

QNAP Turbo NAS

(: 4.1)

Turbo NAS : TS-269L, TS-269 Pro, TS-469 Pro, TS-469L,
TS-469U-RP, TS-469U-SP, TS-470 Pro, TS-470, TS-569 Pro, TS-569L, TS-669 Pro, TS-669L, TS-670 Pro,
TS-670, TS-869 Pro, TS-869L, TS-869U-RP, TS-870 Pro, TS-870, TS-870U-RP, TS-879 Pro, TS-879U-RP,
TS-1079 Pro, TS-1269U-RP, TS-1270U-RP, TS-1279U-RP, TS-1679U-RP, TS-EC879U-RP,
TS-EC1279U-RP, TS-EC1279U-SAS-RP, TS-EC1679U-RP, TS-EC1679U-SAS-RP, SS-EC1279U-SAS-RP,
SS-EC1879U-SAS-RP and SS-EC2479U-SAS-RP, TS-EC880 Pro, TS-EC1080 Pro, TS-EC880U-RP,
TS-EC1280U-RP, TS-EC1680U-RP, TS-EC2480U-RP, TS-131, TS-231, TS-431, TS-251, TS-451, TS-651,
TS-851, HS-251, TS-253 Pro, TS-453 Pro, TS-653 Pro, TS-853 Pro, SS-453 Pro, SS-853 Pro.





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1.

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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). (

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- 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

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1.

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5.

NAS

[27]

NAS

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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 2.
			NAS가
			NAS 가
1			NAS가 가 .
			NAS가 .
LAN			NAS가

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

²S3 TS- x51, TS- x69 Pro, TS- x70, TS- x70 Pro NAS

³가 "Storage Manager()" > "Disks()" > "Action()" > "Locate()"

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






<p>) (0.5</p>	<p>1</p>	<p>1) NAS가 2) NAS가 () 3) 가 NAS 4) 가</p>
<p>) (0.5</p>	<p>3</p>	<p>가 NAS USB 가 가 .</p>
<p>), (1.5)</p>	<p>3 , 5</p>	<p>가 (TS- 119 .)</p>
<p>) (1.5</p>	<p>2</p>	<p>1) 2) 3) NAS 가 4) 가 HDD</p>
	<p>1</p>	<p>1) NAS가 () 2) NAS가</p>

2.2

NAS

가

1. 
2. 
3. CD 

NAS

(

CD가

가

CD

).

가

가


(<http://www.qnap.com/support>).

2.2.1

NAS

1. <http://start.qnap.com> ..
2. HDD NAS "Start Now()"
3. "Hardware()"
4. "Install firmware()"가 "Local Installation()"
5. Qfinder ,
6. Qfinder Qfinder
QTS (QTS Turbo NAS).
7. QTS .

2.2.2

1. NAS PC "start.qnap.com" 가 " " "Cloud Installation()" "Start Cloud Installation()" "Start Cloud Installation()"
2. (QNAP NAS myQNAPcloud "Enter") (가 myQNAP 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)" 
4. Turbo NAS "Register()"
5. Turbo NAS
6. "Begin()" Turbo NAS
7. "Start()"
8. "Proceed()"
- 9.
10. "Connect and Login QTS(QTS)" Turbo NAS
11. 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. Qfinder (QTS Turbo NAS QTS).

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

2.3 가

QNAP NAS . NAS

가

1: QNAP

<http://www.qnap.com/> "QTS 4.1" > "For Home(가)"(
"For Business()") "Utilities(
)" 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
 NAS가
 가
 NAS NAS "System Administration()" >
 "Backup/Restore Settings(/)" NAS 가
 NAS

NAS NAS NAS
 NAS

NAS		NAS		
TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8 4.0.x 4.1.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8.x 4.0.2	
		TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U		
		TS-x31, HS-251, TS-x51, TS-x53, SS-x53	4.0.5	
		TS-x69, TS-x70, TS-x79, TS-x80, TS-x80U	4.1.x	
TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U	3.8 4.0.x 4.1.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8.x 4.0.2	

		<p>TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U</p>		
		<p>TS-x31, HS-251, TS-x51, TS-x53, SS-x53</p>	<p>4.0.5 4.1.x</p>	
		<p>TS-x69, TS-x70, TS-x79, TS-x80, TS-x80U</p>	<p>4.0.x 4.1.x</p>	
<p>TS-x31, HS-251, TS-x51, TS-x53, SS-x53</p>	<p>4.1.x</p>	<p>TS-x31, HS-251, TS-x51, TS-x53, SS-x53</p>	<p>4.0.5 4.1.x</p>	
		<p>TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210</p>		
<p>TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U, TS-x80, TS-x80U</p>	<p>3.8.x 4.0.2</p>	<p>TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U</p>	<p>3.8.x 4.0.2</p>	
		<p>TS-x31, HS-251, TS-x51, TS-x53, SS-x53</p>	<p>4.0.5 4.1.x</p>	

		TS-x69, TS-x70, TS-x79, TS-x80, TS-x80U	4.0.5	
	4.0.5 4.1.x	TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U, TS-x80, TS-x80U	4.0.5 4.1.x	

NAS
 RTRR NAS NAS NAS
 Rsync ).

NAS		NAS	
TS-x31, HS-251, TS-x51, TS-x53, SS-x53	4.1.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210, TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U	3.8.x 4.0.2
TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U	4.0.5 4.1.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210, TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U	3.8.x 4.0.2
		TS-x31, HS-251, TS-x51, TS-x53, SS-x53	4.0.5 4.1.x

- NAS NAS 가 .
- QNAP NAS HDD .
http://www.qnap.com/
- compatibility ..
- SS-x39 SS-469 Pro 2.5 .
- 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 가
- TS-x79 TS-x70U/TS-x79 Multimedia Station,
Download Station, iTunes Server DLNA Media Server .
Multimedia/Qmultimedia, Download/Qdownload .
- NAS myQNAPcloud NAS
NAS myQNAPcloud
NAS myQNAPcloud , 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
2. NAS
3. NAS()
4. QIG() NAS
5. NAS (: admin, : admin).
6. NAS
7. "Start Migrating()" NAS가

: IT 가 ..

- NAS
- Windows AD
 - 가

3. QTS

QTS NAS Turbo NAS

NAS 가 !

- QTS [34]
- QTS [36]

3.1 QTS

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



*

가 Turbo NAS -

가
 QNAP Turbo NAS
 가
 가
 NAS가
 가
 가 QNAP Turbo

- , , , 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;">File Station</p> <p>External Device() , "External Device()" (File Station , File Station). ()</p>
5	Notification and Alert()	<p>"Clear All()" "Event Notifications()" System Logs() System Logs() System Logs() System Logs()</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 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 . NAS 가 가 . 1) (가) NAS . 2) QNAP Qfinder Qmanager Wake-on-LAN(WOL) . WOL "Control Panel()" > "Power()" > "Wake-on-LAN (WOL)" [96] . 3) RM- IR002 MCE ○ : • : NAS • : NAS ○ : NAS <ul style="list-style-type: none"> ▪ NAS 1.5 ▪ Qfinder "Tools()" > "Shut down Server()" • : • : 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	/	

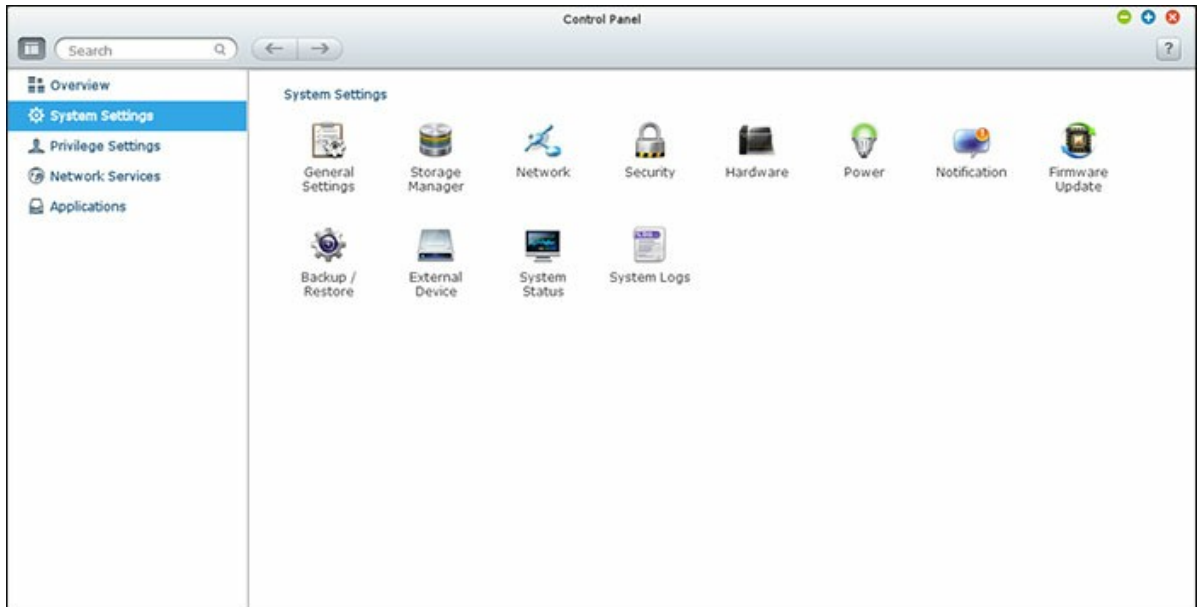
13		HDD NAS
14	QNAP Mobile App (QNAP)	가 QNAP
15	QNAP	가 NAS
16		
17	myQNAPClo ud	myQNAPCloud ²⁴

- :
-
-
-

- :
- QTS 4.x is 1024x768
- Turbo NAS가 QNAP

4.

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



- [41]
- - [43]
- [85]
- [93]
- [94]
- [96]
- [98]
- [100]
- / [102]
- - [103]
- - [117]
- [119]

4.1

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

- : 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

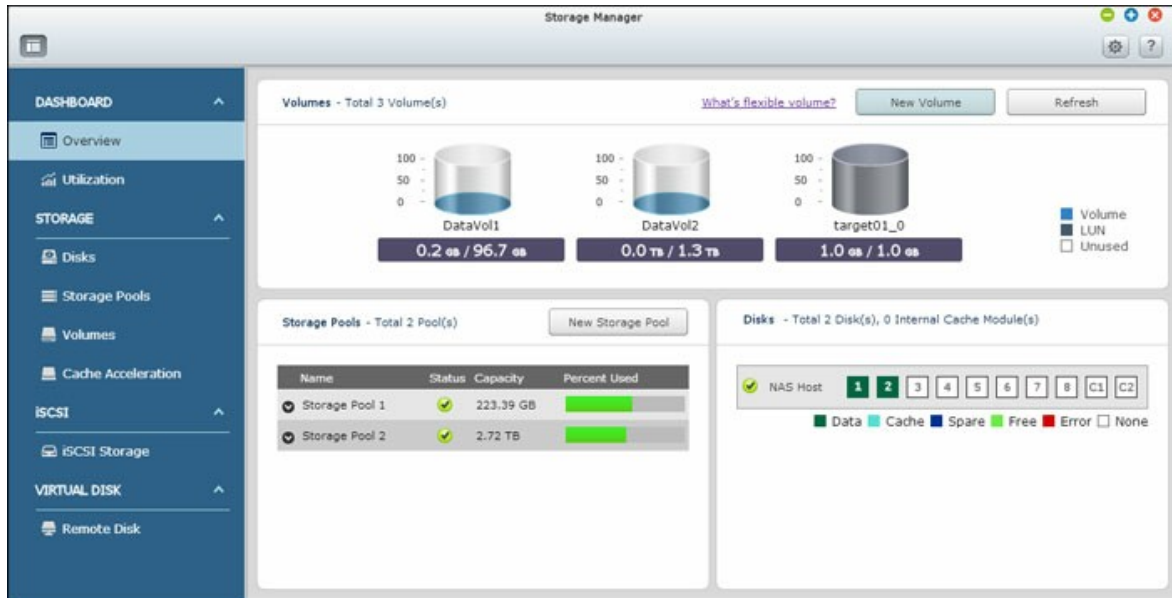
: NAS . FTP
 PC OS(, Windows 95/98/ ME) ,
 가 OS

)" "show firmware version("Preview()"
 "Apply()"
 NAS 100
 100 . "Change Picture()"
 . "Preview()"
 "Apply()"
 249

4.2

QNAP

Turbo NAS
RAID



: NAS

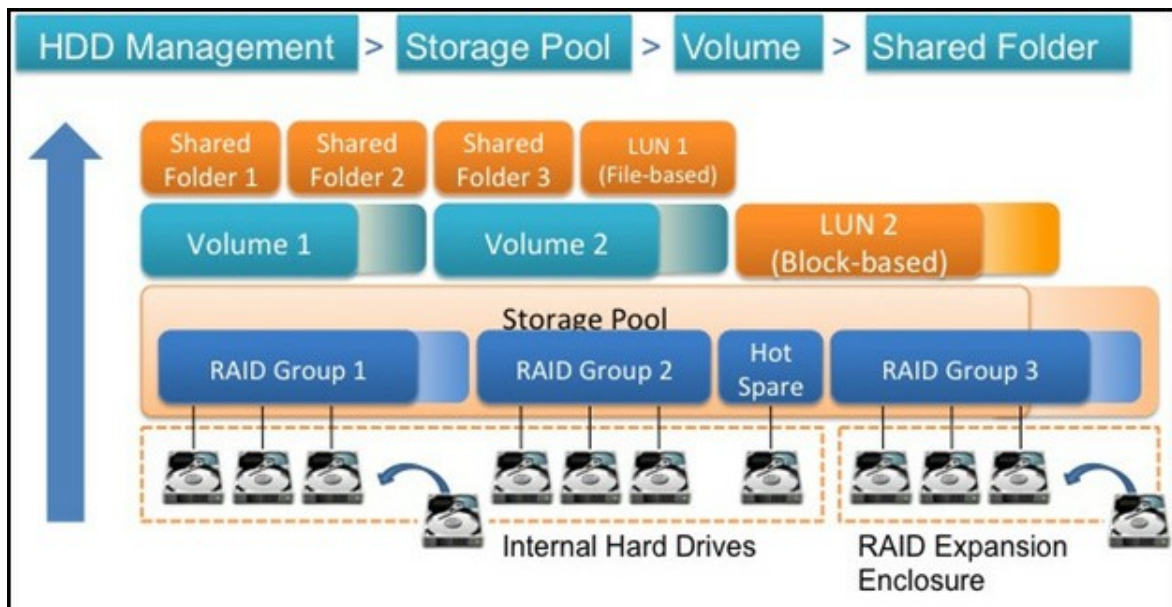
QNAP

QNAP

4가

. HDD

4가



- [45](#)
- [48](#)
- iSCSI [69](#)
- 가 [83](#)

4.2.1

NAS Dashboard

:^[45] TS- 131, TS- 231, TS- 431, TS- 251, TS- 451, TS- 651, TS- 851, HS- 251, TS- 253 Pro, TS- 453 Pro, TS- 653 Pro, TS- 853 Pro, SS- 453 Pro, SS- 853 Pro.

:^[46] TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro.

S.M.A.R.T.:^[47] TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro, TS- 131, TS- 231, TS- 431, TS- 251, TS- 451, TS- 651, TS- 851, HS- 251, TS- 253 Pro, TS- 453 Pro, TS- 653 Pro, TS- 853 Pro, SS- 453 Pro, SS- 853 Pro.

Dashboard



- : 가 , (, LUN)
"New Volume()" ,
"Refresh()" 53
- : (NAS)
)가 49

NAS

Dashboard

: . TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro.



- : 가 , (, LUN)
"New Volume()" ,
"Refresh()" 53
- : .

"New Storage Pool()"

64

(NAS)가

49

RAID "up()" "down()" RAID

"Show members(RAID)" RAID

가 NAS 가 ()

"Clear Record()" "

S . M . A . R . T

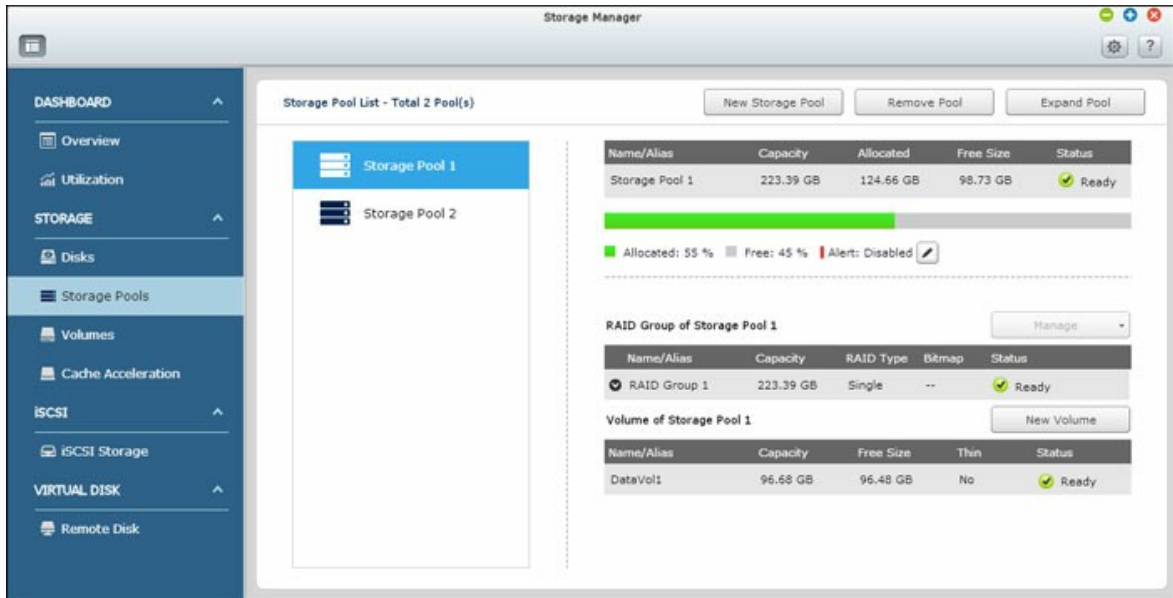
: TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro, TS- 131, TS- 231, TS- 431, TS- 251, TS- 451, TS- 651, TS- 851, HS- 251, TS- 253 Pro, TS- 453 Pro, TS- 653 Pro, TS- 853 Pro, SS- 453 Pro, SS- 853 Pro.

가 RAID , S.M.A.R.T 가 () 가 RAID 가

(?) , "Activate Predictive SMART Migration S.M.A.R.T (S.M.A.R.T , 10)

4.2.2

Storage Manager()
가



- 49
- 53
- 64
- 가 67

가

4.2.2.1

가 NAS

N A S

NAS "System Component()" NAS
 . NAS

	, BUS , CPU ,
("Action()"))	NAS LED가 ,
RAID	RAID , RAID , RAID
	가 NAS, , (HDD SSD), BUS , , (,) "Refresh()"

"System Component()" NAS "+"
 . "System Component()"
 가

- : 가
- : 가
- : (I/O)가
- : RAID
- :
- :

:	ATA ATA , , , , , , .
	M.A.R.T S.M.A.R.T . S.
("Action()")	가 가 "Status()" "bad blocks()" .
("Action()")	LED가 .
("Action()")	RAID 1, RAID 5, RAID 6 RAID 10 가 RAID RAID 가 RAID RAID .
RAID	RAID , RAID , RAID .
	(HDD SSD), BUS 가 NAS, (,) "Refresh()" .

: RAID , RAID 가 .

HDD S.M.A.R.T

"Disk Health()" Disk Health() .
S.M.A.R.T NAS .

	S.M.A.R.T .
	ATA , , , , , , , ATA .

SMART	S.M.A.R.T
	S.M.A.R.T 가
	1) : 가 2) : "Summary()" "APPLY to Selected HDD(HDD)" HDDs()" "APPLY to All

: : TS- 470 Pro, TS- 470, TS- 670 Pro, TS- 670, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP.

(REXP) "System Component()"
(REXP)

	, CPU , , , BUS
("Action()")	LED가 ,
("Action ()")	
("Action()")	
RAID	RAID RAID , RAID ,

	가 NAS, (HDD SSD), BUS ("Refresh()"
--	---

: TS- 470 Pro, TS- 470, TS- 670 Pro, TS- 670, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP.

"Recover()" NAS (: SAS) 가 "Error()" , RAID "Not active()"

1. "Recover()" > "Recover Enclosure()"
2. 가 "OK()"
3. "OK()"
4. 가
5. RAID

:
 • "Recover()"
 • "Reinitialize enclosure ID(ID)" NAS 가 32 ID

4.2.2.2

NAS

: [53] TS- 131, TS- 231, TS- 431, TS- 251, TS- 451, TS- 651, TS- 851, HS- 251, TS- 253 Pro, TS- 453 Pro, TS- 653 Pro, TS- 853 Pro, SS- 453 Pro, SS- 853 Pro.

: [55] TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro.

RAID [56], [60], [60], [60]: TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro, TS- 131, TS- 231, TS- 431, TS- 251, TS- 451, TS- 651, TS- 851, HS- 251, TS- 253 Pro, TS- 453 Pro, TS- 653 Pro, TS- 853 Pro, SS- 453 Pro, SS- 853 Pro.

1. "New Volume()"
2. , RAID
"Next()"
3. "Finish()"
4. 가
 , "Yes()"
- 5.

: RAID 1, RAID 5, RAID 6 RAID 10
RAID 가

가
"Actions()"

:
• 가 "Format()"

- (, , ,) [60]
- 2TB , EXT4
- RAID , RAID
가

1. RAID [54]
2. RAID 가 [54]

RAID

1. "Expand Volume()"
2. "Create a new RAID group to expand the available capacity of volume(가
RAID)" "Next()"
3. , RAID "Next()"
4. RAID RAID , "OK()"
5. "Expand()"
6. 가
7. , "OK()"

RAID 가

1. "Expand Volume()"
2. "Adding new hard drive(s) to an existing RAID group(RAID
가)" RAID "Next()"
RAID 0, RAID 1, JBOD가
3. "Next()"
4. "Expand()"
5. 가
6. , "OK()"

: TS- x51 UX- 500/800P JBOD , NAS
RAID JBOD

: Turbo NAS . TS- 269L, TS- 269 Pro, TS- 469 Pro, TS-469L, TS-469U-RP, TS-469U-SP, TS-470 Pro, TS-470, TS-569 Pro, TS-569L, TS-669 Pro, TS-669L, TS-670 Pro, TS-670, TS-869 Pro, TS-869L, TS-869U-RP, TS-870 Pro, TS-870, TS-870U-RP, TS-879 Pro, TS-879U-RP, TS-1079 Pro, TS-1269U-RP, TS-1270U-RP, TS-1279U-RP, TS-1679U-RP, TS-EC879U-RP, TS-EC1279U-RP, TS-EC1279U-SAS-RP, TS-EC1679U-RP, TS-EC1679U-SAS-RP, SS-EC1279U-SAS-RP, SS-EC1879U-SAS-RP and SS-EC2479U-SAS-RP, TS-EC880 Pro, TS-EC1080 Pro, TS-EC880U-RP, TS-EC1280U-RP, TS-EC1680U-RP, TS-EC2480U-RP.

1. "New Volume()"
2. "Quick()" ("Custom()")
"Next()"
3. , , RAID
"Next()"
4. "Finish()"
5. 가
"Yes()"
- 6.

: RAID 1, RAID 5, RAID 6 RAID 10
RAID 가

1. "Custom()"
"Next()"
2. , , , "Next
()"
3. "Finish()"
- 4.

- :
• :

- : ,
- 가 / ,

"Remove Volume()" . "Apply ()"

1. "Expand Volume()"
2. "Apply()"
3. .

가 "Actions()" , , , ,

- : 가 . "Format()"
- (, , ,) ☐
- 2TB , EXT4 .
- RAID , RAID 가 .

RAID

RAID , RAID 가, RAID , RAID

RAID
RAID

NAS	RAID 가 .
	가 가 .

	<p>: 가 "degraded()" 가 가</p>
RAID 10	<p>RAID 10 RAID 1() RAID 0() . RAID 10 RAID 10 (/2) 가 RAID 10 RAID 10 . RAID 10 2 2 : 가 "degraded()" 가 가</p>
JBOD	<p>가 JBOD</p>

- RAID
RAID 1, RAID 5, RAID 6, RAID 10 RAID
1. RAID "Manage()" > "Expand Capacity()"
 2. "Please remove this drive()"가 , NAS
 3. "You can replace this drive()"가 ,
"Expand Capacity()"
 4. "Yes()"
 5. RAID
가 RAID 가 RAID 5 RAID 6
1. RAID "Manage()" > "Add Hard Drive(가)"
 2. RAID 가 "Apply()"

RAID RAID NAS
 NAS RAID 5
 RAID RAID

RAID	
RAID 1	1
RAID 5	- 1
RAID 6	- 2
RAID 10	/2, (RAID 1 1)

RAID

1. RAID
2. "Manage()" > "Recover()"
3. RAID

"Apply()" , "Set Threshold()"

1. "Create New Shared Folder()"
- 2.
3. 2 "Configure access privileges for users()"
"Edit()"
4. 2 "Advanced settings()" "Edit()"
"Create()"
5. 가

Turbo NAS 256- AES

/
NAS 가

: AES QNAP NAS

QNAP Turbo NAS

- "admin" : 8~16 (! @ # \$ % ^ & * () _ + = ? ")가
- : NAS "Encryption()"

Turbo NAS

- Turbo NAS , JBOD RAID
- NAS , 가
- 가
- ,
- ,

: 가

- NAS
1. NAS "Storage Manager()" "New Volume()" .
 2. RAID "Next()" .
 3. (,) , "Encryption()" , "Next ()" .
 4. "Finish()" 가 !
 5. "Yes()" .
 6. "Actions()" > "Encryption()" > "Lock this Volume()" "Yes()" .
 7. NAS .

> "Volumes()" > "Actions()" > "Encryption()" > "Storage Manager()"

- : (가 , 가)

- : ("Locking and unlocking disk volumes manually()")

- : NAS NAS가

, NAS "Storage Manager()" > "Volumes()" "Actions()" > "Encryption()" > "Lock this Volume()" "Yes()" , NAS "Storage Manager()" > "Volumes()" , "Actions()" > "Encryption()" > "Unlock this volume()" "Apply()"

, NAS "Storage Manager()" > "Volumes()" "Status()" 가 "Status()"

NAS 가

- DataVol1 "Save Encryption Key()"
- DataVol2 "Save Encryption Key()"

: "Save Encryption Key()"

NAS , . DataVol1 DataVol2
가 DataVol1 , DataVol1
. NAS 가
. NAS 가
가 NAS , NAS NAS가

4.2.2.3

RAID NAS 가 , RAID , iSCSI LUN
RAID

- Turbo NAS . TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP and SS- EC2479U- SAS- RP, TS- EC880 Pro, TS- EC1080 Pro, TS- EC880U- RP, TS- EC1280U- RP, TS- EC1680U- RP, TS- EC2480U- RP.
- 가 16 RAID 512MB RAM Turbo NAS 8GB RAM
8 Turbo NAS

1. "New Storage Pool()"
2. , RAID "Create()"
3. 가
4. , "OK()"

1. "Remove Pool()"
2. "Apply()"
- 3.

1. "Expand Pool()"

2. RAID 가 ("Create a new RAID group(RAID). "Adding new hard drive(s) to an existing RAID group(RAID 가)" , "Next()" . RAID 0, RAID 1, JBOD .
3. "Next()" .
4. "Expand()" .
5. 가 .
6. , "OK()" .

RAID

1. "Create a new RAID group(RAID)" . "Next()" .
2. , RAID "Next()" .
3. RAID RAID , "OK()" .
4. "Expand()" .
5. 가 .
6. , "OK()" .

:	RAID 1, 5, 6 가	10 L	RAID 0, JBOD	RAID
---	-------------------	---------	--------------	------

RAID

1. RAID "Manage()" > "Expand Capacity()" .
2. "Please remove this drive()"가 , NAS .
3. "You can replace this drive()"가 , "Expand Capacity()" .
4. "Yes()" .
5. RAID .

:	RAID	56
---	------	----

"New Volume()"

53

4.2.2.4 가

SSD 가 Turbo NAS
SSD

가 SSD NAS

가	SSD *	SSD
TS-x79U-SAS		3
SS-x79U-SAS		3
TS-ECx80U-RP	1, 2, 3, 4	4 **
TS-ECx80 Pro	5, 6, 7, 8	4 **
TS-x79U	3, 4	2
TS-x79 Pro	7, 8	2
TS-x70U	3, 4	2
TS-x70 / TS-x70 Pro	2	2
TS-x51		
TS-x53 Pro / SS-x53 Pro		

* SSD "SSD "

** TS-ECx80 2 mSATA 가

	RAM *
512 GB	1 GB
1 TB	4 GB
2 TB	8 GB
4 TB	16 GB

* SSD 1 TB NAS 4GB RAM

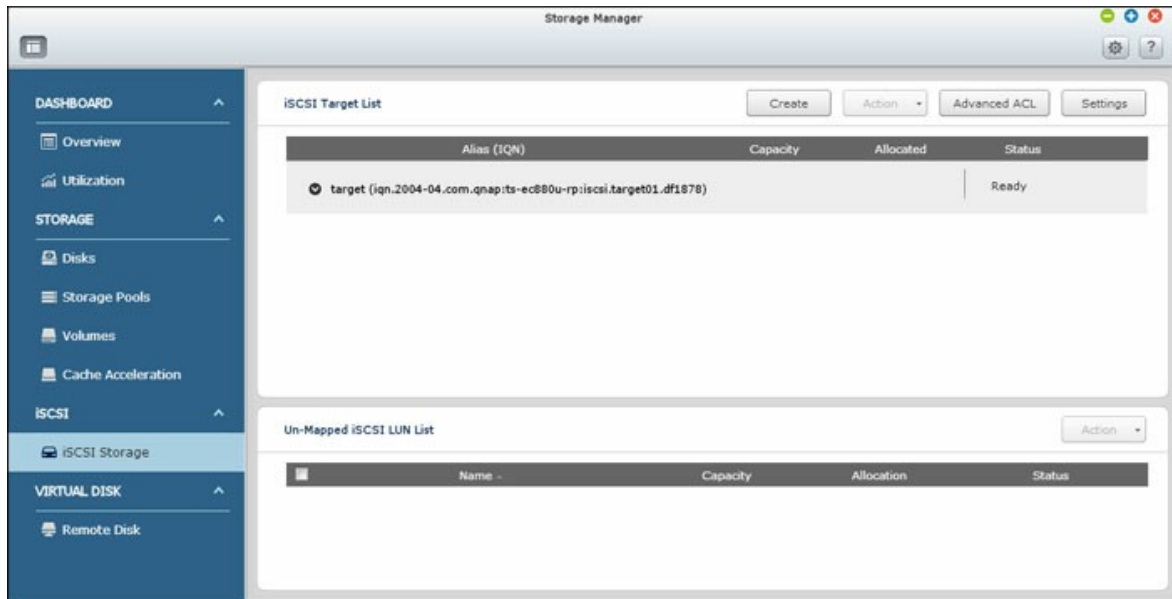
SSD , , SSD

SSD

1. "Create(SSD)"

4.2.3 iSCSI

iSCSI , iSCSI ACL LUN .



- iSCSI [70]
- LUN [80]

4.2.3.1 iSCSI

NAS 가 iSCSI(Internet Small Computer System Interface)

iSCSI , iSCSI , iSNS
 / iSCSI LUN . NAS
 iSCSI LUN . iSCSI LUN

: 가 QNAP

iSCSI

NAS iSCSI

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

(Logical Unit Number) iSCSI LUN . iSCSI LUN 가
 LUN LUN LUN LUN LUN
 NAS

LUN LUN

	LUN()	LUN()
VAAI		
VAAI		
VAAI		
VAAI		
	(VAAI Windows 2012 8)	
Microsoft ODX		

- : 0-9, a-z, A-Z 12-16
- CHAP:
 - : 0-9, a-z, A-Z, : (), . (), - () 12-16
 - : 0-9, a-z, A-Z, : (), . (), - () 12-16
- 6. LUN LUN LUN LUN (NAS), LUN "Next()"
- 7. "Next()"
- 8. "Finish()"
- 9. LUN

iSCSI

iSCSI

1. "Create()"
2. "iSCSI Target only(iSCSI)" "Next()"
3. "Data Digest()" / "Header Digest()" "Next()"
4. "Use CHAP authentication(CHAP)" / "Mutual CHAP(CHAP)" "Next()" "Use CHAP authentication (CHAP)" iSCSI iSCSI "Mutual CHAP(CHAP)" "Mutual CHAP(CHAP)"
5. "Next()"
6. "Finish()"
- 7.

iSCSI LUN

iSCSI LUN

1. "Create()"
2. "iSCSI LUN only(iSCSI LUN)" "Next()"
3. LUN LUN LUN LUN (NAS), LUN "Next()"
4. "Next()"
5. "Next()"
6. "Finish()"
7. LUN 4

iSCSI LUN 4 "Do not map it to a target for now()"

LUN iSCSI LUN

iSCSI LUN

iSCSI		iSCSI	가
		iSCSI	
		iSCSI	
		iSCSI	
LUN		LUN	
		LUN	

iSCSI LUN 가 ("Action()")

			, CHAP
	LUN	LUN	, ,
Delete()	iSCSI		
	LUN		
	LUN		
	LUN	LUN	LUN
	iSCSI LUN	LUN	
	LUN iSCSI	iSCSI LUN	
	iSCSI		

iSCSI LUN

iSCSI LUN

1. iSCSI iSCSI LUN
2. "Action()" > "Disable()"
3. "OK()"

4. "Action()" > "Un-map()" LUN . LUN
iSCSI LUN
5. iSCSI LUN
6. "Action()" > "Map()" LUN
7. LUN "Apply()"
8. LUN

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

iSCSI LUN

NAS iSCSI LUN

1. iSCSI LUN iSCSI
2. "Action()" > "Modify()"
3. LUN . LUN
4. "Apply()"

- iSCSI LUN iSCSI
- LUN , LUN 144TB

iSCSI

- 가 가 iSCSI NAS
- : iSCSI LUN "Instant Allocation()" iSCSI
- **LUN** : NAS LUN
"System Status()" > "Resource Monitor()"
NAS 가 , LUN iSCSI
- **LUN** : / 가
LUN LUN NAS LUN
가 , VM

ACL

- (ACL) LUN
- 가 " " NAS
- "Add a Policy(가)" IQN NAS
- LUN "Apply()"

	LUN
/	LUN
	LUN

iSCSI LUN
 "Edit()"
 iSCSI 가가 "Delete()"

: LUN LUN NAS

: IQN ?
 iSCSI "General()" IQN

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

Xtend SAN iSCSI Initiator :

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

<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
iSCSI
 3. , iSCSI (: 3260), CHAP ()
"Finish()"
 4. NAS iSCSI "Add(가)"
- "Setup()" iSCSI . "Status()" .
 . "Login()" . iSCSI
 가 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
```

4.2.3.2 LUN

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

: 가 QNAP

LUN

LUN (SMB/CIFS), Linux (NFS) NAS Windows

iSCSI LUN NAS iSCSI LUN . iSCSI LUN

1. "Storage Manager()" > "LUN Backup(LUN)" . "Create a job ()"
2. "Back up an iSCSI LUN(iSCSI LUN)" "Next()"
3. LUN "Next()" LUN NAS LUN
4. LUN NAS Linux (NFS), Windows (CIFS/SMB) LUN "Test()"
5. LUN NAS "Next()" ()
6. NAS CPU 가 LUN "Next()"
7. NAS "Next()"
8. "Finish()"
- 9.

가 ("Action()")

Edit()	
Delete()	
Start()	
Stop()	
View Logs ()	

: LUN , 3 .

iSCSI LUN

LUN NAS . LUN LUN
 LUN . iSCSI LUN NAS .
 1. "Storage Manager() > "LUN Backup(LUN)" . "Create a job
 ()"
 2. "Restore an iSCSI LUN(iSCSI LUN)" "Next()"
 3. , IP / / "Test()"
 "Next()"
 4. LUN . "Next()"
 5. "Next()"
 6. NAS . "Next()"
 7. "Finish()"
 가 ("Action()")

Edit()	
Delete()	
Start()	
Stop()	
View Logs ()	

: 5 :
 • LUN : iSCSI LUN NAS LUN . LUN
 • LUN : iSCSI LUN LUN NAS . LUN

iSCSI LUN

- LUN NAS iSCSI LUN
- "Storage Manager()" > "LUN Backup(LUN)" . "Create a job ()" .
 - "Create a LUN Snapshot(LUN)" "Next()" .
 - NAS iSCSI LUN "Next()" . iSCSI LUN
 - LUN NAS LUN . LUN
iSCSI . "Next()" . LUN iSCSI
"Next()" .
 - "Next()" .
 - NAS . "Next()" .
 - "Finish()" .
 - .
 - "Storage Manager()" > "iSCSI Storage(iSCSI)" LUN
iSCSI . iSCSI iSCSI
LUN

: Windows 7 Windows 2008 R2 LUN LUN
NAS LUN NAS

LUN / /

- QNAP NAS NAS iSCSI LUN
- iSCSI LUN , "Storage Manager()" > "LUN Backup(LUN)" NAS
 - Pietty SSH NAS
 - NAS
 - "lunbackup"
 - lunbackup NAS iSCSI LUN ,

: IT 가 .

4.2.4 가

iSCSI 가 (VD) . VD
turbo NAS

: Ext3, Ext4, FAT, NTFS HFS+.
: Ext3, Ext4, FAT, NTFS HFS+.

:
 • NAS 가 16TB
 • 가 (iSCSI) 가 가 UI NAS가 2
 "Disconnected()"
 • 가
 • 가 QNAP

NAS 가 가

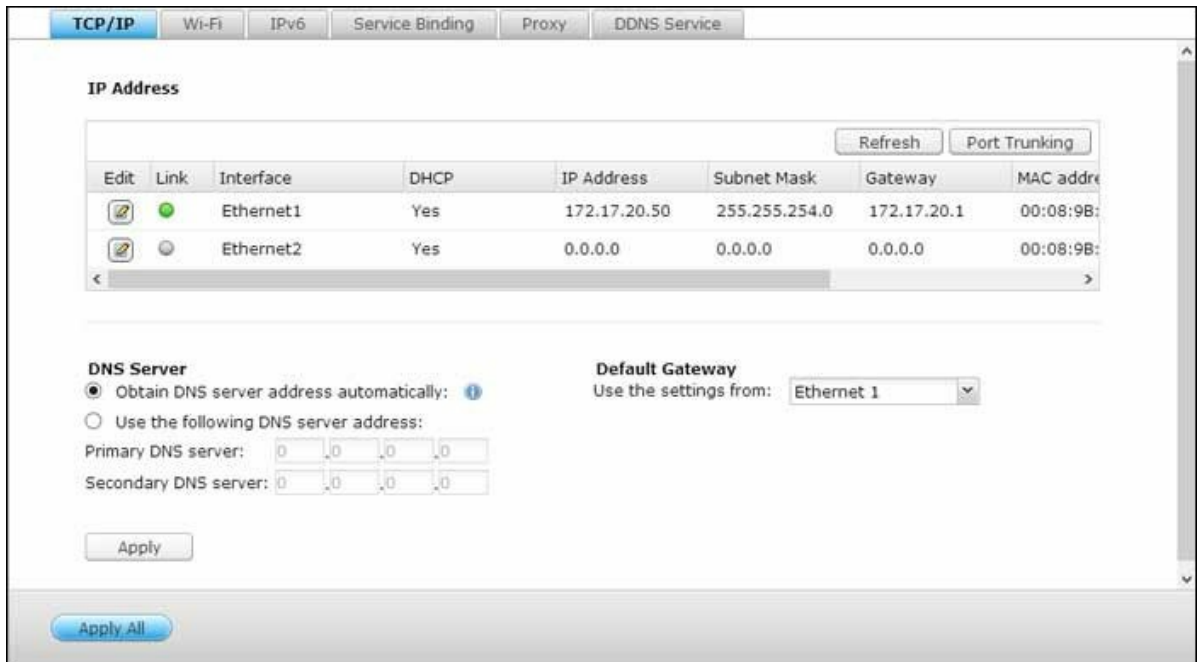
1. iSCSI . "Add Virtual Disk(가 가)"
 2. IP (: 3260). "Get Remote Disk()"
 "Data Digest()" / "Header Digest()" ()
). iSCSI 가 iSCSI 가
 "Next()"
 3. 가 LUN , LUN
 . NAS EXT3, EXT4, FAT32, NTFS, HFS+
 . LUN "Unknown()" "Format
 virtual disk now(가)" . 가
 EXT3, EXT4, FAT 32, NTFS HFS+ . "Format virtual disk now(
 가)" LUN 가 "Next()"
 4. "Finish()"
 5. NAS 가 . "Privilege Settings()" > "Share
 Folders()" 가
- 가 가 ("Action()")

Edit()	iSCSI 가
Connect()	iSCSI

Disconnect ()	iSCSI .
Format()	가 EXT3, EXT 4, FAT 32, NTFS HFS+ .
Delete()	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 USB NAS가 가 가

- , USB ,
- USB Wi-Fi
- 가 USB Wi-Fi <http://www.qnap.com/compatibility> 가 "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()"

4. IP , "Edit()" . DHCP 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 Windows 7 NAS ad-hoc
- 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()" : IPv6 가 , NAS가 IPv6

- **IPv6** : IP (: 2001:bc95:1234:5678), ISP

o (radvd) : NAS IPv6 IPv6 IPv6

- **IPv6 DNS** : DNS DNS . IPv6
ISP
"::"

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

- ()가 NAS
- 가

가 , NAS ,

DDNS

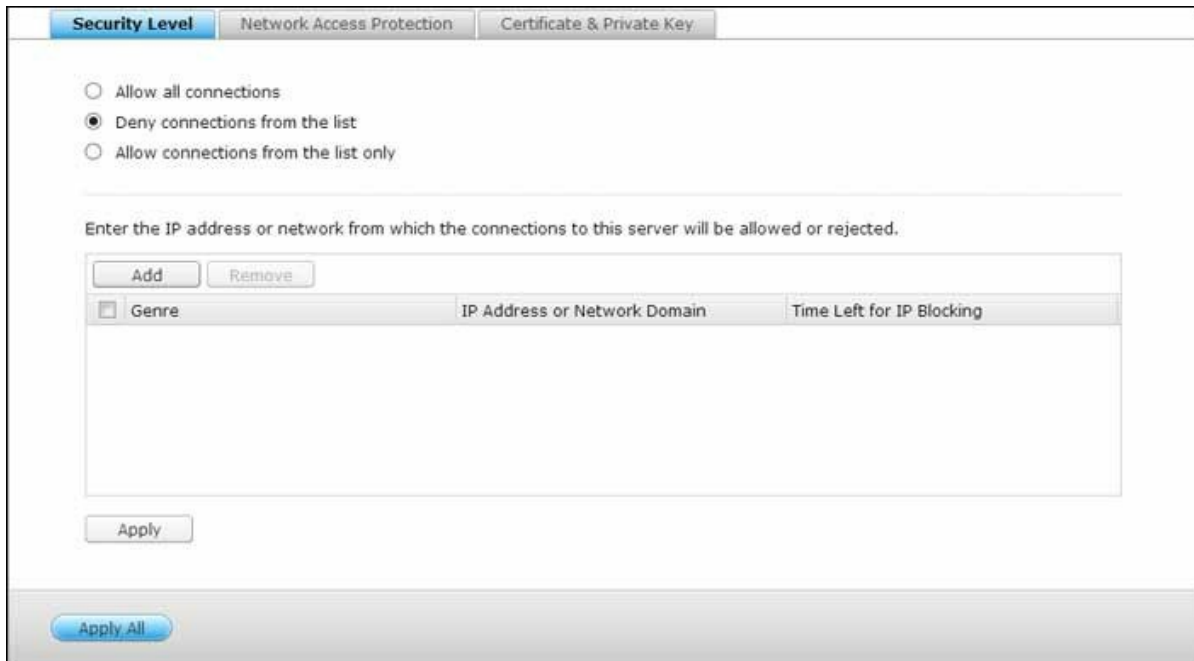
가 NAS , DDNS IP
 NAS DDNS : <http://www.dyndns.com>, <http://update.ods.org>, <http://www.dhs.org>, <http://www.dyns.cx>, <http://www.3322.org>, <http://www.no-ip.com>, <http://www.selfhost.de>.

: DDNS

- 가 :
- QNAP Turbo NAS
- QNAP NAS DDNS

4.4

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



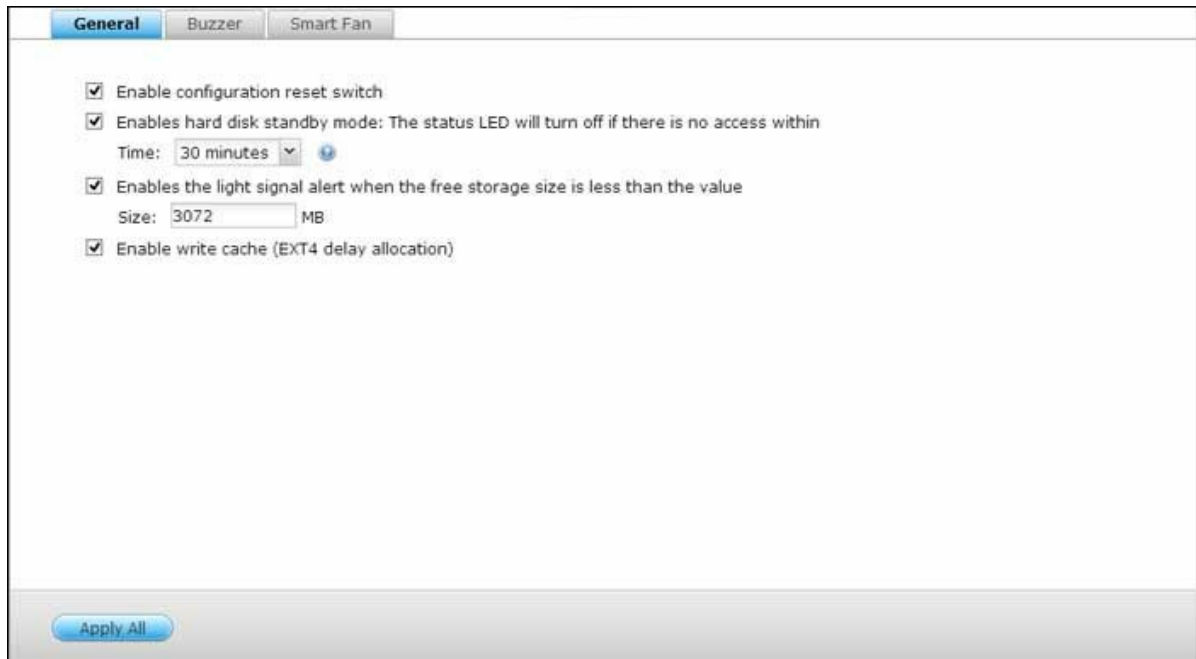
IP
가
"Apply()"
가

IP가 , IP

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

4.5

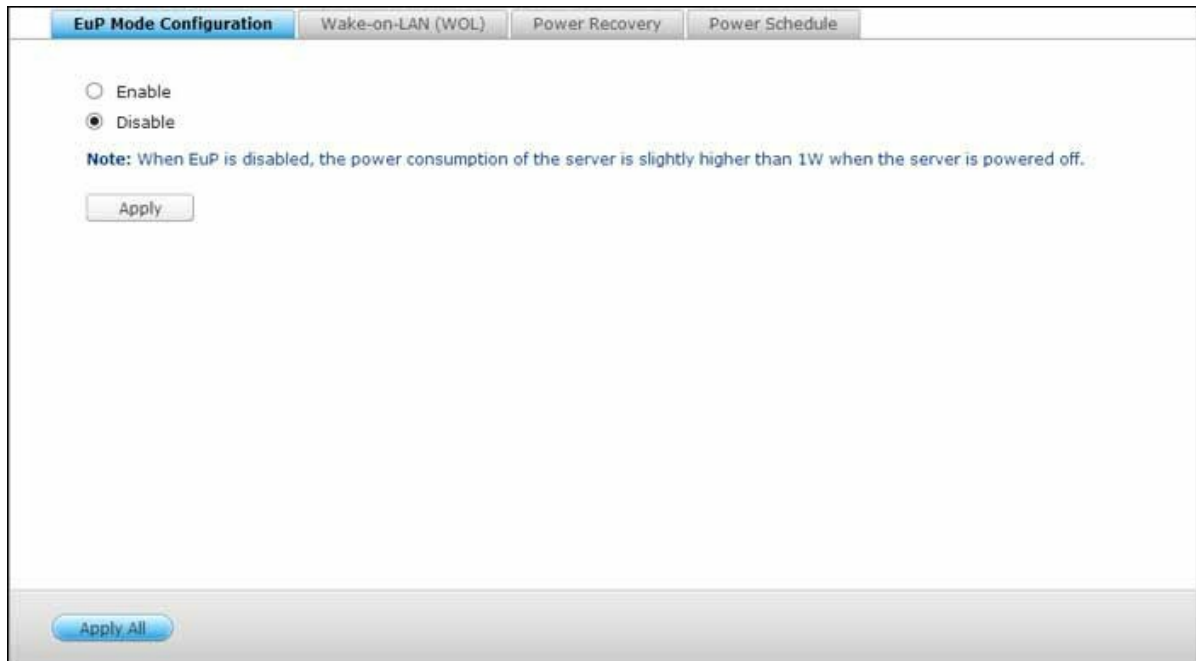
"Control Panel()" > "System Settings()" > "Hardware()" 가
NAS



- : 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

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

(Wake on LAN) NAS
 NAS가
 (Wake on LAN)
 , NAS Qfinder Qmanager WOL NAS
 NAS WOL ("Control Panel() >
 "System Settings ()" > "General Settings()" > "Power()" > "Wake-on-
 LAN (WOL)((WOL))".
 • Qfinder NAS "Tools()" > "Remote Wake Up (Wake on LAN)(
 ())"
 • Qmanager NAS ">"
 "Wake on LAN (WOL)((WOL))"

<http://www.qnap.com>

AC가 NAS 가 ,

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

"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

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

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

(/)가

NAS

- : 가
- : 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>

가

2. NAS IMG

3.

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

가 NAS가

가

QNAP Qfinder

QNAP Qfinder

NAS

1. NAS

"Update Firmware()"

2. NAS

3. NAS

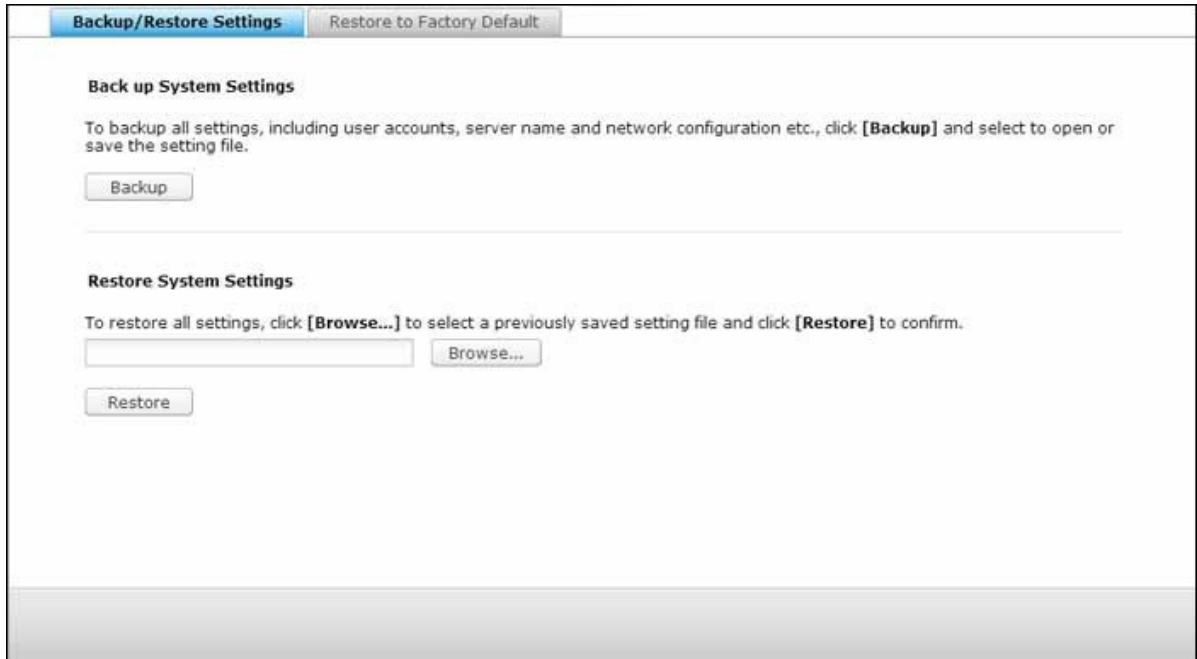
"Start()"

:

NAS

4.9 /

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



/

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

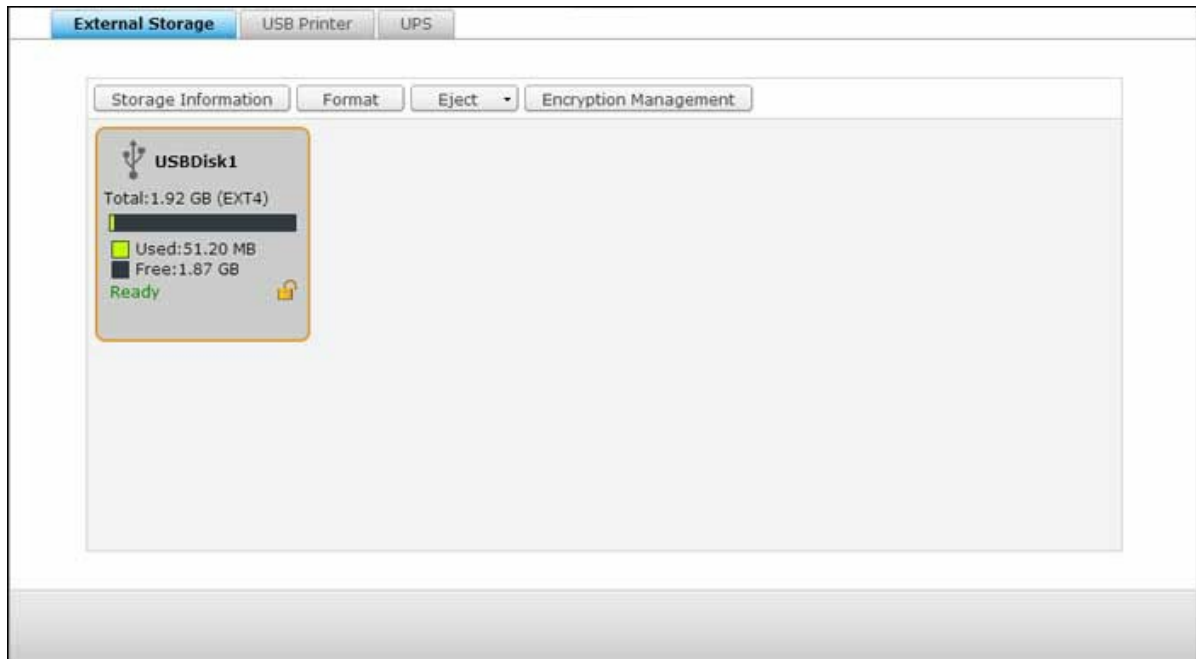
- : .
- : .
- **NAS** : NAS .

```

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

4.10

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



- 104
- USB 106
- UPS 114

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()"
 NAS가

- 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()"
 NAS가

- UPS 가 UPS NAS 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. NAS가
 NAS가 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
- 6. "Apply All()"

: UPS 가 SNMP QNAP NAS , UPS
NAS IP

N A S U P S

가 "System Event Logs()"

NAS 가 "UPS Settings(UPS)"

, NAS

- NAS가
- NAS가

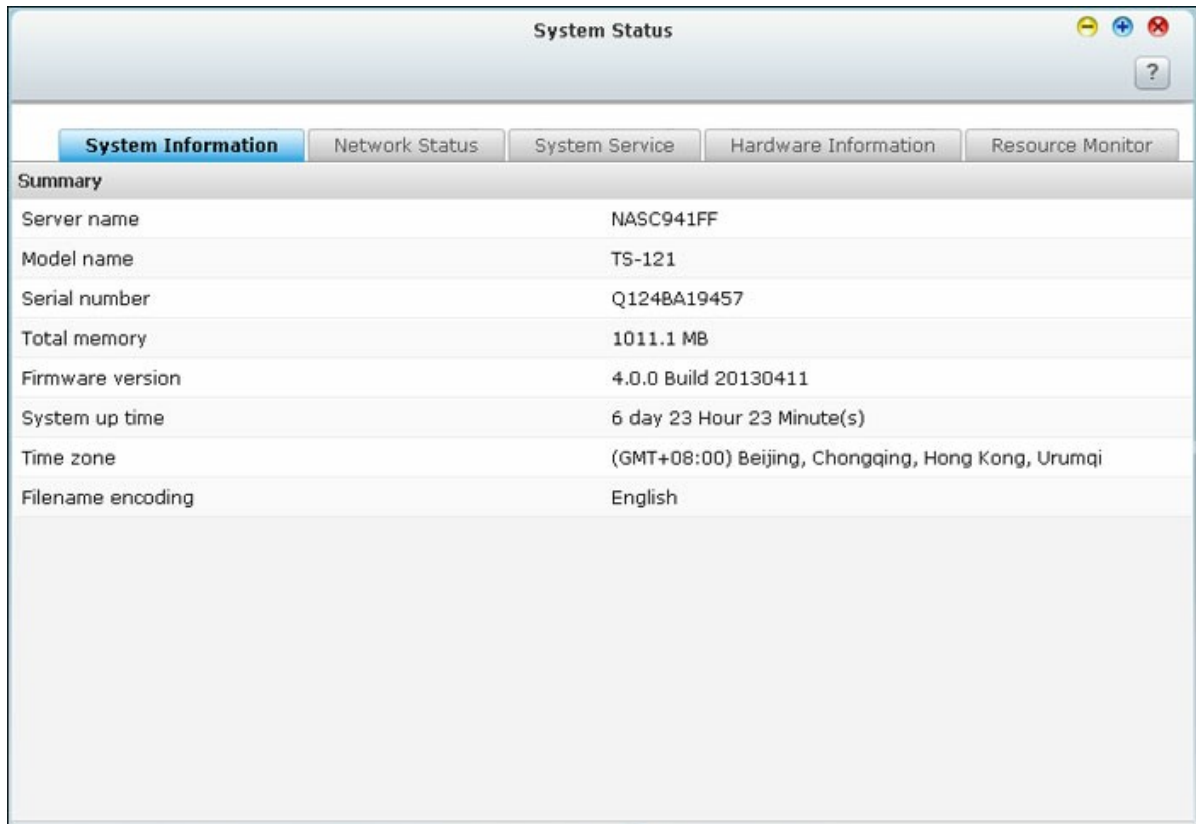
	NAS가	UPS가 , NAS가
	NAS가	NAS가

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
- Disk Performance(): IOPS

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 All()"

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

: IP IP "Clear All()"

: NAS CSV
가 . 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

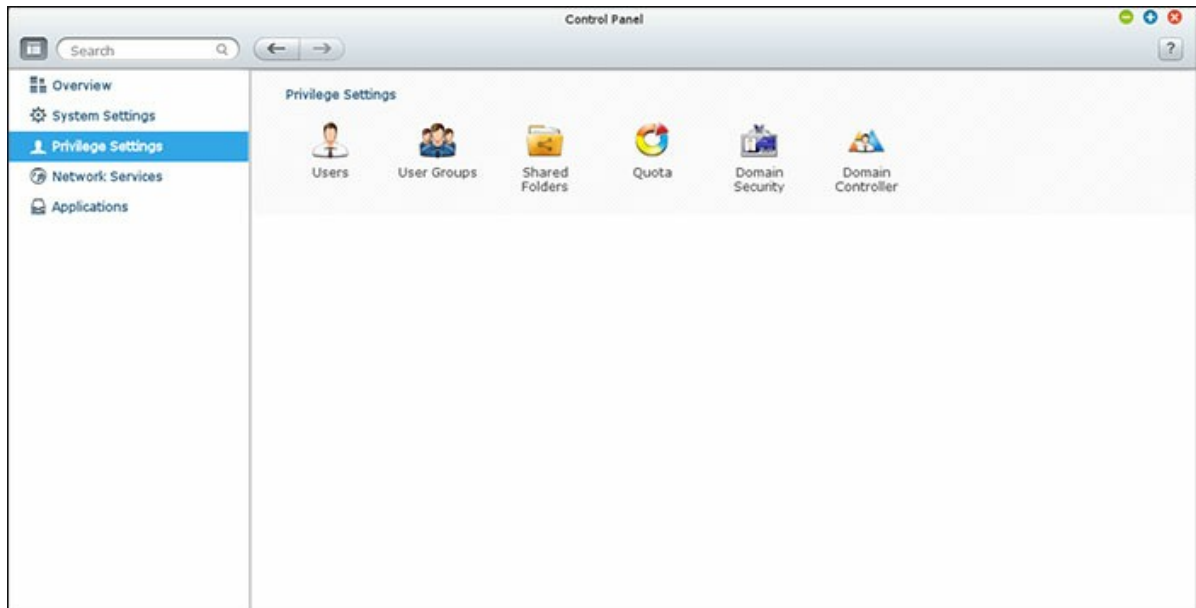
"Search()"

IP

IP

5.

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



- 122
- 125
- 126
- 134
- 135
- 141

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, TS-269 Pro, TS-269L, TS-469 Pro, TS-469L, TS-569 Pro, TS-569L, TS-669 Pro, TS-669L, TS-869 Pro, TS-869L, TS-251, TS-451, TS-651, TS-851, TS-253 Pro, TS-453 Pro, TS-653 Pro, TS-853 Pro, SS-453 Pro, SS-853 Pro.

가

- : , , ,
 32
 ."/ \ [] ; : | = , + * ? < > ` ' `
- : 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
10 . NAS가 , test0001,
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

NAS

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, TS-269 Pro, TS-269L, TS-469 Pro, TS-469L, TS-569 Pro, TS-569L, TS-669 Pro, TS-669L, TS-869 Pro, TS-869L, TS-251, TS-451, TS-651, TS-851, TS-253 Pro, TS-453 Pro, TS-653 Pro, TS-853 Pro, SS-453 Pro, SS-853 Pro.

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.

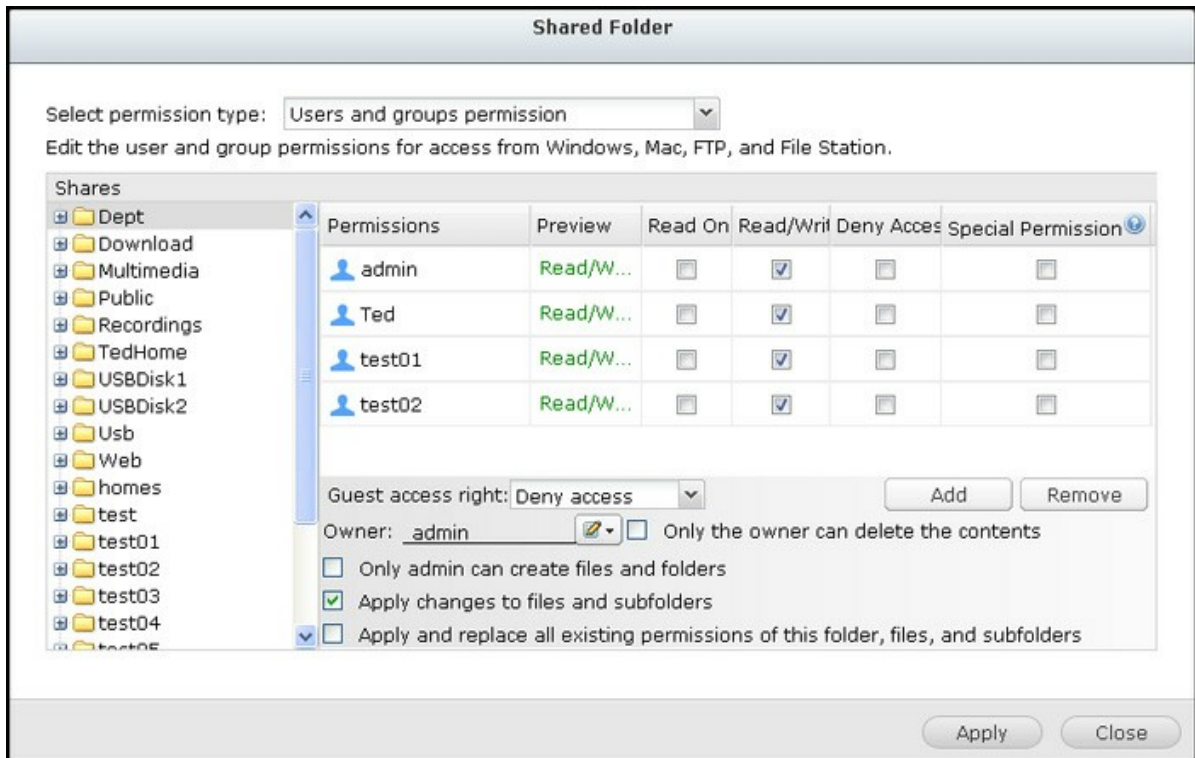
- : " / \ [] ; ;
- | = , + * ? < > ` `
- :
- :
- 3.
- 4.
- 5.
- :
- :
- : Microsoft Networking
- \\ NAS_IP \ share_name
- (Oplocks): Windows 가
- (oplock) 가
- oplock가
- 8.3 : 8,3 가
- SMB : SMB 3
- : "Restrict the access of Recycle Bin to administrators only for now()"
- : NAS가
- 6. "Create()"
- "Remove()" (
- 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)"
 "Add(가)"
3. "Add(가)"
4.
 - Guest Access Right(): , ,
 - 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(,):

· "Only the owner can delete the contents(가)" "Only admin can create files and folders()"

- Special Permission():
 - 가 "Read only()" "Read/Write (/)" 가
 - Microsoft "admin()" 가
 - "Read/Write(/)" 가
 - Windows "admin()" 가
 - "admin()" "admin()" NAS 가

7. , "Apply()" "YES()" .

```

:
•
• "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) .

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 NAS 가 NAS
10

- 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_permissions
-
- "Advanced Folder Permissions ()"

Windows NAS Windows ACL

FTP, AFP File Station 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
- **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
가 AD NAS
Windows Server 2008 R2 NAS V3.2.0
NAS AD

NAS Active Directory()

1. NAS QNAP NAS Windows
"System Settings()" > "General Settings()" > "Time()"
NAS AD
2. "System Settings()" > "Network()" > "TCP/IP"
DNS 가 IP 1 DNS IP
DNS IP DNS
3. "Privilege Settings()" > "Domain Security()"
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()"
Directory authentication (domain member) (Active Directory ())
"Quick Configuration Wizard ()"
2. " " " "
3. (DNS) NetBIOS
DNS IP IP Active Directory
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
 Linux , LDAP Samba QNAP
 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

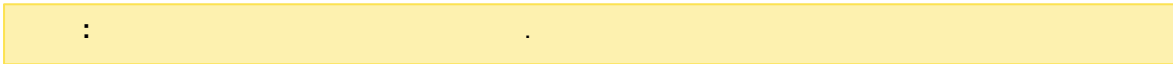
- DN: dc=macserver,dc=qnap,dc=com
- DN: uid=root,cn=users,dc=macserver,dc=qnap,dc=com
- DN: cn=users,dc=macserver,dc=qnap,dc=com
- DN: cn=groups,dc=macserver,dc=qnap,dc=com

5.6

Turbo NAS Windows

. IT 가 Turbo NAS

Windows



3

Turbo NAS

- NAS : NAS
- 가 : 가 , NAS가
- : NAS

NAS

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Domain Controller()"
- 2.
3. (: mydomain.mycompany.local).
4. "Verify Password()"
5. "Apply()"

가 , Microsoft

: NAS Domain Controller() > "Applications()"	LDAP)") > "LDAP Server(LDAP)"	,)" LDAP	"Enable "Control Panel(LDAP
---	---	-----------------	------------------------------------

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Users()"
2. "Create()" > "Create a User()"
- 3.

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Users()"
2. "Create()" > "Create Multiple Users()"
3. "Next()"
4. (: test). (: 0001)
(: 10) NAS test0001, test0002, test0003...
test0010 10

5. 가 , NAS
- 6.
7. "Finish()"
8. 가
9. 가

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Users()"
2. "Create()" > "Batch Import Users(가)"
3. "Overwrite existing users()"
(가
) . "Browse()" (, , ,
) CSV CSV
CSV (Excel)
4. "Next()" 가 가 "Finish()"
5. 가





- : 가 ()
-

CSV (Excel)

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

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Users()"
- 2.
3. "Delete()"
4. "Yes()"

"Action()"

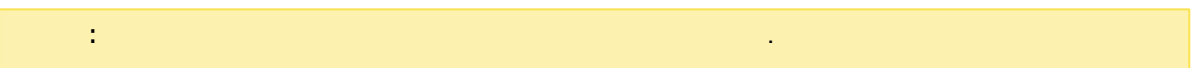
		
		가
		가
		,

- : /home /
 user1profile //nas.mydomain.local/home UNC 가

- : 가 PC
()
- : 가
/home /
user1profile //nas.mydomain.local/home UNC 가

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Groups()"
2. "Create a User Group()"
3. "Yes()" "Next()" , "No()" 가
4. "Finish()"

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Groups()"
2. "Delete()"



1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Groups()"
2. "Action()" "Edit Group Membership()"
- 3.
4. "Next()"

) 가 , NAS가 (:

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Computers()"
2. "Create a Computer()"
3. "Next()"
4. "Next()"
5. "Create()"

1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Groups()"
2. "Delete()"
3. "Delete()"

"Action()"

		
		가

D N S

, DNS 가
 (가) DNS
 NAS DNS , 가/ , _msdcs 가/

DNS

DNS , "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "DNS"

, DNS

- 1.
2. () , "X"
3. "Apply()"

가

가 , "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "DNS"

1. "Action()" > "Add Domain(가)"
2. "Create()"

가
가 , "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "DNS"

- 1.
2. "Action()" > "Add Record(가)"
3. "Create()"

: A, AAAA, PTR, CNAME, NS, MX, SRV, TXT

, "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "DNS"

- 1.
2. "Action()" > "Delete()"
3. "Yes()"

/

/

가 AD ,
가 가

1. "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "Backup/Restore(/)"
2. "Back up Database()"
()
3. "Apply()"

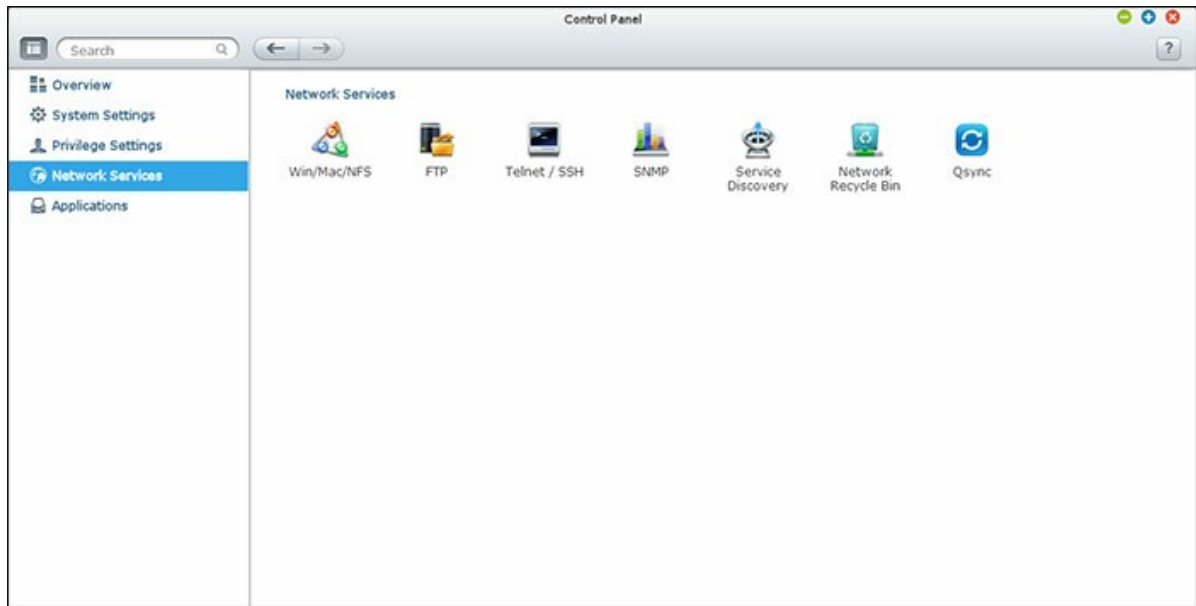
가

1. "Control Panel()", "Privilege Settings()" > "Domain Controller()" > "Backup/Restore(/)" > "Restore ADDC Database(ADDC)"
2. "Browse()"
3. "Import(가)"

가 가 , NAS
 가 NAS
 , NAS
 가 ,
 NAS ,
 NAS ,

6.

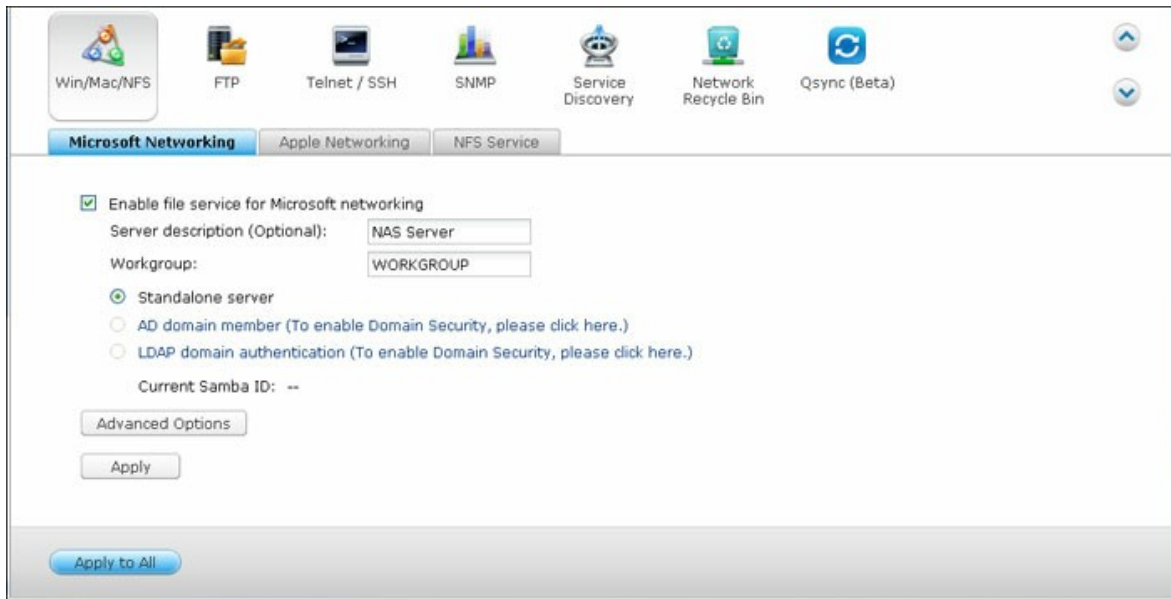
"Control Panel()" > "Network Services()" 가 NAS



- Win/Mac/NFS [149]
- FTP [152]
- Telnet/SSH [154]
- SNMP [155]
- [156]
- [157]
- Qsync [158]

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 , "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 .)
- **I/O** : SAMBA UPS
- **SMB** : Microsoft SMB (

Apple

Mac OS X 10.7 Lion NAS Apple Filing Protocol AppleTalk NAS

(*) "DHX2 Authentication Support(DHX2)"

Mac OS X 10.7 Lion NAS "Apply()"

Mac OS X 10.7 Lion NAS "Go()" > "Connect to Server()"

Mac OS X 10.7 Lion NAS "Command+k" "afp://"

YOUR_NAS_IP_OR_HOSTNAME "Server Address()"

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

Apple Filing Protocol NAS "afp://" Apple Microsoft Networking "smb://" Apple Microsoft Networking

NFS

Linux NFS NAS "Privilege Settings()" > "Share Folders()"

Linux NFS NAS "Action()" Access Permission()

Linux NFS NAS "No limit()"

Linux NFS NAS "Read only()"

Linux NFS NAS "Deny access()"

- 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()"

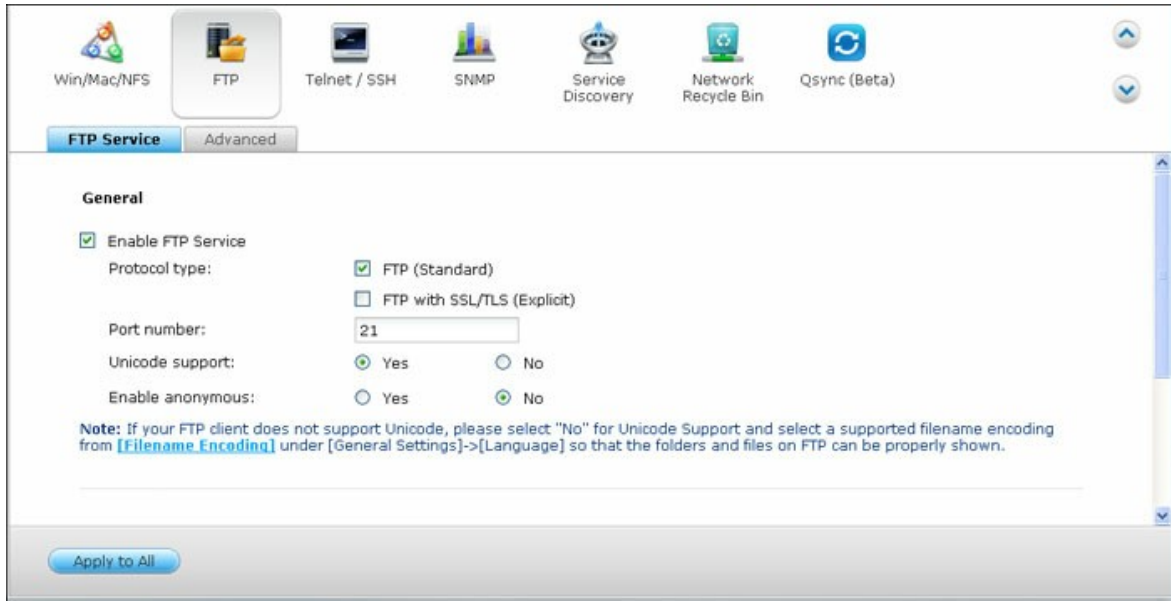
```
mount -t nfs 192.168.0.1:/public /mnt/pub
```

: "root()"

ID

6.2 FTP

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



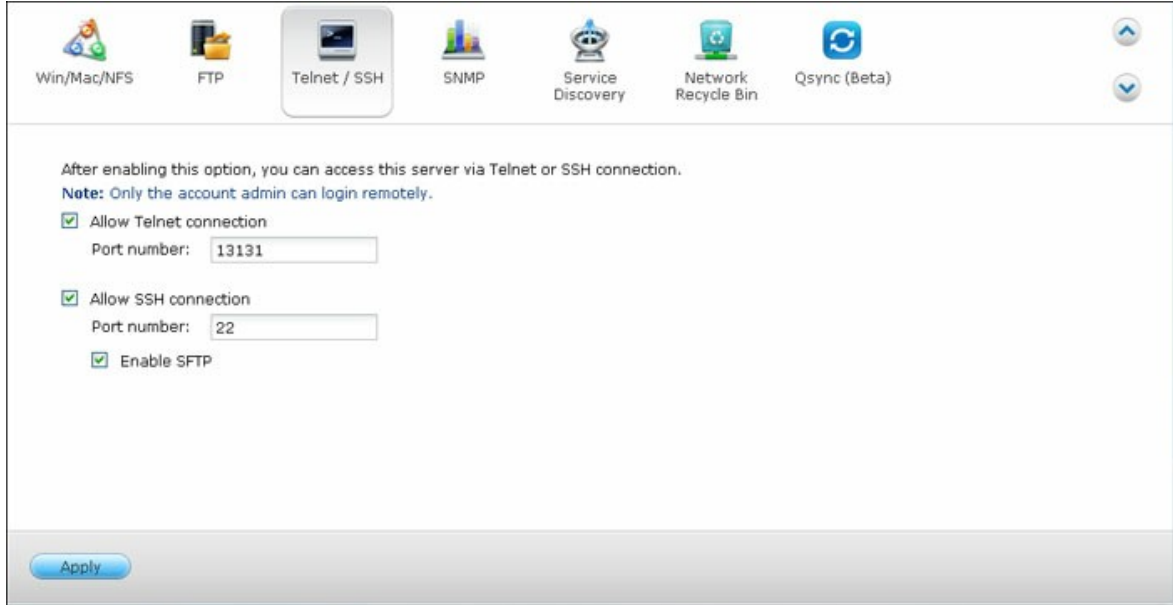
FTP

FTP

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

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

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

- Qsync (Windows)
- Qfile (iOS Android)

3. NAS

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

: 가 NAS IP 가
 IP (: 8080)

Qsync

Windows Qsync 가 Qsync 가
 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

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

- NAS LAN
- NAS가 LAN ,
myQNAPcloud LAN

• 가

Qsync

Qsync

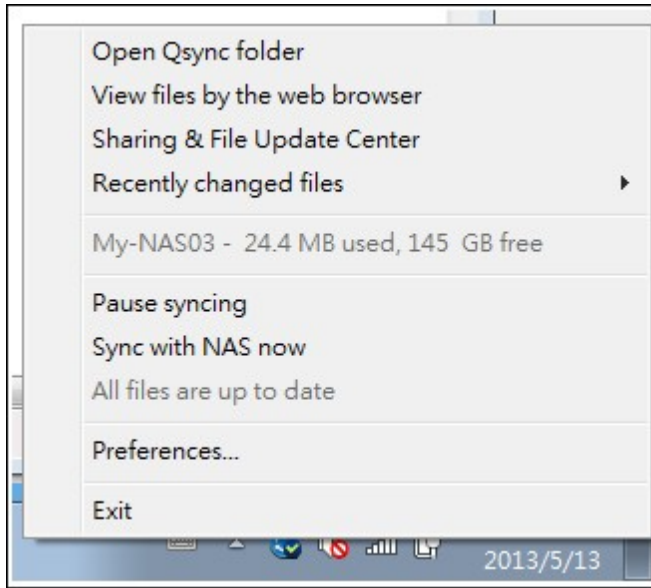
Qsync

- 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. :
 - ii. NAS Qsync NAS 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 "Delete()" "Apply All()" "Apply()"

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

:
 • "Apply()" "Apply All()"
 • 64

Qsync

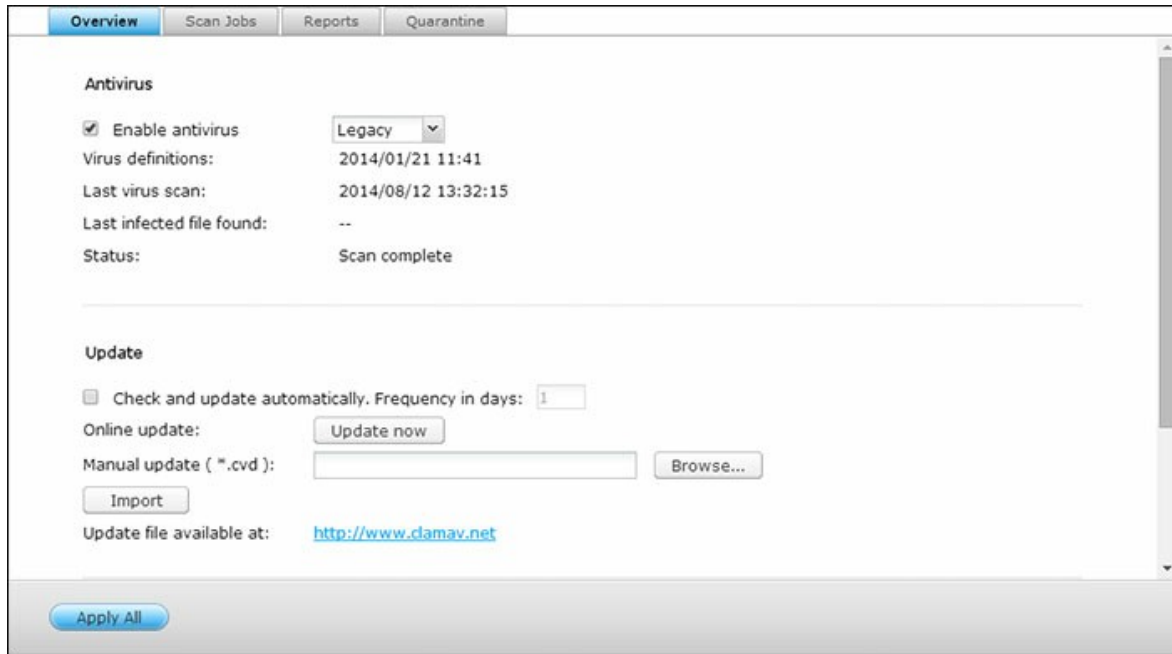
1. : NAS Qsync File Station , ().
2. : Qsync Qsync ().
3. : 가
- a. PC
 - b. Qfile "Qfile- Android" "Qfile- iPhone"
 - c. File Station Qsync Qsync- File Station
4. :
5. : 가 가
6. :

7.

NAS

- [167](#)
- [170](#)
- File Station [184](#)
- iSCSI [70](#)
- LDAP [192](#)
- MySQL [194](#)
- NTP [195](#)
- RADIUS [195](#)
- Syslog [197](#)
- TFTP [200](#)
- 가 [201](#)
- VPN [204](#)
- [208](#)

7.1








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



: "Enable antivirus()"
App Center²¹⁴ QTS

1. "Application Servers()" > "Antivirus()" > "Scan Jobs()"
 - 2. "Add a Scan Job(가)"
 - 3. "Add(가)"
 - 3. "Delete (X)"
 - "Next()"
 - "Next()"
 - 4. "Exclude files or folders()"
 - o /Public/testfile.txt
 - o /Download
 - o *.log
 - o *.exe *.com
 - o *.txt; "Next()"
 - 5. "Next()"
 - o (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 /
 - o , "System Settings()" > "Notification()" > "SMTP Server(SMTP)" SMTP
 - o "Finish()"

7.




NAS

		WordPad
		

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

NAS

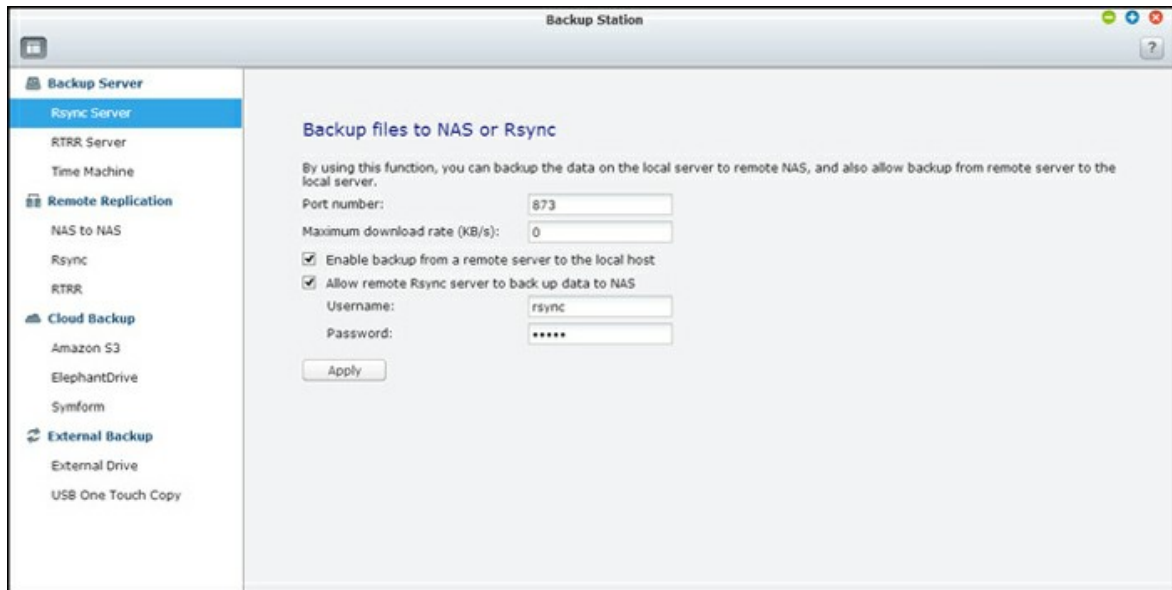
가

		
		
		가 ()

7.2

NAS

Backup Station



- _____ 171
- _____ 173
- _____ 178
- _____ 180

7.2.1

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

7.2.2

- NAS NAS Rsync
- 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

NAS , NAS RTRR ("Main Menu()" > "Backup
Station()" > "RTRR Server(RTRR)") FTP ("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(): /
- Last modified():
- Include file types():
- Exclude file types():
- File date/time(/):

- 10. " "
- 11. "Next()"
- 12. "Finish()"

		
		
		
		; download logs().
		
		

"Options()"

"Event Logs()" "Download Detailed Logs()"
 SMTP NAS ("System Settings()" > "Notification()")

"Policy()" "Filter()" RTRR

"Action()" "View()"
 "Download Logs()"
 Microsoft Excel
 Logs("Options()" > "Event Logs()" "Download Detailed

7.2.3

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

7.2.4

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.

- 8. "Next()" , "Configure policy and filter()"
 - Delete extra files(가): 가
 - Detect sparse files(): 가
 - Check file contents(): 2
 - Ignore symbolic links(): 가
- 9.
 - File size(): 가
 - File date/time(/): 가
 - Include file types(): 가
 - Exclude file types(): 가
- 10. 63
- 11. "Next()"
- 12. "Finish()"
- 13. 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()"

U S B

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)" 가

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 ,

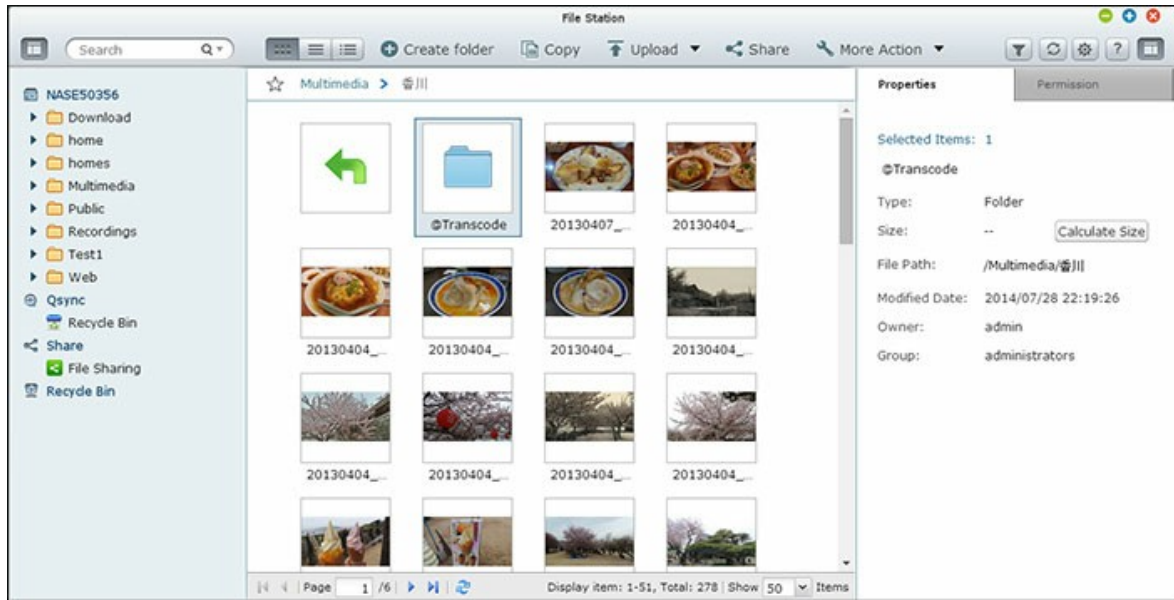
7.3 File Station

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 / • / .

: Chrome PC NAS

- 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()	Transcode(Beta)(가())" . "Add to
/	/
가	"Favorites()"
(Zip)	

가

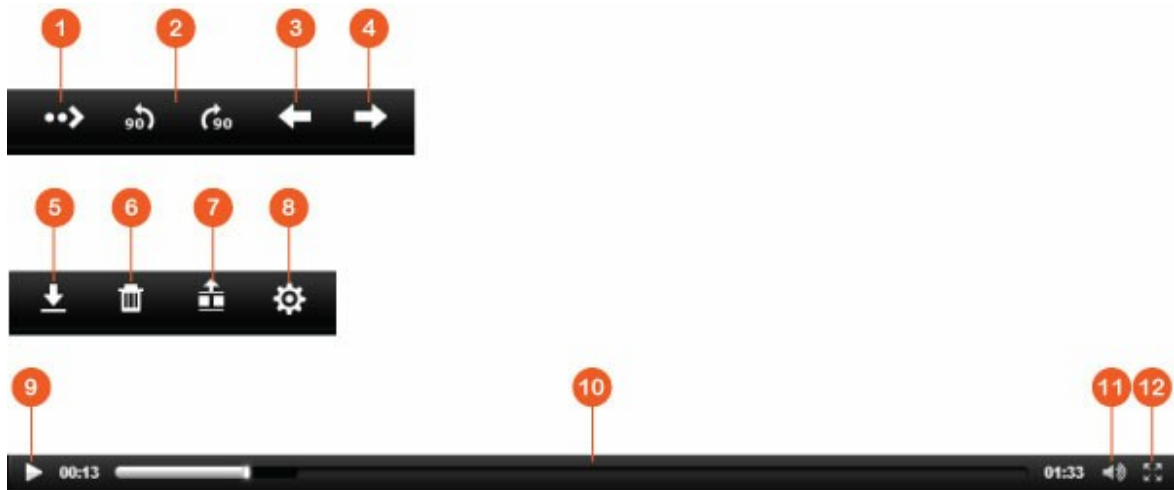
- Ctrl + C: /
- Ctrl + V: /
- Ctrl + X: /
- Ctrl + A: /
- Del: /
- F2: /
- F5:

/	
	<ul style="list-style-type: none"> • • •
	PC
VLC	(VLC).
	NAS
/	
가()	. "Add to Transcode(Beta) (가())"
/	/

(Zip)	
ISO	iso iso iso가 "Unmount()"

- IE 8, JAVA, File Station, NAS, 2GB, 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
- WAN IP
- 4. "Publish()"

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

7.4 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

7.5 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

7.6

NTP 서버를 PC, Turbo NAS에 설치하는 방법입니다.



NTP

NTP Service(NTP)를 "Control Panel()" > "Applications()" > "NTP Enable NTP Server(NTP)"로 설정합니다.

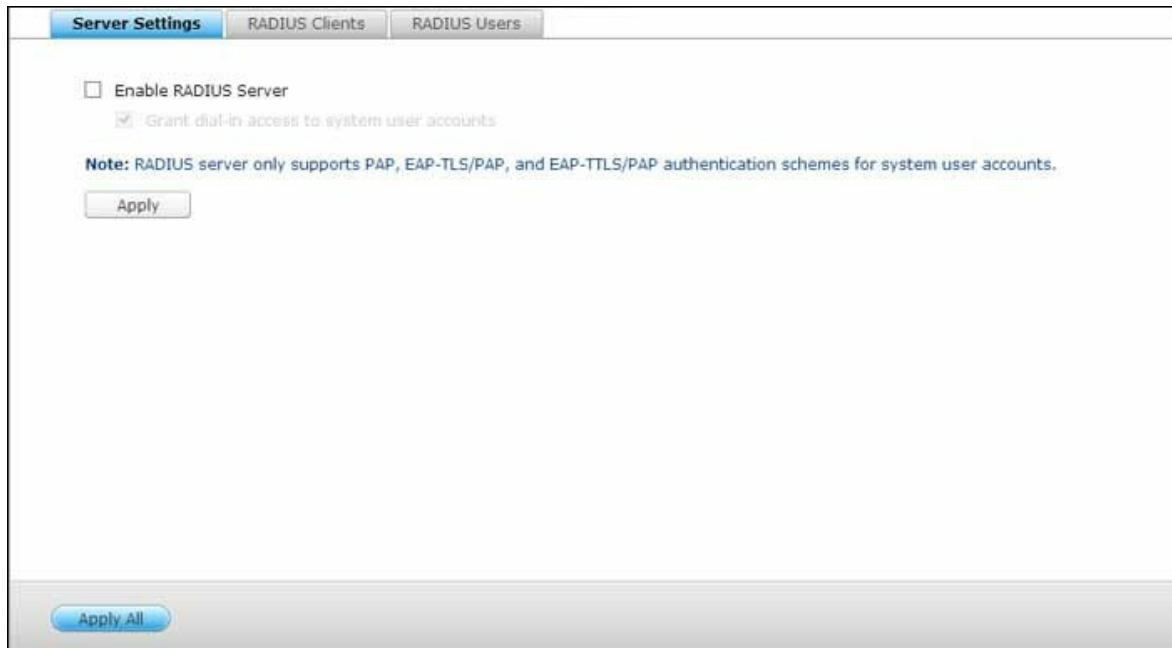
- NTP 서버의 IP를 "255.255.255.255"로 설정합니다.
- NTP 서버를 활성화합니다.
- IP를 NTP 서버로 설정합니다.

이제 NTP 서버가 정상적으로 작동합니다.

7.7 RADIUS

NAS
Authentication Dial In User Service)

RADIUS (Remote



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

7.8 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" and "Apply All"

- : NAS Syslog syslog (TCP / UDP) 514

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)" >

7.9 TFTP

NAS

TFTP (Trivial File Transfer Protocol)

.TFTP

FTP

. TFTP

FTP

. TFTP

FTP

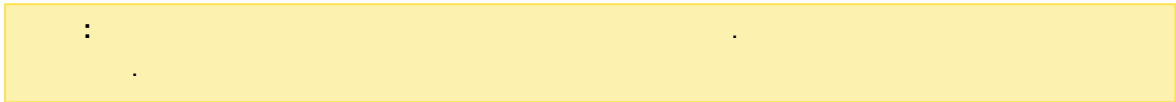
Enable TFTP Server
 UDP port:
 You need to specify a root directory for the TFTP server.
 Root directory:
 Enable TFTP logging
 The log file(s) will be saved in the selected folder. If the size of a log file exceeds 1MB, the file will be archived automatically.
 Save log files in:
 Access right:
 Allow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

7.10 가

QNAP Turbo NAS 가 가
 VMware vSphere, Microsoft Hyper- V, Citrix XenServer
 iSCSI VAAI, NAS VAAI ODX()
 가
 가 QNAP 10Gbe
 SSD SSD
 QNAP vSphere QNAP SMI- S



가

Turbo NAS 3가 가 VMware vSphere,
 Microsoft Hyper- V Citrix XenServer.

iSCSI VAAI NAS VAAI

Turbo NAS VMware VAAI(vStorage API 가 가
 VAAI 가 Turbo NAS 가
 ESXi CPU, ,
 VAAI 2 1) iSCSI VAAI 2) NAS VAAI.

- iSCSI VAAI 4가
- (): EXSi 가 Turbo NAS 가
 - (): Turbo NAS가 가 가
 - : SCSI LUN VMware vSphere 가 ESXi 가
 - : 가 가 LUN
- NAS 가 IT

NAS VAAI 3가
 • : EXSi 가 Turbo NAS NAS
 ESXi 가

- : vSphere 가 가
QNAP NFS 가 NAS 가 IT
- : QNAP NFS 가 ()
가 / ()
).

Turbo NAS iSCSI VAAI NAS VAAI (120) 가
가 . iSCSI VAAI NAS VAAI

ODX ()

Turbo NAS Microsoft Windows Server 2012 Hyper- V 가 iSCSI
(ODX) . ODX Windows
Turbo NAS Windows
QNAP iSCSI Windows 2012
. ODX .

10 G b e

10GbE(10 가) 가 가
. QNAP 10GbE Turbo NAS 10GbE
가 . 10GbE ,
, (),

SSD

SSD SSD Turbo NAS
SSD SSD Turbo
NAS SSD , .

v S p h e r e

QNAP Turbo NAS vSphere ESXi Turbo NAS
가 vSphere Client QNAP Turbo NAS
VMware QNAP Turbo NAS . vSphere

Q N A P S M I - S

QNAP SMI- S

가 (SCVMM 2012)

Turbo NAS SCVMM 2012

, 가

. QNAP SMI- S

.

7.11 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)"
- 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

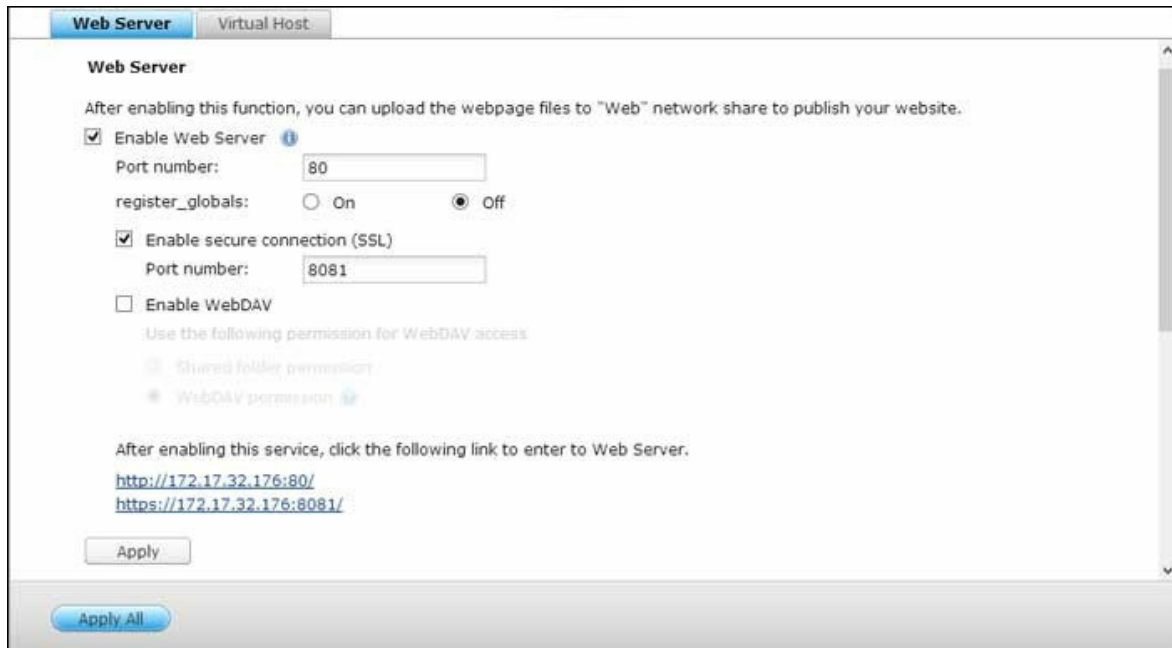
Mac OpenVPN

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

7.12

"Control Panel()" > "Applications()" > "Web Server()" 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
"Privilege Settings()" > "Shared Folders()" > "Action()" > "Access Permissions()" > "WebDAV access(WebDAV)" > "Apply()" > "Apply()" WebDAV NAS

: WebDAV NAS AD LDAP

NAS PC , WebDAV

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

Windows XP

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

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

M y S Q L

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

7.12.1 가

가 ()
 가
 (32) NAS

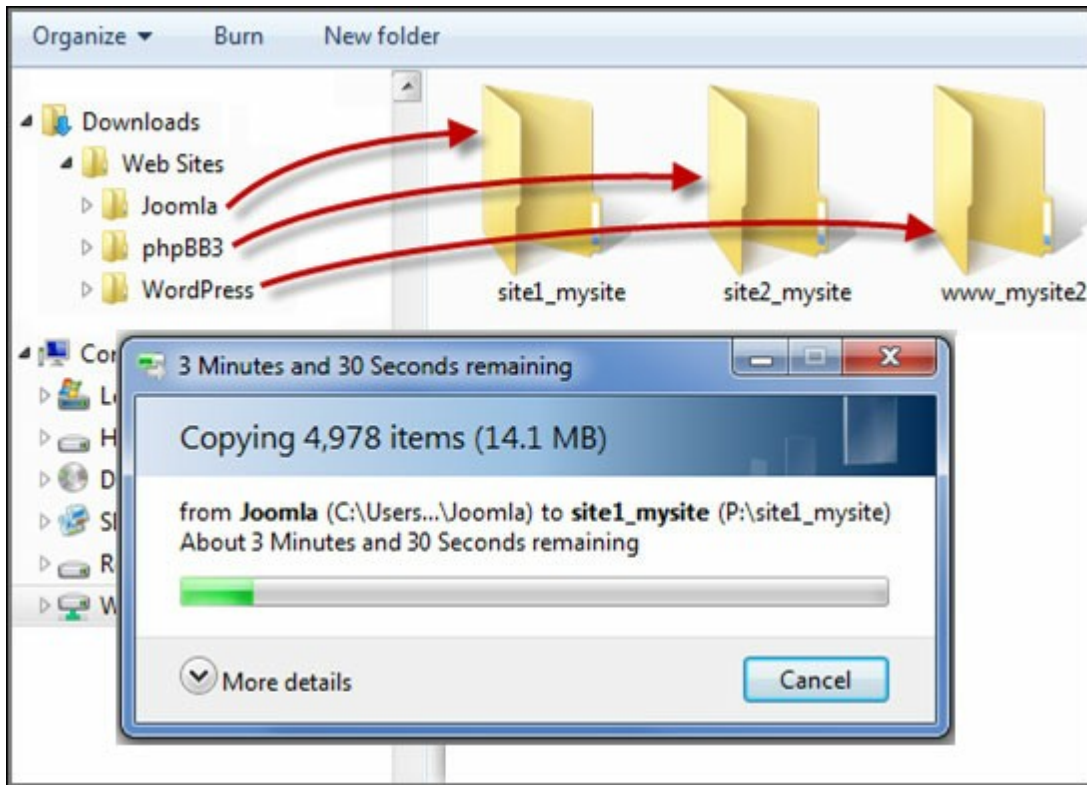
	WAN/ LAN IP		
site1.mysite.com	WAN IP: 111.222.333.444	/Qweb/site1_mysite	Joomla!
site2.mysite.com	LAN IP: 10.8.12.45	/Qweb/site2_mysite	WordPress
www.mysite2.com	(NAS) : 80 (NAS)	/Qweb/ www_mysite2	phpBB3

- : "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
 URL

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

 Joomla!, phpBB3 WordPress

8.

QNAP

- App Center [214](#)
- DLNA [217](#)
- Download Station [218](#)
- HybridDesk Station [224](#)
- iTunes [232](#)
- [233](#)
- Music Station [233](#)
- myQNAPcloud [241](#)
- Photo Station [244](#)
- [254](#)
- Surveillance_Station [256](#)
- [259](#)
- Video Station [261](#)

8.1 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://www.qnap.com/go/qpkg.html)
 (http://forum.qnap.com/) (*.qpkg)
 "Install Manually()"

8.2 DLNA

QNAP Turbo NAS 가 DLNA : QNAP
Twonky DLNA .

Enable DLNA Media Server (Beta)

Service Name:

Select default user account:

Note:
DLNA Media Server requires [Media Library](#) to be enabled. Please configure the settings in "Applications" > "Multimedia Management" > "[Media Library](#)".
The displayed contents of DLNA server will be based on the system administrator account permissions and media library settings.

Enable TwonkyMedia DLNA Server

After enabling this service, click the following link to enter DLNA Media Server configuration page.
<http://172.17.32.176:9000/>

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

Media Library .

Multimedia Shared Folder

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

"Rescan content directories()"
"Restart server()"

8.3 Download Station

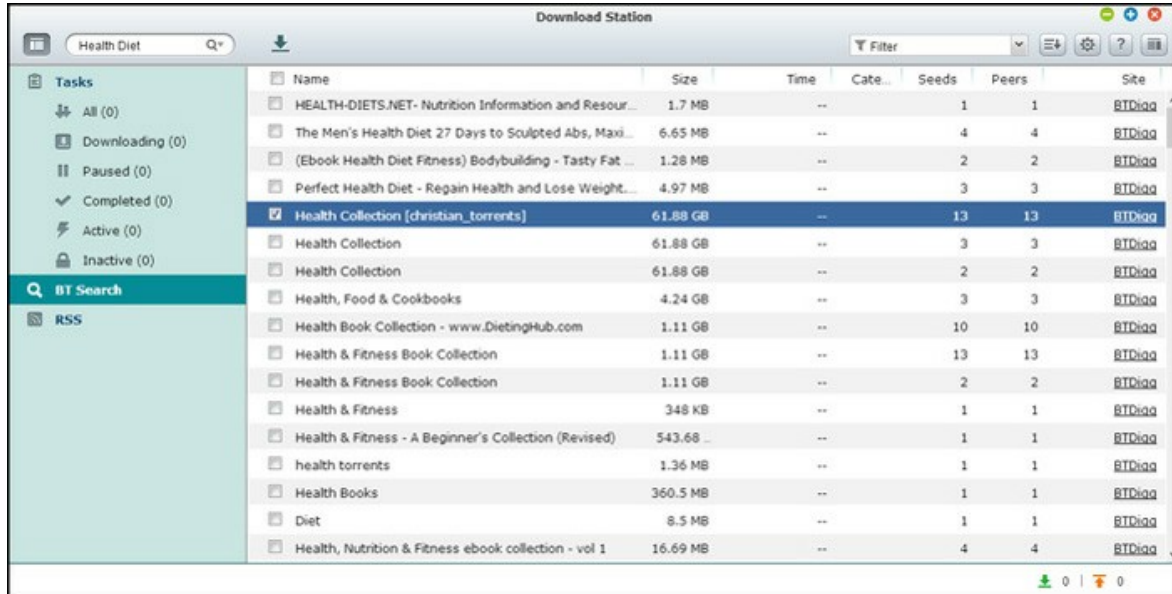
Download Station BT, PT, Magnet Link, HTTP/HTTPS, FTP/FTPS

RSS

. BT

BT

NAS



: Download Station

: PT PT
 (libtorrent) PT , App
 Center

Download Station

NAS

Download Station

App Center 가 , Download Station

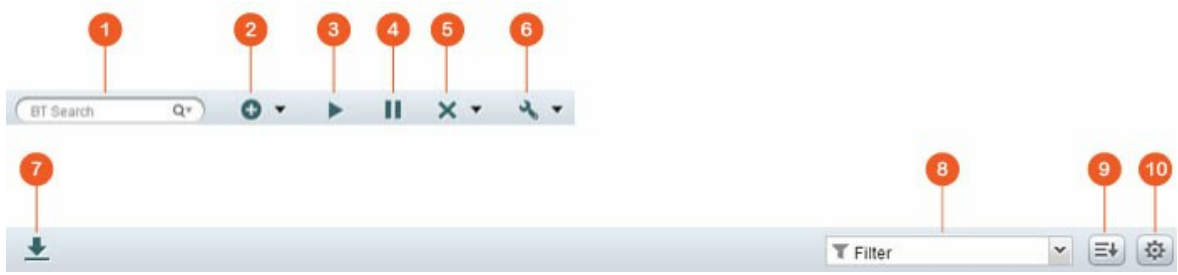
(QTS 4.1)

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

B T

"Edit Downloads()" BT

/

Download Station "Settings()" > "HTTP", "FTP" "BT" >
"Bandwidth Limit()"

"Settings()" > "Global()" > "Download Schedule(
)" 가 "Full speed()", "Turn off
()" "Limited()"

"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

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

8.4 HybridDesk Station

HybridDesk Station XBMC Chrome 가 NAS
 HDMI TV



: HybridDesk Station x69L, x69 Pro, x70 x70 Pro Turbo NAS

HybridDesk Station

1. HybridDesk Station . HDMI NAS HDMI TV

- : HybridDesk Station 4가 가
 - QNAP
 - MCE
 - USB
 - Qremote: HybridDesk Station QNAP

: Chrome Qremote
 NAS USB

2. HybridDesk Station :
 ○ "Applications()" > "HybridDesk Station" 가 "Get Started Now(HybridDesk Station)"

3.
 ○ HybridDesk Station: TV HybridDesk Station

- XBMC: TV
- Chrome: Chrome QNAP Turbe NAS HDTV 가
- YouTube: YouTube TV
- My NAS: NAS 가 NAS
- Surveillance Station(): Turbo NAS 가 IP

- XBMC , Chrome NAS HybridDesk Station 가
- 6
- NAS 6 HybridDesk Station
- HD , QNAP TS- x69 NAS 2GB
- XBMC AirPlay , TS- x69 NAS 2GB
- USB HybridDesk Station
- XBMC XBMC "Multimedia()"

TV Station HybridDesk



4. HybridDesk Station . HybridDesk Station

XBMC

TV

TV

Qfile

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

TV HybridDesk Station

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

U S B

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

N A S 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



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

Chrome
 HybridDesk Station Chrome
 PC

: Qremote NAS
 USB

Surveillance Station()
 IP Turbo NAS

YouTube
 HybridDesk Station YouTube

MyNAS
 NAS 가 NAS

HybridDesk Station

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

- QNAP MCE TS-x69
 TS-x70 MCE
- 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	

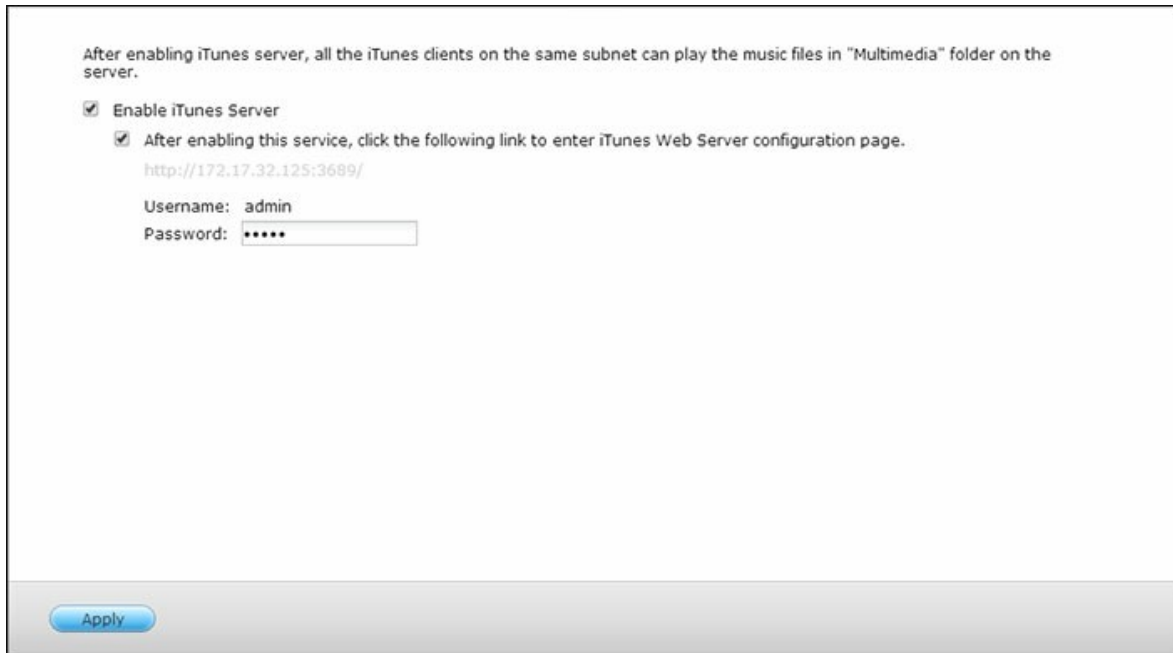
		27			7		
		24			7		
		30			16		
		31			31		
		32			15		
		33					
		34			30		
		35			33		
		36					
	/	37					
		38			2		
		39					
		40					
		41					
				()	19		
					34		
				16:9 / 4:3	27		

가 :
• HD Station Surveillance Station()

8.5 iTunes

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

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



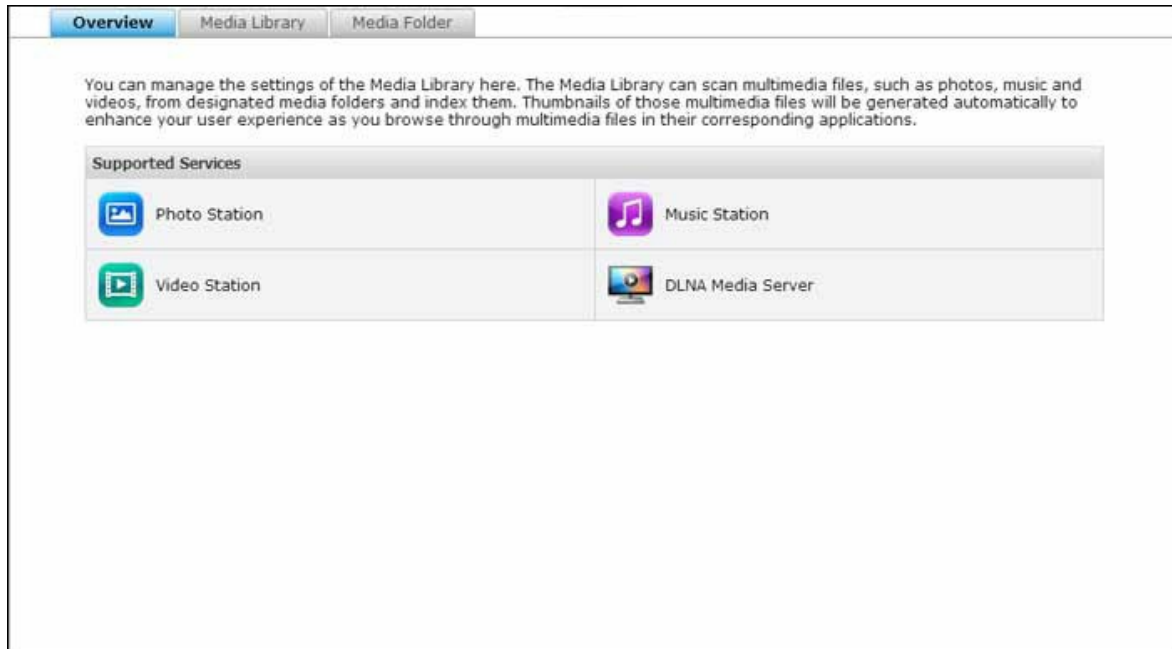
: iTunes 가 : x70U, x79
 Pro x79U. iTunes 41 "System Administration(
)" .

iTunes 가 , iTunes

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

가 :
 • QNAP iTunes

8.6



- : 가
- : 가
- :
- : "Scan now()"
- : 가
- : , 가
- : - 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 , [41] " "
- Photo Station Music Station
 DLNA Media Server가
- : 가 400

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

8.7 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(233()

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		



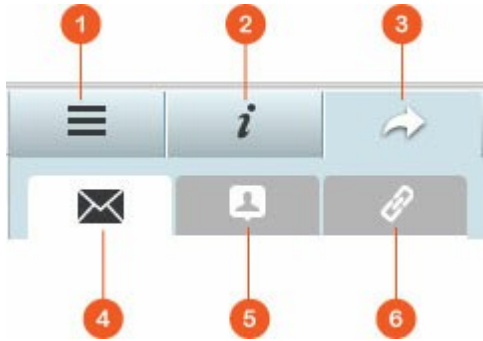
1		

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 : AIFF, APE, FLAC, M4A, M4A Apple Lossless (ALAC), MP3, Ogg Vorbis, WAV (PCM, LPCM), WMA, WMA PRO, WMA VBR.



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()"

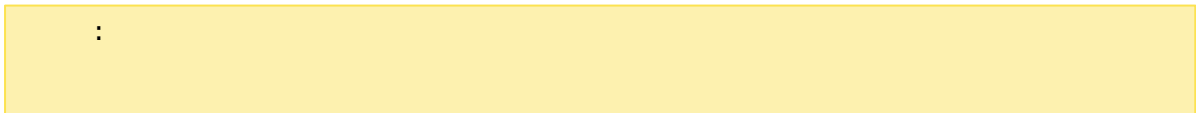
"Sharing()"
가 "Songs()"
"Email()", "Social Sharing(
)", "Link()"
"Playlist()"
가

- / /
- "Info()"
- Ctrl

"My Favorites()"

Music Station ()

Music Station 가 /



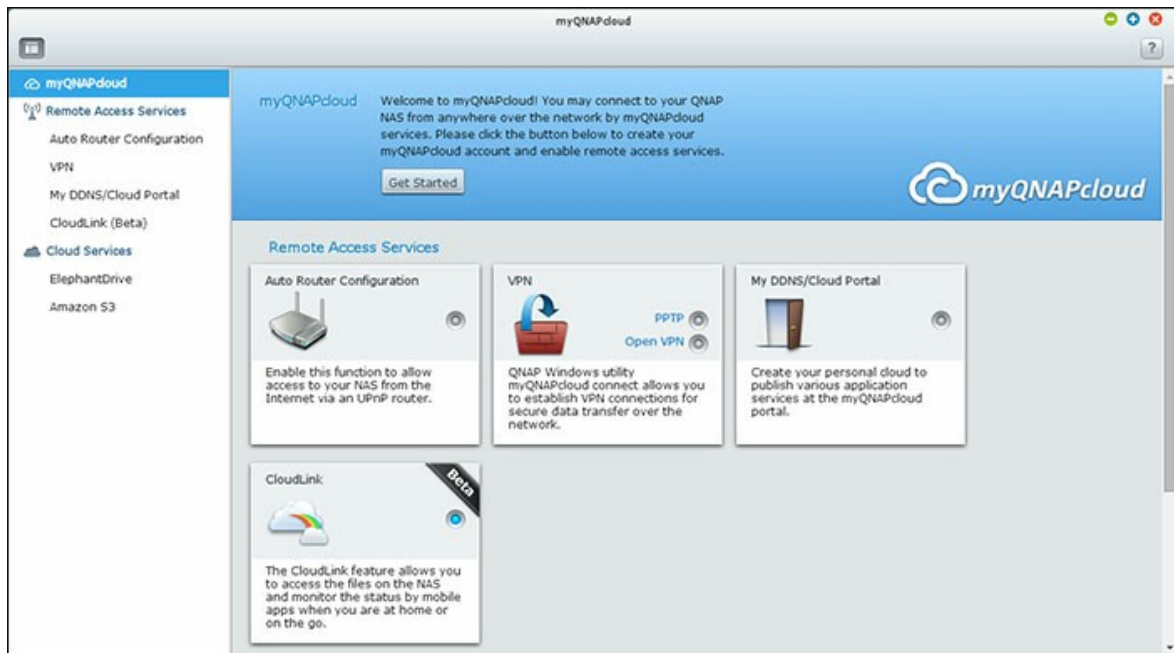
- "/home()" 가 NAS (NAS) "Private Collection()".
- "Control Panel()" > "Privilege Settings()" > "Shared Folders()".

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

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

8.8 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()"
 WAN IP 가 NAS myQNAPcloud My DDNS myQNAPcloud NAS
 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 NAS 가 myQNAPcloud (http://www.myQNAPcloud.com)
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 myQNAPcloud (VPN) / "Apply()" "Apply()" NAS
5. myQNAPcloud "Send Invitation()" "Send"
6. "Send()"

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

Cloud Link()

CloudLink UPnP가

QNAP NAS

QNAP

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

8.9 Photo Station

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

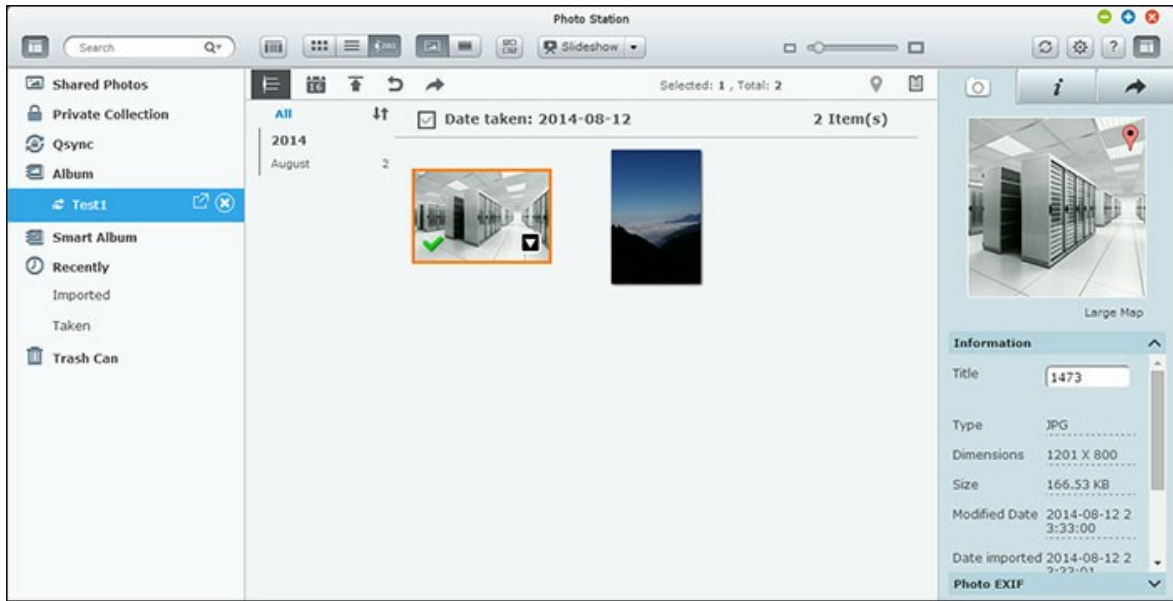


Photo Station

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

1. NAS 가 . 1) PC Mac Qfinder

Connecting to NAS ; 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

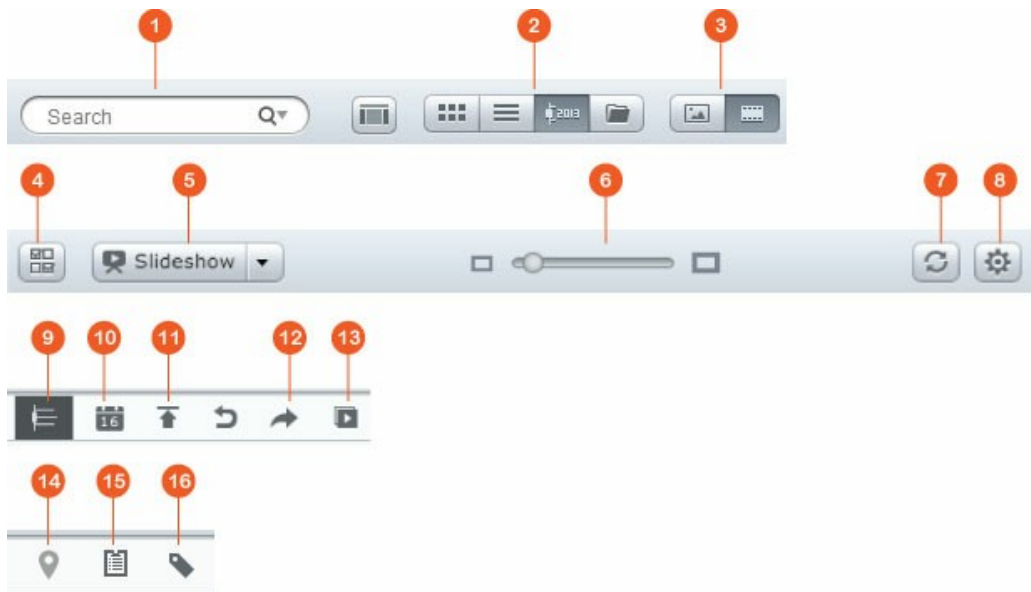
	bmp (Intel NAS), jpg, jpeg, gif, png, tif, tiff, RAW (arw, srf, sr2, dcr, k25, kdc, cr2, crw, nef, mrw, ptx, pef, raf, 3fr, erf, mef, mos, orf, rw2, dng, x3f)
	MP4 (H.264). (avi, m2ts, mpg, mp4, wmv, ts, tp, asf, m2t, mov, mod, m2v, mpeg, 3gp, mkv, mts, tod, trp, m1v, m4v, rmp4, divx, flv, rmvb rm) MP4 .

- 2GB .
- 2GB .

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

: Photo Station NAS .

Photo Station



1		

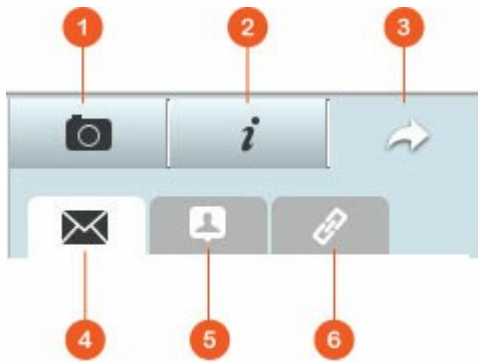
2		(:),
3	/	,
4		.
5		,
6		.
7		.
8		<ul style="list-style-type: none"> • : Photo Station () • : 가 "Bind with Facebook()" Photo Station (http://NAS_Name_or_IP/photo/) • : "Always ask me to enter my password when accessing Private Collection and Qsync(Qsync)" 가
9		.
10		.
11	가	가
12		"Share with the public()"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

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

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

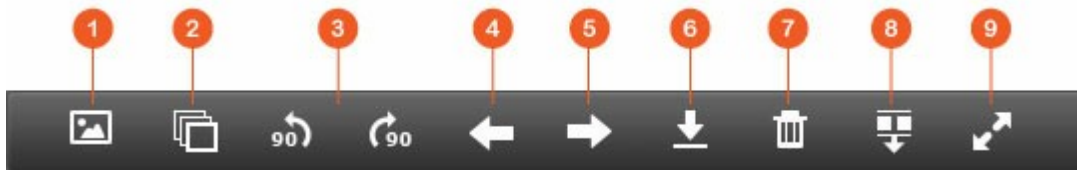
"Sharing()" "Select
 Photos()" "Email()", "Social Sharing()", "Link(
)" "Album()" 가

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

가 가

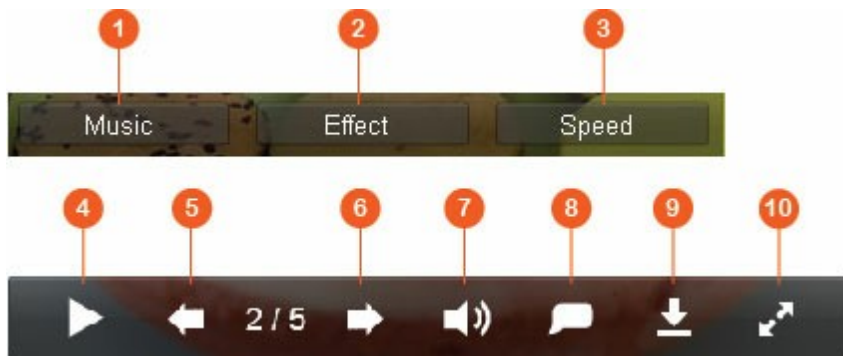
()	.
	90 / ().
/	.
	()
VLC	(VLC).
	("Album Settings()" (URL, HTML, vB Forum , Alt Forum)
	.
	.
	.
가	. 240P, 360P, 480P SD, 720P HD 1080P Full HD().
가	가 .
(Pixlr Editor)	().
	/ .
	.
	GPS ().
가	가 .
	.
	.

, , "Multi- select()"
 , Ctrl , ,



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		가
10		

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

Photo Station Media Library²³³(
)
가 Photo Station
/

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

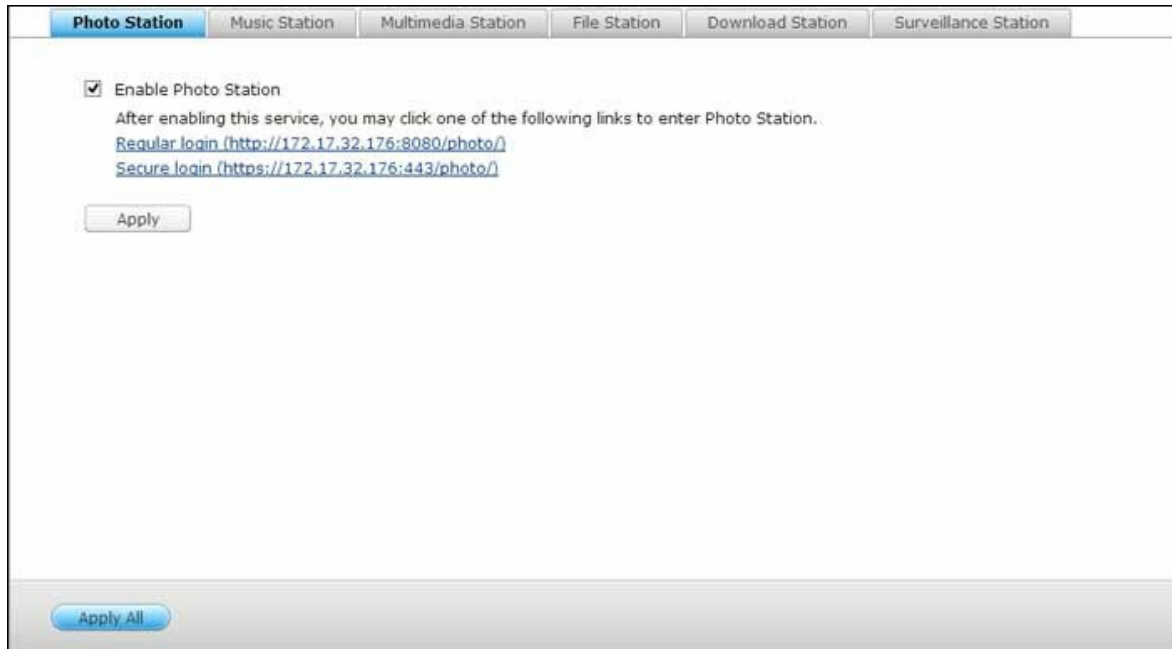
- 가 NAS, "/home()" (NAS "Private Collection()").
- "Control Panel()" > "Privilege Settings()" > "Shared Folders()".

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

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

8.10

QNAP



"Enable Photo Station()"

Sharing Management on the login screen(

. "Show the photos of)"

가

244

: NAS

QTS 4.0

2

"Enable Music Station()"

238

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

"Enable File Station()"

184

"Enable Download Station()"

218

Surveillance Station

"Enable Surveillance Station (Surveillance Station)"

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

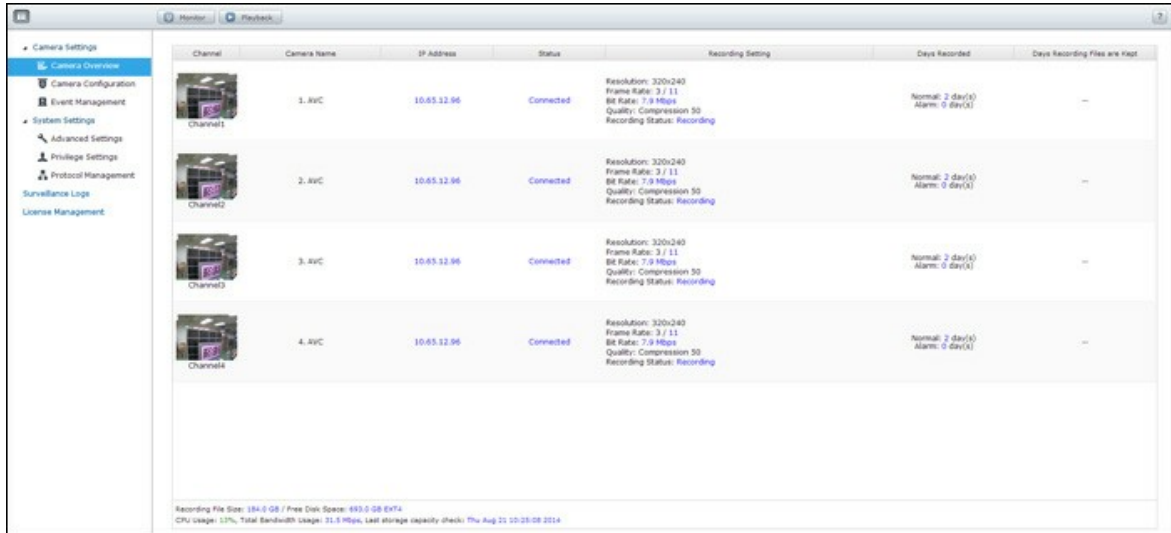
:
 • NAS NAS
 QNAP License Store (<http://license.qnap.com/>)
 • NAS IP ,
 • 가 QNAP (> >
 "Surveillance Station Pro 가 ?").
 • Windows IE 10, Chrome Firefox
 • Mac QNAP Surveillance Client for Mac(Mac QNAP
) QNAP Surveillance Client for Mac(Mac
 QNAP) <http://www.qnap.com/download>

"License Management()"

8.11 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 "Camera Settings()" > "Camera Configuration()" 가 "Add(가)" , , , IP , , 가 "Next()"

: "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(

)" > "Event Management(

)"

"Traditional Mode(

"Advanced Mode(

)"

- : "Apply()"

- : "Add(가)" 가

"Motion Detection()" "Recording()"가

Surveillance Station

"Play()" "Playback(

)" 가

Surveillance Station

1. /

2. IP

가

가

3. "Play()" "

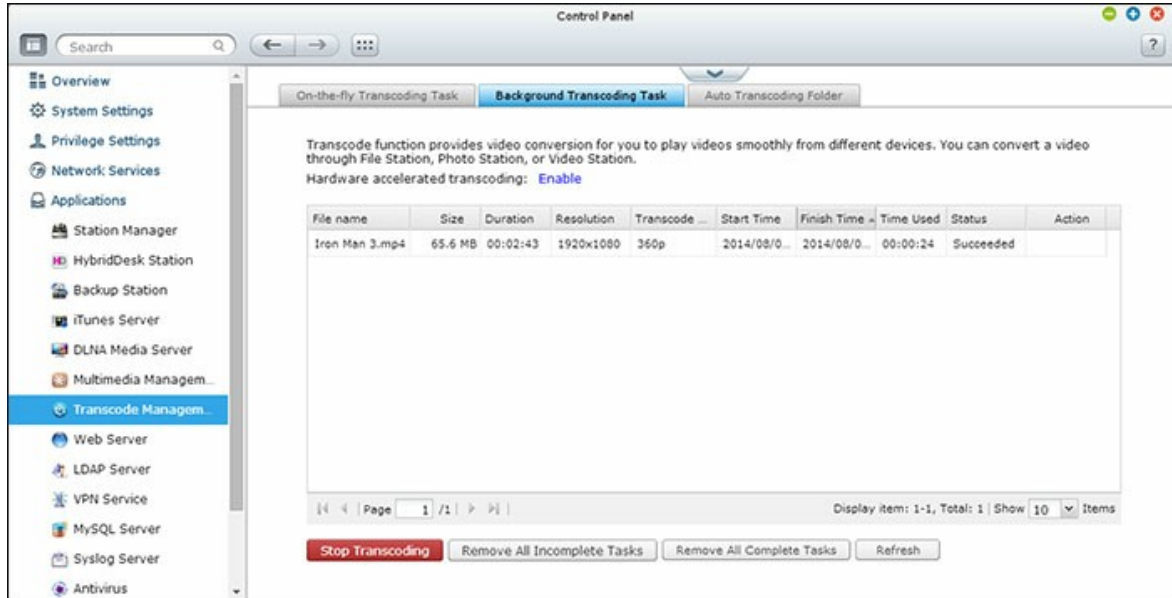
4.

5. "Play()" "

(, , / , / ,)

8.12

(* .MP4) 가 TV 가 가






CodexPack CPU Turbo NAS CPU 가 가

↓ ↑		
✘		

: NAS . QNAP (www.qnap.com)
()

Video Station
240p, 360p, 480p, 720p
CPU
1080p

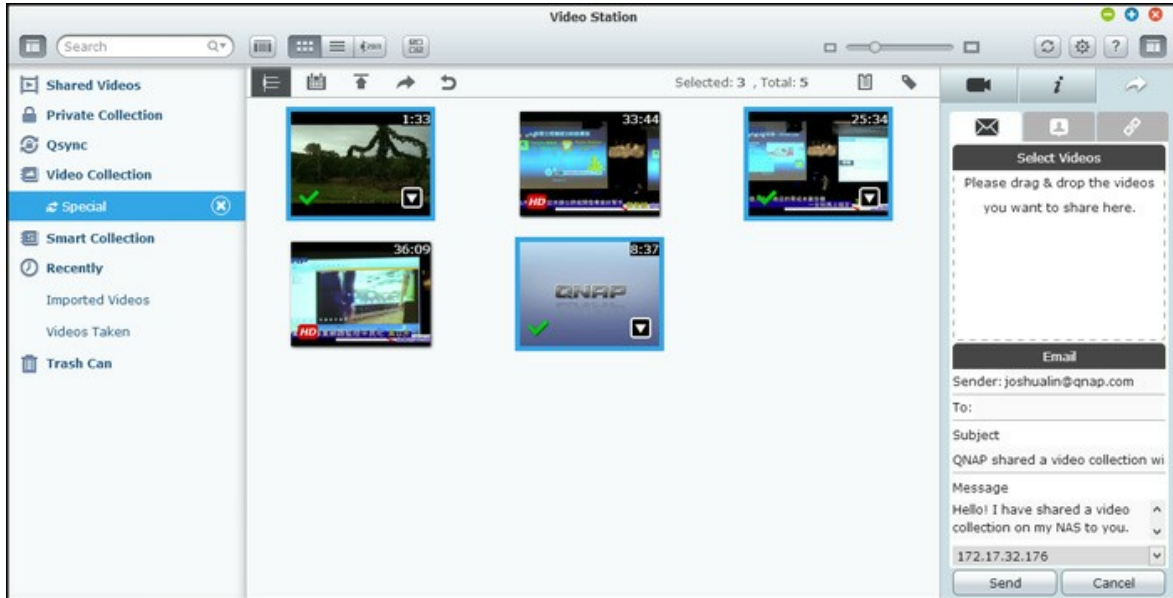
가
. File Station, Photo Station
가
"@Transcode"

가 ,
"Add(가)" 가 ,
() 가

8.13 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
 - 1) PC Mac
 - 2) "Shared Videos()" "Private Collection()" ; "Import(가)"()
 - 가 Turbo NAS 가 ("Shared Videos()" ; "Private Collection()") ; "Video Collection()"
 - 3) NAS
 - "/multimedia()" ; "/home()"

- : 2GB
- 2GB

2. Video Station 가 Video Station Video
 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, rmv, rm MP4)

Video Station



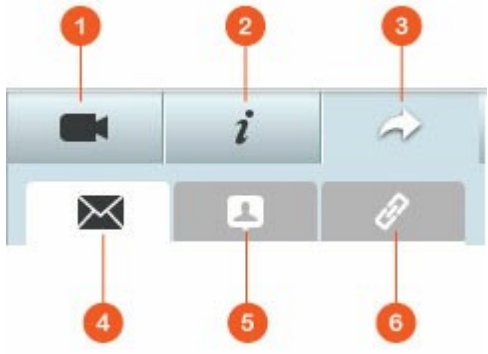
1		
2		(: / /)
3		
4		
5		
6		<ul style="list-style-type: none"> • : 가, Home Videos(), Movies(), TV Shows(TV), Music Videos() • Video Station ()

		<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		

6		<pre> . "Select Videos(, "Select Link Format"(, LAN IP WAN IP (myQNPcloud.com myQNAPcloud myQNAPcloud Service HTML (URL , HTML , vB Forum Alt Forum) . "Create ()" . URL 가 </pre>
---	--	--

: "Video Property()"

Video Station

- 가
1. "Create New Collection()"
 2. "Video Collection()"
- Settings()" "Share with the public()" "Collection public()"
- (Home Videos(), Movies(), TV Shows(TV) Music Videos())
- "Collection Settings()" "Share with the public()".

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

Ctrl "Multi- select()"



1	/	/
2		
3	/	/
4		

: HD HD

Video Station Media Library 233()

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 .

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
 , RAID NAS LCD . 100%
 RAID NAS
 RAID , 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								

가 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.
 - DHCP
 - IP*
 -

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

- 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		

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

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

LCD LCD
 "Yes()"

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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