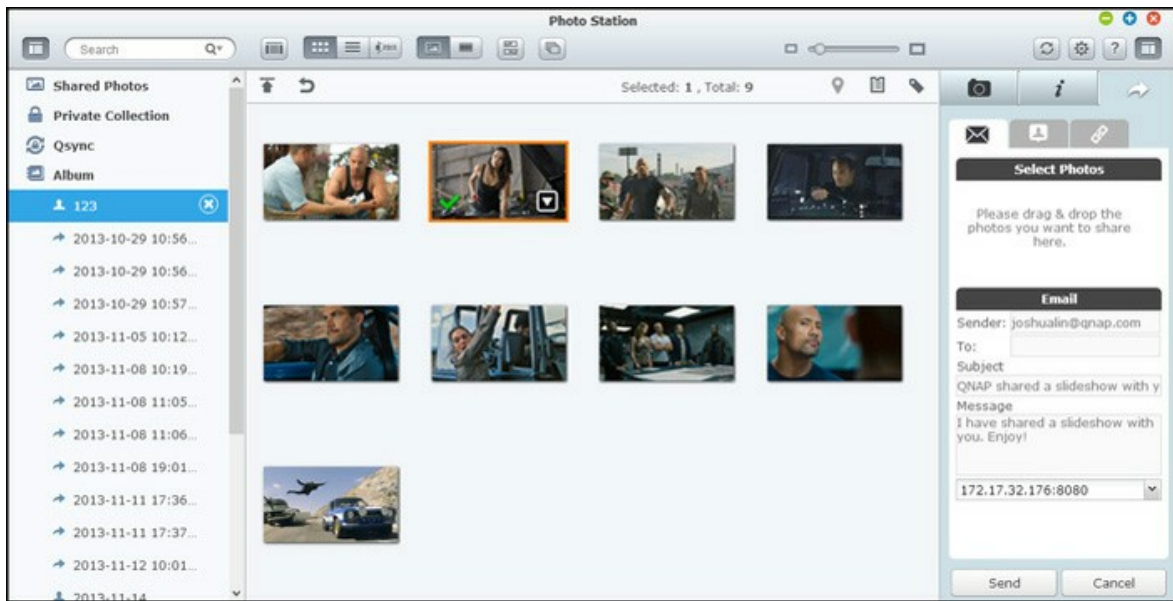


Photo Station

NAS Photo Station
 App Center 가 , Photo Station
 (QTS 4.1) Photo Station

1. NAS 가 . NAS
 가 . 1) PC Mac Qfinder

Connecting to NAS [24] ; 2)
 "Shared Photos()" "Private Collection()"
 "Import(가)" PC 가
 가 Turbo NAS 가
 ("Shared Photos()"
 "Multimedia()" "Private Collection()"
 "/home()"). "Album()"
 3)
 가 NAS

Photo Station

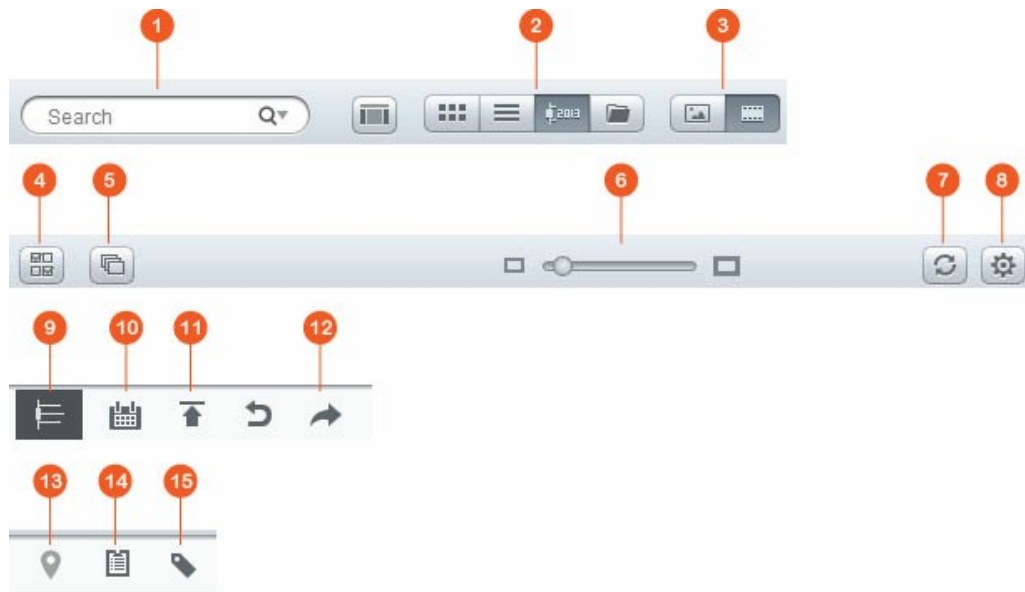
	bmp (Intel NAS), jpg, jpeg, gif, png, tif tiff
	MP4 (H.264). (avi, m2ts, mpg, mp4, wmv, ts, tp, asf, m2t, mov, mod, m2v, mpeg, 3gp, mkv, mts, tod, trp, m1v, m4v, rmp4, divx, flv, rmvb rm) MP4

- 2GB
- 2GB

2. Photo Station 가 Photo Station Photo Station (http://NAS_Name_or_IP/photo/).

: Photo Station NAS

Photo Station



1		

2		(:),
3	/	,
4		.
5		.
6		.
7		.
8		<ul style="list-style-type: none"> • : Photo Station () • : "Bind with Facebook(가)" Photo Station (http://NAS_Name_or_IP/photo/) • : "Always ask me to enter my password when accessing Private Collection and Qsync(Qsync 가)" 가
9		.
10		.
11	가	가
12		.
13		GPS 가 Geotagging ; GPS 가 GPS
14		.
15		.

- : Turbo NAS
("/home()" "Qsync")

- : "/home()"

- Qsync: Qsync

- : 가

가

NAS
Photo Station

- : 가

Photo Station

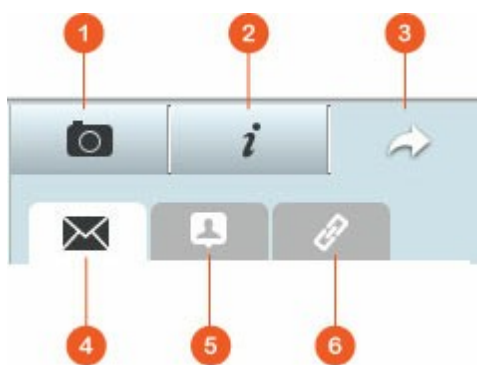
- : () 가

- : (가 가)

• "/home()" NAS
 "/home()"

• Multimedia Management()
 Privilege Settings() "User()"

• Photo Station
 Management() Multimedia



1	EXIF	/ EXIF
2		/ ,
3		(, 가).
4		"Send()" , "Control Panel()" > "System Settings ()" > "Notifications()" > "SMTP Server()"
5		
6		Link Format"()" , DDNS , LAN IP WAN IP (myQNPcloud.com myQNAPcloud Service () myQNAPcloud HTML (URL , HTML , vB Forum Alt Forum) "Create Link()" 가 URL

: EXIF Date()

Photo Station

- 가
- "Create New Album()"
 - "Album()"
 - "Album Settings()"
 - "Share with the public()"

, "Smart Album()" "+" ,
 (, ,)
 , , (, , "Album Settings(
)" "Share with the public()")

NAS (NAS 가
 /)
 (QTS 가 ())

- Photo Station 가 NAS
 ("Control Panel()" > "General Settings()" >
 "Login Screen()")
-

, "Email()" "Sharing
 Links()", "Publish()" ,
 가

, "Sharing()" "Select
 Photos()" "Email()", "Social Sharing()", "Link(
)" ,
 "Album()" 가

"Settings()" Photo
 Station
 Photo Station (http://NAS_Name or IP/photo/)

가 가

()	

	90 / ()
VLC	(VLC)
	("Album Settings()" (URL, HTML, vB Forum , Alt Forum)
가	240P, 360P, 480P SD, 720P HD 1080P Full HD()
가	가
(Pixlr Editor)	()
	GPS ()
가	가

Ctrl "Multi- select()"



1		
2		/
3		90 / ().
4		
5		
6		
7		"X" 가 가 가
8	/	/
9		

"Slideshow()"



1		Music Station ("Playlist "). Music Station
2		
3		

4	/	/	.
5			.
6			.
7			.
8			.
9			.

EXIF "Large Map()" "Set
Coordinates()"
"Photo Map()"
GPS 가 GPS 가

Photo Station Media Library()
가 Photo Station
/

- x86 NAS , "/recording()" "/web()"
가 ARM NAS
"/multimedia()" "/homes()"
가
- "/home()"
가 NAS (NAS
"/home()" "Private Collection()"
).
- , "Control Panel()" > "Privilege Settings()" >
"Shared Folders()"

가
"Control Panel()" > "Multimedia Management()" >
"Media Library()"
Multimedia Management()

: Photo Station, Music Station, Video Station DLNA Media Server가

가

8.6 Music Station

Music Station 4.0

NAS

가

. Turbo NAS



Music Station

NAS

Music Station

App Center 가 , Music Station

(QTS 4.1

)

Music Station

1. NAS

. NAS

가

. 1)

PC

Mac

Qfinder

Connecting to NAS

[24]

; 2)

"Songs()" "Private Collection()" ()

()

PC 가

가 Turbo NAS

가

("Songs()" "Multimedia(

)" "Private Collection()"

"/home()"

). "Recently Added(가)"

. 3)

가

NAS

:

- Music Station NAS
- Music Station Multimedia Management()
- Music Station Multimedia Management()

2. Music Station 가 Music Station Music Station (http://NAS_Name_or_IP/musicstation/ Music Station).

Music Station



1		
2		(: / /)
3		
4		
5		, NAS
6		



1		

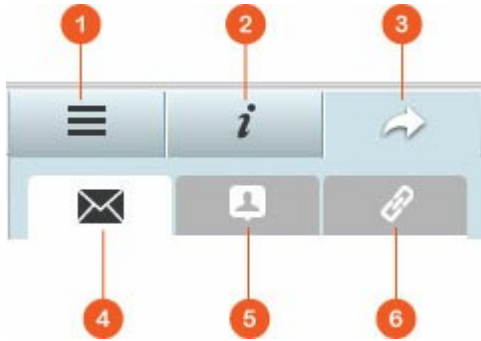
2	/	/
3		.
4		/
5		.
6		,
7		.
8		.

- , , :
 PC 가 Songs()
 Multimedia /
- : "Now Playing()"
- : "/home"
- Qsync: Qsync
- : 200
 600
 "Playlist()" "+" 가
 "Now Playing()" 가
- : 1 가
- "Rating()"
 가 : 가
- : 가
- : URL TuneIn Radio 가
 가 1,024
 URL 가 MP3
- TuneIn: TuneIn
- :

:
 • "Playlist()" . / | \ : ? < > * " ' \$.
 • "Recently Added(가)"

- Music Station
APE.

. MP3, OGG, WAV, AIFF, AU, FLAC, M4A



1	가	가 가 가 .
2		가 .
3		"Songs()" (, 가 .)
4		"Send()" . "Control Panel()" > "System Settings()" > "Notification()" > "SMTP Server()"
5		.
6		"Link Code()" , LAN IP WAN IP (myQNAPcloud. com myQNAPcloud myQNAPcloud) . "Save()" 가 .

Music Station

가
Music Station .

"Playlist()"
"OK()"
"Now Playing(
)"
"Share with the public(
)"
"Playlist Settings
)".

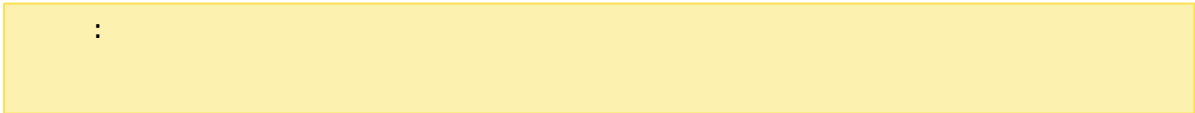
:
가 NAS (NAS
) , 가 / ()

"Email()"
, "Link Code()"
"Sharing()"
가 "Songs()"
"Email()", "Social Sharing(
)", "Link()"
"Playlist()"
가

- / /
- "Info()"
- Ctrl

"My Favorites()"

Music Station () 가
Music Station /



- NAS, "/home()" 가
"/home()" "Private Collection()" (NAS).
- "Control Panel()" > "Privilege Settings()" >
"Shared Folders()" .

가
"Control Panel()" > "Multimedia Management()" > "Media
Library()" Multimedia
Management() .

: Photo Station, Music Station, Video Station DLNA Media Server가
가 .

8.7 Download Station

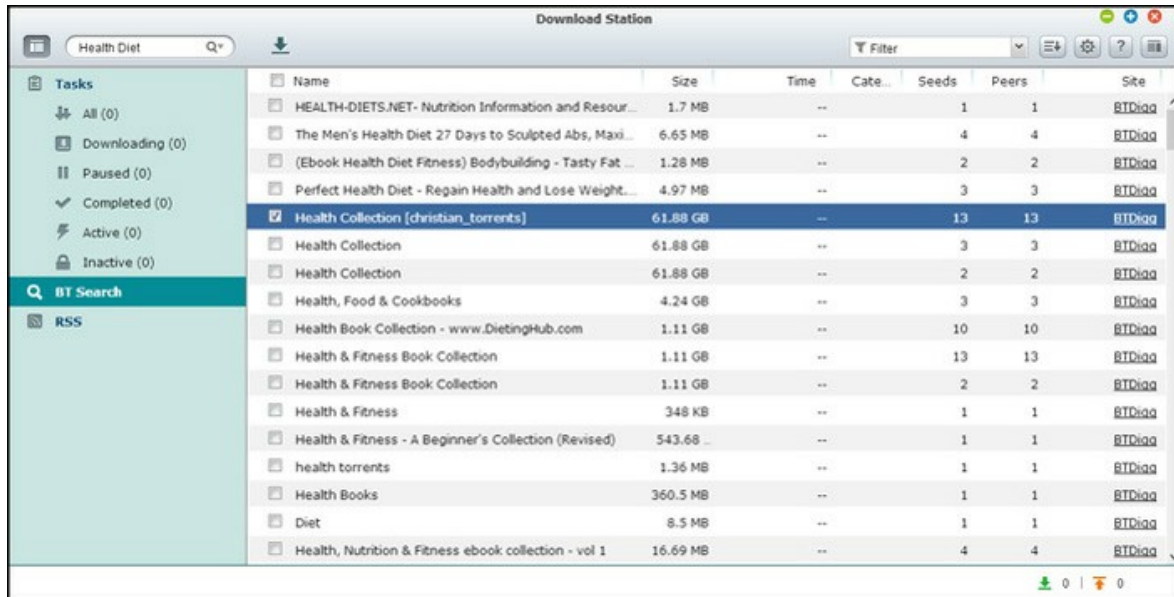
Download Station BT, PT, Magnet Link, HTTP/HTTPS, FTP/FTPS

RSS

. BT

BT

NAS



Download Station

: PT PT
(libtorrent) PT , App
Center

Download Station

NAS

Download Station

App Center 가 , Download Station

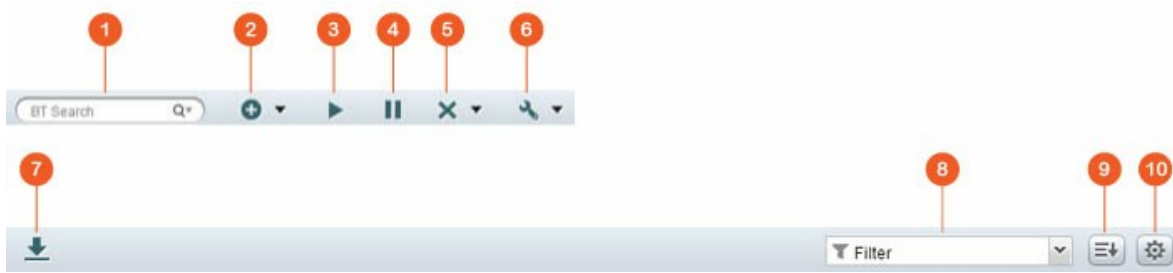
(QTS 4.1)

Download Station 가 Download Station Download Station

(http://NAS_Name_or_IP/cgi-bin/Qdownload/qdownloadindex.cgi

).

Download Station



1		. BT . BT 가 > "BT" > "BT Search()" "Settings()"
2	가	URL PC BT 가 .
3		BT
4		BT
5		BT BT
6		, , .
7		BT , .
8		BT .
9		.
10		BT RSS (Download Station .

- : BT (, , , , , BT) . ()
- BT : BT () , URL . BT
- RSS: RSS , , .

Download Station

"Settings()" Download Station

- : "Full speed()" ()
 . "Limited()"
- : NAS
- : SMTP
- "System Administration()" > "Notification()"

HTTP

- : HTTP
- : HTTP . 0
 (Intel NAS HTTP FTP 30 (Intel
) ARM NAS 10).

FTP

- : FTP
- : FTP . 0
 (Intel NAS HTTP FTP 30 (Intel
) ARM NAS 10).

BT

- - BT 6881- 6889
 - UPnP : UPnP
 - DHT : 가 NAS가
 DHT() DHT UDP
 - :
 - : BT . 0
 - : BT (Intel NAS
 30 (Intel) ARM NAS 10
).
 - (KB/s): BT . 0
 - (KB/s): BT . 0
 - (KB/s): . 0
 - :

-
- : BT
- BT : BT Download Station BT

64 HTTP FTP 가 "Add Account(가)" IP, 가 HTTP, FTP "Enabled()" "Apply()" "Cancel()" "Edit Account()" "Delete Account()")"

RSS : RSS NAS가 RSS 가

Download Station

- 가
1. PC Download Station BT/PT "+" 가 BT/PT URL (HTTP/FTP/Magnet) 가
 2. BT 가 BT
 3. "RSS" RSS 가 Download Station 가 RSS

• Intel	NAS	60	(BT/PT	30, HTTP+FTP
• ARM	NAS	20	(BT/PT	10, HTTP+FTP
•	PC	Download Station	BT/PT	Chrome Firefox

HTTP, FTP, Magnet 가
 HTTP, FTP, Magnet 가 "Start()" HTTP/FTP
 URL ().
 Magnet 가 "Use credentials()"
 "OK()" NAS가

B T

"Edit Downloads()" BT

/

Download Station "Settings()" > "HTTP", "FTP" "BT" >
"Bandwidth Limit()" > "Global()" > "Download Schedule()"
() "Limited()" "Full speed()", "Turn off"

"Settings()" > "Global()" > "Notification()" 가 "Email()" >

R S S

Download Station RSS

1. "RSS" "+" RSS 가
2. URL
3. RSS "Download()"
4. NAS가

RSS RSS RSS

RSS 가, ,

R S S

RSS BT

- 가 , RSS "Add(가)"
-
- RSS (가
- 가 "All()")
- :
TV 1 1- 26 1x1- 26
1 1 1x1

- RSS . NAS가 RSS
가
- "Apply()"
- "Cancel()"
- "Delete()"

BT

"Settings()" > "BT" > "Bandwidth Limit()">"Seeding Preferences()"
가
"Share Ratio()" "Share Time()"

BT

BT "Settings()" > "BT" > "Bandwidth Limit()">"Seeding Preferences()"
가
"Share Ratio()" "Share Time()" BT

BT 가 **BT** 가

1. 가
2. NAS IP DNS DNS
가
3. 3- 5
4. NAS가 NAT BT 가
 - a. BT NAT NAS LAN IP
 - b. NAS UPnP NAT NAT 가
UPnP , NAT
NAS UPnP NAT . BT 가

2. **HD Station**

- "Applications()" > "HD Station" 가 "Get Started Now()"

3.

- HD Station: TV HD Station
- XBMC: TV
- Chrome: Chrome QNAP Turbe NAS HDTV 가
- YouTube: YouTube TV
- My NAS: NAS 가 NAS

• XBMC , Chrome NAS
 HD Station 가

• 6

• NAS 6 HD Station

• HD Station QNAP Turbo NAS 2GB

• XBMC AirPlay Turbo NAS 2GB

• USB HD Station

• XBMC XBMC "Multimedia()"

TV

HD Station



4. HD Station

. HD Station

XBMC

TV

TV

Qfile

- a. Qfile NAS
- b.
- c.
- d. NAS

TV HD Station

- e. TV XBMC
- f. "Pictures()"
- g. "Multimedia()"
- h.

USB

- a. USB NAS USB
- b. "Pictures()"
- c. "USBDisk"
- d.

NAS 가

(Samba, AFP, FTP, NFS) 가 "Multimedia(USB eSATA)" "Qmultimedia"

"Multimedia()" 가

1. "Videos()" "Files()" .
2. "Add Videos(가)" .
3. "Browse()" .
4. "Root filesystem()" .
5. "share()" .
6. "Download()" 가 "Download()" .
7. "OK()" 가 .
8. "Download()" 가 .

:
 • 가 XBMC
 : "Setting()" > "Video()" > "Playback()" 가 "Adjust display refresh rate to match video()" "Sync playback to display()"

Chrome HD Station Chrome PC

: Qremote NAS
 USB

YouTube HD Station YouTube

MyNAS NAS 가 NAS

H D S t a t i o n

HD Station "Settings()" HD Station
 • :
 • :
 • :
 HDMI . USB NAS

- QNAP TS-x70 MCE TS-x69
- TS-x69 HDMI Audio Passthrough가





	RM-IR001		MCE		XBMC	HD
		1			1	
		2			13	
	0,1,2,3,4,5,6,7,8,9	3		0,1,2,3,4,5,6,7,8,9	18	0,1,2,3,4,5,6,7,8,9
	Vol+, Vol-	4		Vol+, Vol-	12	Vol+, Vol-
	/	5				
		6				

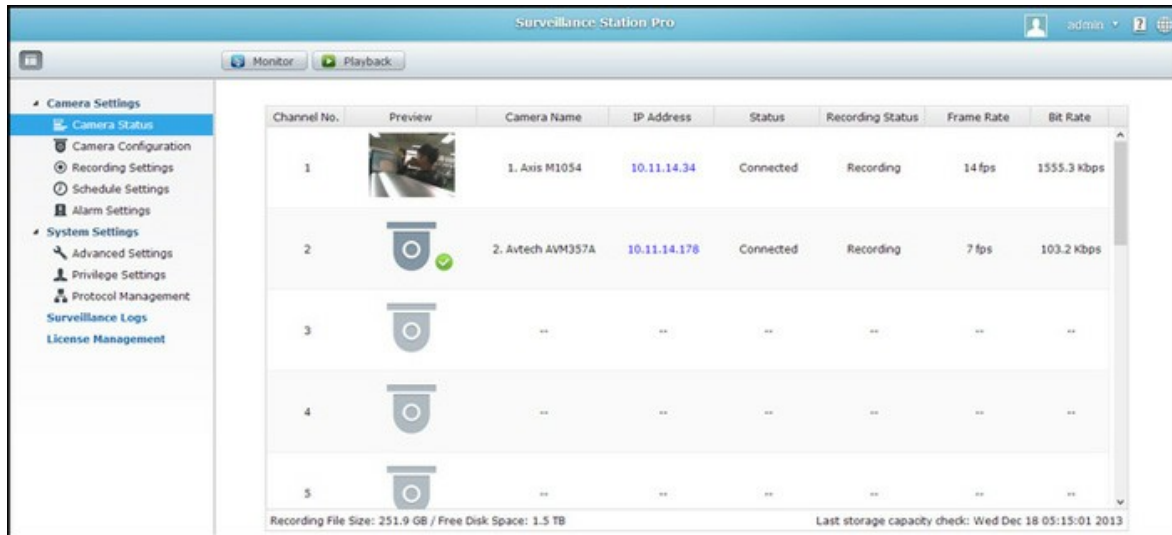
	TV	8				
		7				
가	- ()	9		- ()	3	
	()	10		()	4	
	()	11		()	22	
	()	12		()	23	
		13				
		14				
	가	16				
		15				
	CH-	17			32	
	CH+	18			33	
		20				
		19			10	
		21				
		22				
	가	28			7	
		29				
		25			7	
		23			7	
		26			7	

		27			7		
		24			7		
		30			16		
		31			31		
		32			15		
		33					
		34			30		
		35			33		
		36					
	/	37					
		38			2		
		39					
		40					
		41					
				(19		
)			
					34		
				16:9 / 4:3	27		

8.9 Surveillance Station

Surveillance Station(5.0) 가 & , ,
IP

가
. Surveillance Station IP
<http://www.qnap.com/en/index.php?sn=4056>



- 1.
2. IP
3. QNAP NAS Surveillance Station

가 /

- NAS IP
- IP
- SSID IP

, NAS, IP 가 LAN . NAS IP
IP :

- IP: 192.168.1.100
- 1 IP: 192.168.1.10 (IP)
- 2 IP: 192.168.1.20 (IP)
- NAS IP: 192.168.1.60 (IP)

IP

1. IP . IP .
IP LAN IP IP (192.168.1.100) LAN .
2. IP .
3. IP .
4. .

- IP IP .
- IP / .

QNAP NAS Surveillance Station

1. "Control Panel()" > "System Settings()" > "Network()" > "TCP/IP" 가 "Edit()" NAS IP : 192.168.1.60 LAN IP , 192.168.1.100 .
2. "Control Panel()" > "Applications()" > "Station Manager()" > "Surveillance Station()" 가 "Enable Surveillance Station ()" "Apply()" "Enable Surveillance Station ()" .
3. Surveillance Station "Settings()" 가 "Camera 1(1)" "+" , , , IP , , .

: "Test()" IP .

- . "Next()" .
- "Schedule Settings()" .
- 0~ 23 , 0 00:00~ 01:00, 1 01:00~ 02:00 .
- "Confirm Settings()" .
- NAS 가 , "Monitor()" .
- ActiveX control (QMon.cab) 1 2 .

- Chrome, Firefox IE Surveillance Station "ActiveX control" (QMon.cab) 가
- IP ID .

가

QNAP NAS

Surveillance Station

Surveillance

Station "Camera Settings(
"Traditional Mode()"

)" > "Alarm Settings()"

"Advanced Mode()"

- : "Apply()"

- : "Add(가)" 가

"Motion Detection()" "Recording()"가

Surveillance Station

"Play()" "Playback()" 가

Surveillance Station

1. /

2. IP

가 , 가

3. "Play()" "

4.

5. "Play()" "

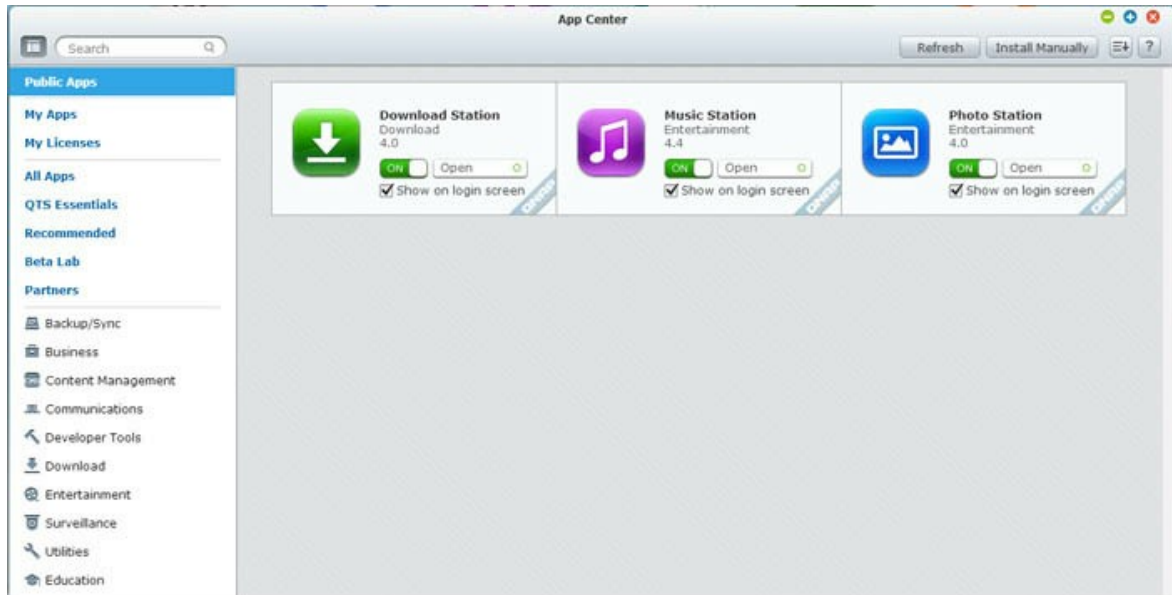
(, , / , / ,)

8.10 App Center

App Center NAS
3 App Center
가

QNAP

NAS



App Center

App Center NAS App Center 가

App Center



1		NAS
2		NAS
3		
4		QPKG
5		

- "My Apps()" 가 , 가 "Show on login screen()"
- : NAS
- : NAS 가
- : NAS 가
- : NAS
- QNAP : QNAP
- : QNAP (QNAP 3 가).
- :
- : QNAP 가
- : "Backup/Sync(/)" "Education()" , 가

App Center

'
 "Add to QTS+(QTS+ 가)"
 "Add to QTS+(QTS+ 가)" "Open()"
 "My Apps()"

• NAS가

• QNAP / QNAP 가

• 가

• App Center

"Update()" "OK()"
 "Update All()" "Refresh"
 ()" "Open()"
 가 ,

"Remove()"

NAS

"OK()"

- :
- QNAP (http://www.qnap.com/go/qpkg.html).

NAS가

QNAP App

QNAP
(http://forum.qnap.com/)

(http://www.qnap.com/go/qpkg.html)
(* .qpkg)

"Install Manually()"

9. LCD

LCD

NAS

<http://www.qnap.com>

NAS

LCD

NAS가

NAS

IP

N	A	S	5	F	4	D	E	3						
1	6	9	.	2	5	4	.	1	0	0	.	1	0	0

LCD

IP 가

		가 *
1		
2	RAID 1	-> JBOD -> RAID 0 -> RAID 1
3	RAID 5	-> JBOD -> RAID 0 -> RAID 5
4	RAID 5	->JBOD -> RAID 0 -> RAID 5 -> RAID 6

*"Select"()

"Enter"()

5

가

NAS

LCD

C	o	n	f	i	g	.		D	i	s	k	s	?		
'	R	A	I	D	5										

"Select()"

RAID 6

가

"Enter"

가

"Select"()

" "

C	h	o	o	s	e		R	A	I	D	5	?			
'	Y	e	s			N	o								

RAID 1, RAID 5

RAID 6

, RAID

, RAID

NAS

LCD

. 100%

RAID

NAS

RAID

NAS

RAID

"Storage Manager(

)" > "Volume

Management()"

30-60 MB/s (

).

:RAID 가 RAID 가 가 .
 "Volume Management()"

* LCD <Encrypt Volume?()> "Yes
 ()" "admin" NAS
 "Storage Manager()" > "Encrypted File System()"

E	n	c	r	y	p	t		V	o	l	u	m	e	?	
'	Y	e	s			N	o								

IP 가 . NAS가
 가 .

C	r	e	a	t	i	n	g	.	.	.					
R	A	I	D	5		F	a	i	l	e	d				

* TS- 110, TS- 119, TS- 210, TS- 219, TS- 219P, TS- 410, TS- 419P, TS- 410U, TS- 419U, TS- 119P+, TS- 219P+, TS- 419P+, TS- 112, TS- 212, TS- 412, TS- 419U+, TS- 412U

가 .

L C D

LCD NAS IP 가 "Enter"

1. TCP/IP
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

TCP/IP

TCP/ IP

1. LAN IP
2. LAN
3. LAN
4. LAN PRI. DNS
5. LAN SEC. DNS
- 6.

o DHCP

○ IP*
 ○
 7. 가
 * DNS IP IP , , , LAN 1 LAN 2

- 1.
2. 가

D	i	s	k	:	1		T	e	m	p	:	5	0	°	C
S	i	z	e	:		2	3	2		G	B				

NAS

RAID

R	A	I	D	5							7	5	0	G	B
D	r	i	v	e		1	2	3	4						

"Select()"

RAID 5

LCD

LCD	
RAID5+S	RAID5+
RAID5 (D)	RAID 5
RAID 5 (B)	RAID 5
RAID 5 (S)	RAID 5
RAID 5 (U)	RAID 5
RAID 5 (X)	RAID 5가

C	P	U		T	e	m	p	:		5	0	°	C		
S	y	s		T	e	m	p	:		5	5	°	C		

S	y	s		F	a	n	:	8	6	5	R	P	M		

"Enter" NAS "Select()" "Yes()"

NAS "Enter" "Select()" "Yes()"

LCD "Yes()" LCD

C	h	a	n	g	e		P	a	s	s	w	o	r	d	
					Y	e	s			N	o				

8 (0 9) 가 "OK()" "Enter"

N	e	w		P	a	s	s	w	o	r	d	:			
														O	K

NAS 가 가 LCD "Enter()"

S	y	s	t	e	m		E	r	r	o	r	!			
P	l	s	.		C	h	e	c	k		L	o	g	s	

Sys. Fan Failed	
Sys. Overheat	
HDD Overheat	가
CPU Overheat	CPU가
Network Lost	LAN 1, LAN 2
LAN1 Lost	LAN 1가
LAN2 Lost	LAN 2가
HDD Failure	가

Vol1 Full	(1)
HDD Ejected	
Vol1 Degraded	(1)
Vol1 Unmounted	(1)
Vol1 Nonactivate	(1)

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Version 3, 29 June 2007

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