

QNAP Turbo NAS

(: 4.2.1)

Turbo NAS :TS-110, TS-112, TS-112P, TS-119, TS-119P+, TS-119P II, TS-120, TS-121, TS-210, TS-212, TS-212-E, TS-212P, TS-219, TS-219P, TS-219P+, TS-219P II, TS-220, TS-221, TS-239 Pro, TS-239 Pro II, TS-239 Pro II+, TS-259 Pro, TS-259 Pro+, HS-210, TS-269H, TS-410, TS-410U, TS-412, TS-412U, TS-419P, TS-419P+, TS-419P II, TS-419U, TS-419U+, TS-419U II, TS-420, TS-420U, TS-421, TS-421U, TS-439 Pro, TS-439 Pro II, TS-439 Pro II+, TS-439U-RP/SP, TS-459 Pro, TS-459 Pro II, TS-459 Pro+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-509 Pro, TS-559 Pro, TS-559 Pro+, TS-559 Pro II, TS-639 Pro, TS-659 Pro, TS-659 Pro+, TS-659 Pro II, TS-809 Pro, TS-809U-RP, TS-859 Pro, TS-859U-RP+, TS-859 Pro+, TS-859U-RP, SS-439 Pro, SS-839 Pro.





* NAS
* NAS <http://docs.qnap.com>

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1.

-  6
-  8
-  10
-  11

1.1

QNAP
)

Turbo NAS(
Turbo NAS가

- "Turbo NAS" "NAS"
- Turbo NAS

QNAP QNAP QNAP Systems, Inc.
TM

QNAP

QNAP QNAP QNAP /

QNAP , , , ,

QNAP Systems, Inc. (QNAP) , , ,

QNAP , , , ,

. QNAP , ,

. QNAP

NAS ,

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

1.2

FCC

QNAP NAS FCC
가

FCC

A

FCC

15

- 1.
- 2.

: FCC 15 A

, ,
가

: QNAP Systems, Inc. FCC가
가

FCC

B

FCC

15

- 1.
- 2.

: FCC 15 B

- , ,
- 가 (
- 가 .)
 -
 - 가
 - /

: QNAP Systems, Inc.
가

FCC가

CE

QNAP Turbo NAS

CE

FCC	CE	NAS
A	A	TS- EC1679U- RP, TS- EC1279U- RP, TS- EC879U- RP, TS- 1679U- RP, TS- 1279U- RP, TS- 1270U- RP, TS- 1263U- RP, TS- 1263U, TS- 1253U- RP, TS- 1253U, TS- 879U- RP, TS- 870U- RP, TS- 863U- RP, TS- 853U- RP, TS- 453U- RP, TS- 1079 Pro, TS- 879 Pro, TS- 863U, TS- 853U, TS- 463U, TS- 463U- RP, TS- 453U- RP, TS- 453U, TS- 451U, TS- 431U, TVS- 871U- RP, TVS- 1271U- RP
B	B	TS- 853S Pro, TS- 453S Pro, TS- 870 Pro, TS- 853 Pro, TS- 670 Pro, TS- 653 Pro, TS- 470 Pro, TS- 453 Pro, TS- 253 Pro, TS- 431+, TS- 231 +, TS- 451S, TS- 870, TS- 851, TS- 670, TS- 651, TS- 470, TVS- 863+, TVS- 863, TVS- 663, TVS- 463, TVS- 471, TVS- 671, TVS- 871, TS- 451, TS- 451+, TS- 431, TS- 251, TS- 251+, TS- 251C, TS- 231, TS- 131, TS- 269H, TS- 212P, TS- 112P, HS- 251, HS- 251+, HS- 210, TS- 453mini, TS- 563, IS- 453S, TS- 531P, TS- 253A, TS- 453A, TS- 653A, TS- 853A, TS- 128, TS- 228, TAS- 168, TS- 268

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
6. NAS
7. NAS 가
8. NAS
9. NAS
- 10.
11. NAS
12. (IT 가) NAS

- 가
-

2.

NAS NAS QNAP NAS . QNAP NAS

28

- NAS :**
1. 13
 2. 18
 3. 가 23
 4. 24
 5. NAS 27

- NAS :**
- NAS 28

2.1

NAS

1.

(HDD)가 NAS

[14]

2. QNAP NAS PC

NAS가

LED

[15]

:

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 (가 RAID 1, RAID 5 RAID 6)
		0.5	1) NAS가 2) NAS가 3) 가
		2	NAS S3 가 1.
			NAS가
			NAS 가
1			NAS가 가 .
			NAS가 .
LAN			
			NAS가

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

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

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

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

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

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





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

2.2

NAS

가

.

1.  19
2.  20
3. CD  21
4. HDMI  22

NAS

가

CD

(

CD가

).

가

가

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

2.2.1

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

2.2.2

1. NAS PC "start.qnap.com" 가 " " "Start Cloud Installation()" "Start Cloud Installation()" QR
2. (QNAP NAS) "Enter" myQNAPcloud (가 myQNAP 가).
3. myQNAPcloud myQNAPcloud myQNAPcloud "I agree to myQNAPcloud Terms of Use and QNAP Privacy Policy(myQNAPcloud QNAP)" "Next Step()" myQNAPcloud "Sign in myQNAPcloud account (myQNAPcloud)" Turbo NAS "Register()" 209
4. Turbo NAS "Begin()" Turbo NAS
5. Turbo NAS "Start()" "Proceed()" 9.
10. "Connect and Login QTS(QTS)" ID Turbo NAS
11. ID Turbo NAS

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

2.2.3 CD

1. CD-ROM NAS CD QNAP Qfinder Pro .
2. QNAP Qfinder Pro . QNAP Qfinder Pro가
3. Qfinder Pro . QTS NAS).

- :
- TS- x12, TS- x20, TS- x21 NAS CD가
 - NAS ID "admin" .

2.2.4 HDMI

NAS HDMI

1. NAS HDMI

2.

3. HD Station
(QTS NAS

271 QTS
)

QTS

:

- HDMI 가 NAS
- NAS ID "admin"

2.3 가

QNAP NAS
NAS

가

. A

1: QNAP

<http://www.qnap.com/> "Support()" > "Download()" > "Utilities()"
PC

2: CD-ROM

NAS CD-ROM . QNAP
myQNAPcloud Connect NetBak Replicator.

CD-ROM

- : NAS
- QNAP : Windows QNAP
- myQNAPcloud Connect : Windows myQNAPcloud Connect
- NetBak Replicator : Windows NetBak Replicator
- : NAS

2.4 NAS

NAS

:

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

2.4.1 Windows

Windows NAS 가 .

1: QNAP Qfinder Pro

NAS

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

: & NAS

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

2: File Explorer() Run() NAS

1. Windows File Explorer "Network()" NAS NAS NAS
NAS (Windows + R)
2. \ \ NAS_name \ \ NAS_IP (ID "admin"
3. .

2.4.2 Mac Linux

Mac

NAS 가 .

1: QNAP Qfinder Pro

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

2:

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

Linux

Linux .

```
mount -t nfs <NAS IP>:/ < > < >
```

NAS IP 가 192.168.0.1 /mnt/pub directory
"public"

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

ID NAS .

```
:
```

2.5 NAS

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

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

2. ID . "Secure login()"(Secure Sockets
 Layer) NAS 가 . 가
 NAS , (NAS
 ID "admin").

: NAS가 NAT , NAS
 443가 NAT NAS LAN IP .

3. NAS .

2.6 NAS

() NAS () NAS
NAS NAS

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

1. NAS [28]
2. NAS [30]
3. [32]
4. NAS [32]

N A S

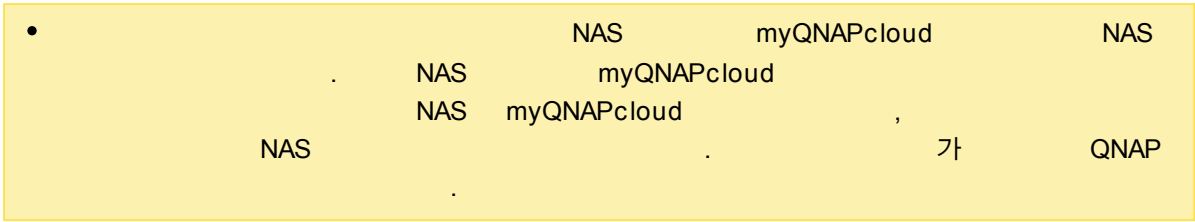
NAS NAS NAS
NAS

N A S		N A S		
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/x31+, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.x	
		TVS-x63, TS-563, TS-x63U, TS-x69, TS-x70, TVS-x71, TS-x79, TS-x80, TVS-x80, TS-x80U		
509, TS-809, SS-x39, TS-	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/x31+, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.x	
		TVS-x63, TS-563, TS-x63U, TS-x69, TS-x70, TS-x70U, TVS-x71, TVS-x71U, TS-x79, TS-x80, TVS-x80, TS-x80U	4.0.x 4.1.x	
TS-x31/x31+, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53, TS-x53S Pro	4.1.x	TS-431U, HS-251, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.x	
		TVS-x63, TS-563, TS-x63U, TS-x70, TS-x70U, TVS-x71, TVS-x71U, TS-x79, TS-x80, TVS-x80, TS-x80U		
TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U, TS-x80, TS-x80U, TVS-x80	3.8.x 4.0.2	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8.x	
		TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U, TS-x69, TS-x69U, TS-x70, TS-x70U, TS-x79, TS-x79U	4.0.2	
		TS-x31/x31+, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.x	
		TS-x69, TS-x70, TS-x79, TS-x80, TS-x80U	4.0.5	
	4.0.5 4.1.x	TVS-x63, TS-563, TS-x63U, TS-x69, TS-x69U, TS-x70, TS-x70U, TVS-x71, TVS-x71U, TS-x79, TS-x79U, TS-x80, TS-x80U, TVS-ECx80	4.0.5 4.1.x	
		HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.1.2	
TS-x31+	4.1.1	TVS-x71, TVS-x63, TS-563, TS-x63U, TS-x53, TS-x51/x51+, x31+	4.1.1	

TS-x31/x31+, TS-431U, HS-251/251+, TS-x51/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/x31+, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.1
TS-x31+/x51/x53	4.1.2	TS-x31	4.1.x

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



NAS

N A S		
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.

N A S

1. NAS
- 2.

NAS

3. NAS()
4. QIG() NAS
5. NAS (NAS ID "admin").
6. NAS
7. "Start Migrating()" NAS가

IT 가

- NAS
- Windows AD
-

3. QTS

QTS NAS Turbo NAS

·
NAS 가 . !
:

- QTS [35]
- QTS [37]

3.1 QTS

QTS Turbo NAS

QTS GUI

가 Turbo NAS

Turbo NAS

App Center

QTS

, iSCSI

QTS



*

가 Turbo NAS -

가 , , , 가

QNAP Turbo NAS

. QNAP Turbo NAS가

가

가

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

Turbo NAS - IT

- TCO() IT
- QNAP Turbo NAS , , , 가 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

- QTS ^[37]
- 2- step Verification(2)^[41]

QTS



1		/
2		<div>가</div> <div>1) (SYSTEMS): NAS</div> <div>2) QNAP (APPLICATIONS): NAS</div> <div>QNAP가 ;</div> <div>3) : 가 QNAP</div> <div>NAS</div> <div>가</div>

3		QTS
4		(HDD SMART ,) ()
5		USB SATA NAS USB 가 File Station "External Device()" 가 (File Station File Station) ()
6	Notification and Alert()	"Clear All()" "Event Notifications()" [117]
7		<ul style="list-style-type: none"> • Profile(): [117] • Wallpaper(): [46] • 2-step Verification(2): 2 2-step Verification(2) [41] • Change Password(): • E-mail Account(): Music Station, Photo Station, Video Station File Station • : <ul style="list-style-type: none"> ○ Auto logout after an idle period of(): 가 ○ Warn me when leaving QTS(QTS): 가 QTS (가 ○ Reopen windows when logging back into QTS(QTS): (: " ") NAS

		<ul style="list-style-type: none"> • Language(): UI • Desktop Preference(): <ul style="list-style-type: none"> • Tab Mode(): NAS • Window mode(): • Frameless Mode(): • Feedback(): • About(): NAS , HDD 가 ()
10		HDD , , , , , NAS 가
11	Desktop Area()	
12	Next Desktop/ Last Desktop(/)	
13	myQNAPcloud	myQNAPcloud 가 ..
14	QNAP Utility (QNAP)	NAS 가 NAS
15	Feedback ()	

16		(150)	.
----	--	---------------	---

2 - step Verification (2)

2 , NAS
1 (6) . 2 1
(TOTP) 가
Google Authenticator(Android/iOS/ BlackBerry) Authenticator(Windows Phone)가

- 2
1. . Android iOS ,
Google Authenticator . Windows ,
Authenticator .
 2. NAS .
 3. " " > "2-step Verification(2)" 가 "Get Started()" .
NAS
 4. QR
 5. NAS
 6. ,
SMTP 가
"Control Panel()" > "Notification()" > "Email()"

2 QTS
 , 가
QTS
 , "Verify another way()"

2
2 "Options()" > "2-step Verification(2)"
가 "Stop()" NAS 가 가
"Control Panel()" > "Users()" > "Edit Account Profile()" 가
NAS 2
가 QTS 2
 , NAS "RESET()"

NAS

:

-

-

가

-

:

- QTS 4.x

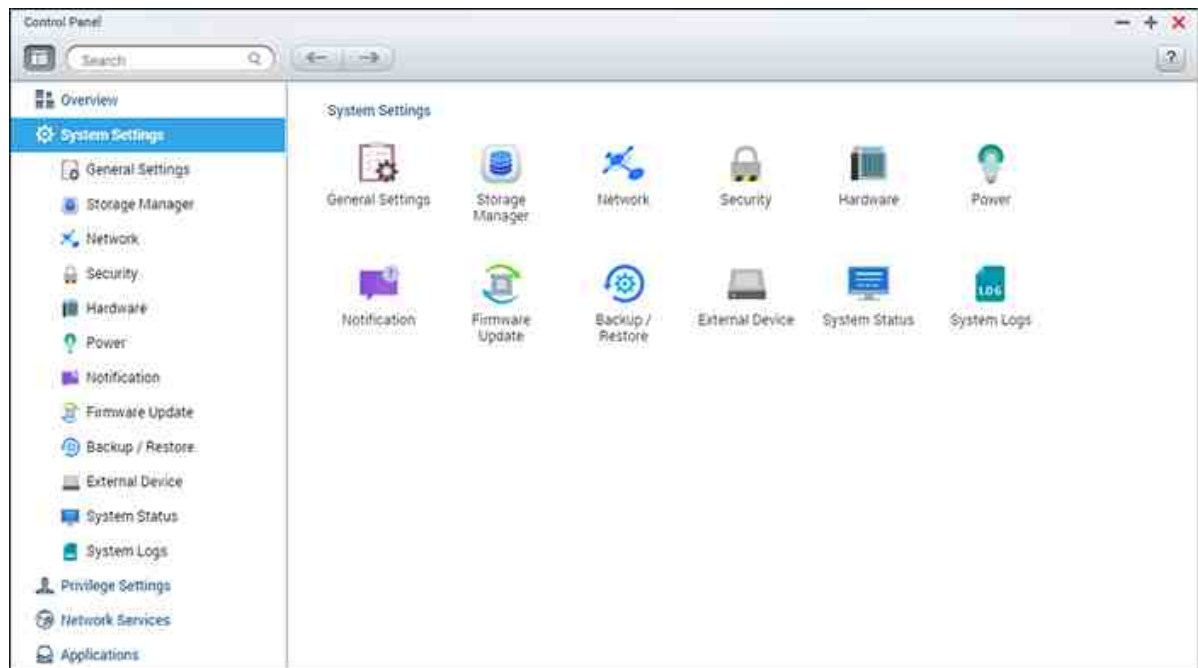
1024x768

- NAS QNAP

가

4.

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



- :
- [44]
 - - [47]
 - [79]
 - [88]
 - [90]
 - [93]
 - [95]
 - [97]
 - / [99]
 - - [101]
 - - [115]
 - [117]

4.1

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

System Administration Time Daylight Saving Time Codepage Password Strength Login Screen

Server name: NASC4EF14

You can change the default port number (HTTP) for Web Administration.

System port: 8080

☒ Enable secure connection (HTTPS)

Port number: 443

☐ Force secure connection (HTTPS) only

Note: After enabling the "Force secure connection (HTTPS) only" option, the Web Administration can only be connected via https.

Apply

Apply All

- :
 - 44
 - 45
 - 45
 - 45
 - 45
 - 46
- : NAS . NAS 14
 (A- Z a- z), (0- 9), (-) () (.), 8080
 . System Management, Photo Station, Music Station, File Station, Download Station. ,
- (HTTPS): HTTPS NAS (HTTPS)
 . "Force secure connection(HTTPS) only((HTTPS))" , HTTPS .
- Photo Station, Music Station, Surveillance Station, Download Station, iTunes DLNA /

Photo Station, Music Station, Video Station(2.0 1.0.5), Surveillance Station, Download Station, DJ Station, iTunes, Media Library DLNA NAS . x70U, x79 Pro, x79U.

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

: .

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

NAS가 .

: NAS . PC OS FTP 가 , NAS OS

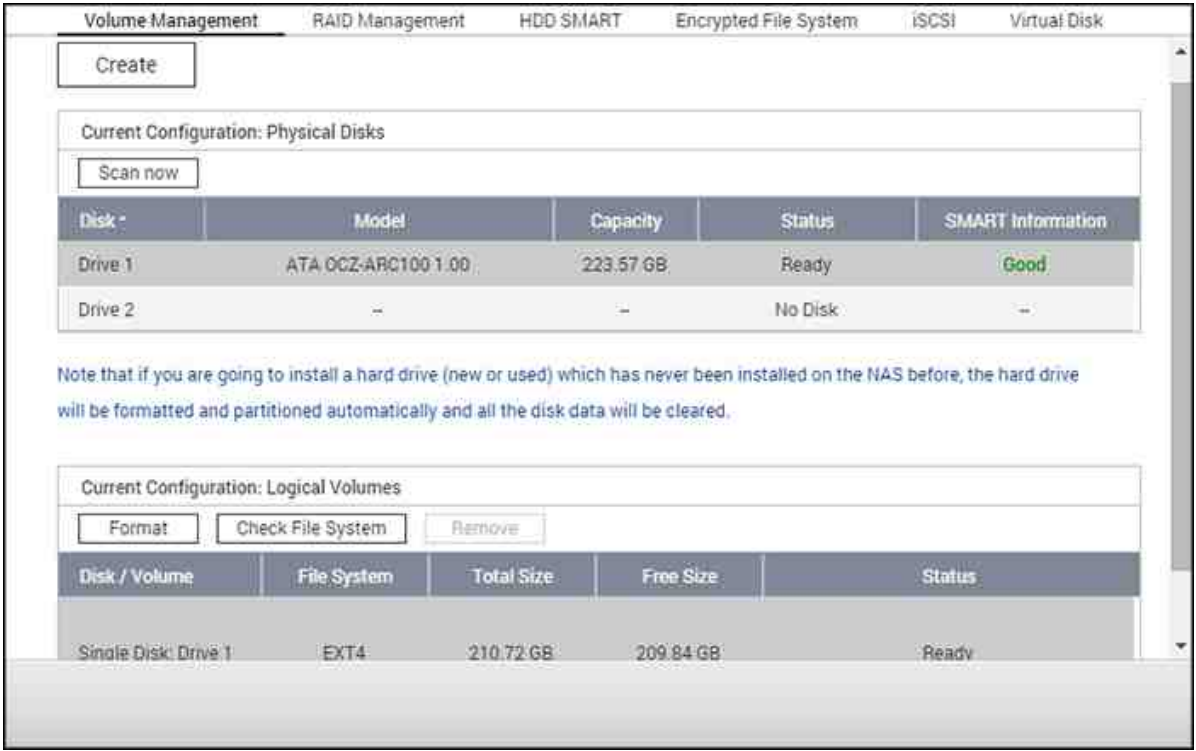
NAS가

- : "Preview()"
- :
• : 가 (QNAP , myQNAPcloud
)
- :
NAS : 100 100
"Change Picture()"
"Preview(
)"
"Apply()"
"Preview()" ,
"Apply()"

247

4.2

Storage Manager() RAID ,
iSCSI 가



- :
- _____ 48
 - RAID _____ 50
 - _____ SMART 60
 - _____ 61
 - iSCSI 64
 - 가 _____ 78

4.2.1

NAS SATA

가

- :
48
- RAID 48
- NAS 49

NAS

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

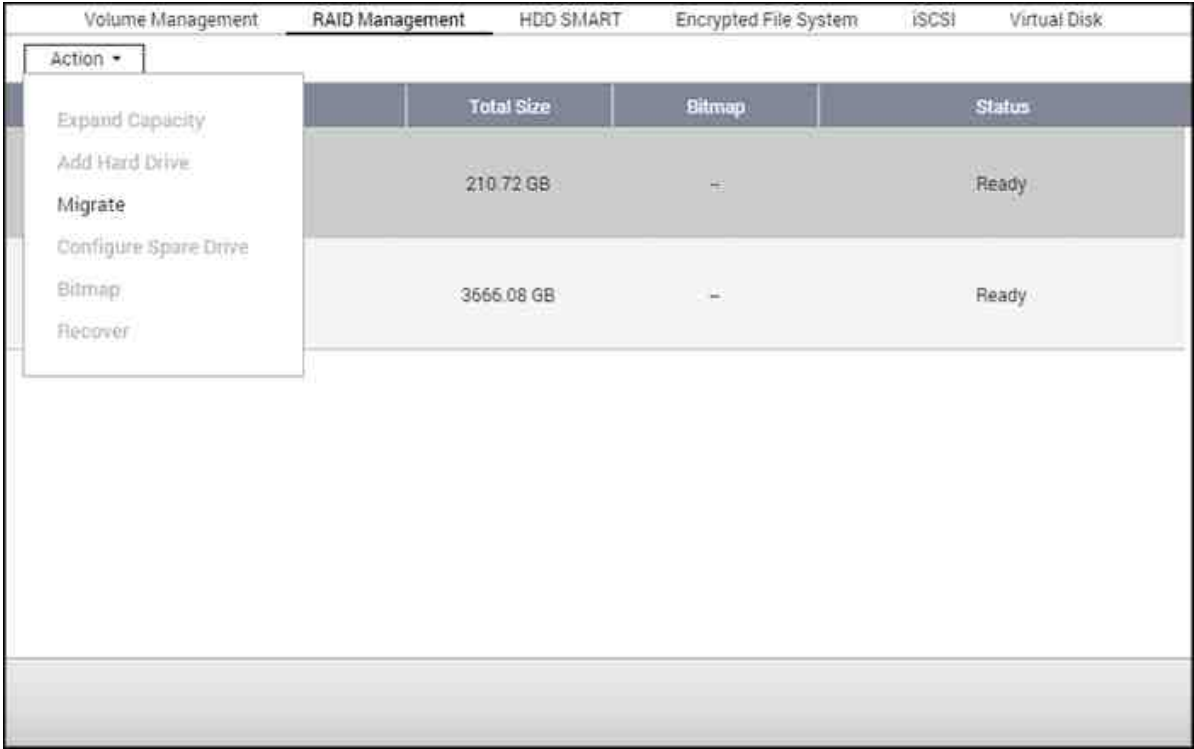
- :
NAS
- NAS NAS
- 2TB EXT4

RAID

- : 가
- JBOD (): JBOD RAID 가
- RAID 0 : RAID 0() 2 RAID 0
- RAID 1 : RAID 1 2 RAID 1 , 2 가

4.2.2 RAID

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



RAID 10 가 RAID

- [50]
- 가 [53]
- [53]
- [54]
- RAID [54]
- / [55]
- RAID [55]

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

RAID

TS- 509 Pro 가 250GB HDD HDD

RAID 5

가 1.5 TB 가 NAS
1TB 가

"Storage Manager()" > "RAID Management(RAID)"

"Action()" > "Expand Capacity()"

HDD "Change" ()

1. Description() "Please remove this drive()"
가 NAS NAS가

2. Description() "Please insert the new drive()"
가 HDD

3. HDD NAS가

4. HDD

5. HDD "Expand Capacity()" RAID

6. "OK" ()

7. NAS가

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

: 가 NAS /

. NAS

RAID "Ready" () 가 NAS
(1.8TB)

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

- :
- RAID , RAID
가
 - QTS 4.1.1 RAID (ARM NAS (Intel NAS))
16TB
8TB

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

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

가

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

RAID 10 가 RAID 10
가 RAID 10

RAID NAS

RAID 5, 6, 10 가

1. RAID 5, 6, 10 " "
2. NAS NAS 가
3. RAID "CONFIGURE SPARE DRIVE()"
4. SPARE DRIVE(가) "CONFIGURE"
5. "CONFIGURE SPARE DRIVE()" "OK()"

RAID 5, 6, 10

" " 가 .

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

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

: RAID 1, 5, 6 10 .

(RAID)

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

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

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

- RAID 1, RAID 5 RAID 6 RAID
- 가 RAID

	RAID 5	QNAP RAID 5	RAID 6	QNAP RAID 6
	N-1	N-1	N-1 N-2	N-1 N-2
(HDD)		N-1, 가 .		N-2, 가 .
RAID (RAID :)		NAS , , HDD .		NAS , , HDD .
RAID	N-2	N-2 HDD 가 , HDD / / .	N-3	N-3 HDD / / .

N =

/

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

: RAID

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

N A S R A I D

NAS

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

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

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

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

4.2.3

SMART

HDD , HDD S.M.A.R.T.(가)

NAS

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

4.2.4

NAS

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

- " " " "

가 (: , ,)

- QNAP Turbo NAS [61]
- [61]
- [62]
- [62]
- [62]
- [63]
- [63]

Q N A P T u r b o N A S

Turbo NAS 256 AES
NAS
/

NAS 가

AES :
AES(Advanced Encryption Standard) 가
가 AES- 128, AES- 192, AES- 256 [...] AES
128 , 128 , 192 , 256 AES
(: http://en.wikipedia.org/wiki/Advanced_Encryption_Standard)

AES QNAP NAS
. http://www.qnap.com/images/products/comparison/Comparison_NAS.html

Turbo NAS

- Turbo NAS , JBOD
RAID

- NAS . ,
- 가 .
- 가 .
- !
- .

NAS ,

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

가 !

NAS .

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

- NAS
(1) " "
- (4) " "

NAS 가
가

- NAS
NAS가 NAS

- NAS , NAS 가

, NAS Storage Manager(
)" > "Encrypted File System(
가

- : (
-).

- :
 - : NAS가 NAS
NAS
- (" !

- :
- : NAS가

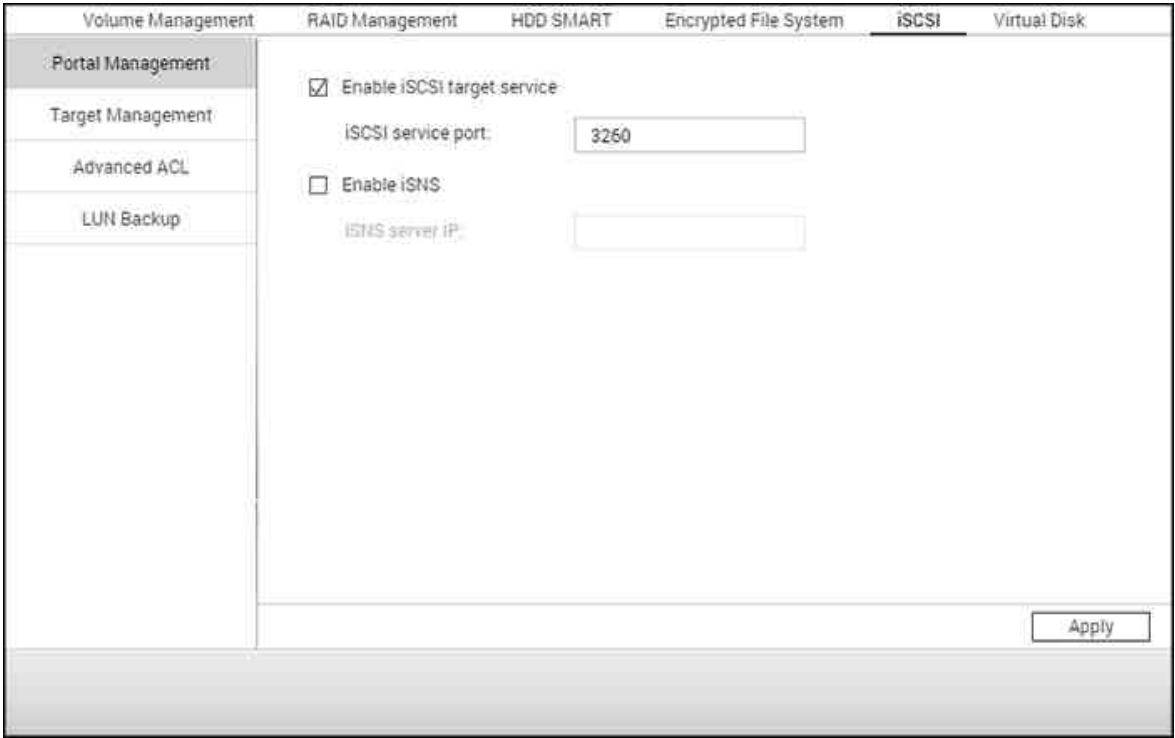
NAS "Storage Manager(
)" >
"Encrypted File System(
device(
)" "Unlock this
가

4.2.5 iSCSI

"Control Panel()" > "System Settings()" > "Storage Manager()"

iSCSI iSCSI ACL

LUN



- :
- _____ 65
 - _____ 67
 - _____ ACL 74
 - LUN _____ 75

4.2.5.1

NAS 가 iSCSI(Internet Small Computer System Interface) .

- :
- iSCSI 65
 - iSCSI 65
 - iSCSI LUN 66

i S C S I

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

: (iSCSI) iSCSI .

i S C S I

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

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

```
. "Use CHAP authentication(CHAP          )"
    , iSCSI          .
```

CHAP: iSCSI 가

"Mutual CHAP(CHAP)"

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

iSCSI LUN

iSCSI LUN iSCSI 가
LUN .

-
- The diagram illustrates two storage configurations:
- Top Configuration:** A host (represented by a circle) is connected to a RAID controller (represented by a rectangle). The RAID controller is connected to a single Network Attached Storage (NAS) unit (represented by a rectangle).
 - Bottom Configuration:** A host (represented by a circle) is connected to two separate Logical Unit Numbers (LUNs). Each LUN is connected to its own NAS unit (represented by a rectangle).

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

4.2.5.2

- iSCSI LUN
- iSCSI

67
 - LUN

68
 - iSCSI LUN

68
 - iSCSI

69










i S C S I

:	3.3.0	NAS
3.2.0		NAS

- iSCSI LUN LUN iSCSI LUN iSCSI
1. "Target Management()" "Quick Configuration Wizard()"
 2. "iSCSI LUN only(iSCSI LUN)" "Next()" LUN
 3. "Next()" LUN
 4. LUN ().
 5. "Next()" LUN
 6. LUN "Finish()" iSCSI
 7. LUN iSCSI

iSCSI		iSCSI
		iSCSI
		iSCSI
		iSCSI
LUN		LUN 가
		LUN 가

--	--	--

		
		
		LUN , CHAP , LUN , ,
		iSCSI
		LUN
		LUN
		LUN LUN LUN LUN "Un- Mapped iSCSI LUN List(iSCSI LUN)" LUN
		LUN iSCSI "Un- Mapped iSCSI LUN List (iSCSI LUN)" .
		iSCSI

LUN

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

- LUN
1. iSCSI LUN ()
 2. "Unmap()" LUN LUN iSCSI LUN
"Map()" LUN
 3. LUN "Apply()" .
 4. LUN
- NAS iSCSI LUN , (Windows PC, Mac Linux) iSCSI
iSCSI LUN 가

iSCSI LUN

- NAS iSCSI LUN
1. "iSCSI" > "Target Management()" iSCSI iSCSI LUN
"Modify()" .

2. LUN . LUN

3. "Apply()"

- :
- iSCSI LUN iSCSI .
- LUN , LUN 32TB 가

iSCSI

가 iSCSI NAS

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

Mac OS X에서 Xtend SAN iSCSI Initiator를 사용하여 iSCSI (QNAP NAS)에 연결하는 방법
 1. Mac OS X에서 Xtend SAN iSCSI Initiator를 설치합니다.
 2. iSCSI Initiator를 사용하여 NAS에 연결합니다.
 3. iSCSI LUN을 마운트합니다.

Xtend SAN iSCSI Initiator :

ATTO Mac OS X Xtend SAN iSCSI Initiator Mac에 설치하여 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
```

4.2.5.3 ACL

:	3.3.0	NAS	NAS
3.2.0		NAS	.

3.3.0 NAS 3.2.0

NAS iSCSI LUN NAS iSCSI LUN

"Advanced ACL(ACL)" "Add a Policy(가)"

, IQN NAS LUN

- : 가 LUN
- / : 가 LUN
- : 가 LUN

iSCSI LUN ,

iSCSI

"Edit()"

:	LUN	NAS	LUN
.			

:	IQN	?	
	iSCSI	"General()"	IQN
.			

4.2.5.4 LUN





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

- iSCSI LUN [75]
- iSCSI LUN [75]
- iSCSI LUN [76]
- LUN / / [77]

iSCSI LUN

iSCSI LUN NAS iSCSI LUN .
SCSI




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

	Start()	
		
		
		

iSCSI LUN

iSCSI LUN NAS

1. "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)"
2. "Restore an iSCSI LUN(iSCSI LUN)" "Next()"
3. , IP / / "Test()"
4. LUN "Next()"
5. "Next()"
6. NAS가 "Next()"
7. "Finish()"

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

iSCSI LUN

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

SCSI LUN

1. "Storage Manager()" > "iSCSI" > "LUN Backup(LUN)"
2. "Create a job()" "Next()"
3. NAS iSCSI LUN iSCSI LUN "Next()"
4. LUN NAS가 LUN iSCSI "Next()"
- 5.
6. NAS가 "Next()"

7. "Finish()"
- 8.
9. "iSCSI" > "Target Management()" 가 LUN iSCSI
iSCSI initiator iSCSI LUN

: Windows 7, Windows 2008 R2 LUN NAS LUN NAS LUN

LUN / /

NAS iSCSI LUN ,

: IT

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



4.2.6 가

가 가 . NAS QNAP NAS 8 가 iSCSI

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

가 NAS 가 , iSCSI

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

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

4.3

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

The screenshot shows the Network Settings window with the following components:

- Tabs:** TCP/IP, Wi-Fi, IPv6, Service Binding, Proxy, DDNS Service.
- IP Address Table:**

Edit	Link	Interface	DHCP	IP Address	Subnet Mask	Gateway
		Ethernet1 (1 GbE)	Yes	172.17.32.28	255.255.254.0	172.17.32.1
		Ethernet2 (1 GbE)	Yes	--	--	--
- DNS Server:**
 - ☒ Obtain DNS server address automatically:
 - ☐ Use the following DNS server address:

Primary DNS server:
 Secondary DNS server:
- Default Gateway:** Use the settings from: Ethernet 1
- Buttons:** Refresh, Port Trunking, Apply All.

- TCP/IP ⁷⁹
- Wi-Fi ⁸³
- IPv6 ⁸⁵
- ⁸⁶
- ⁸⁶
- DDNS ⁸⁶

T C P / I P

(i) IP

TCP/IP , DNS , NAS .

("Network Parameters()", "Advanced Options()", "DHCP Server(DHCP)") "Edit()"

. LAN 가 2 NAS

TCP/IP . NAS IP 2

Qfinder 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
LAN LAN

TCP/IP "Network Parameters()"

- : NAS
NAS가
- **D H C P** IP : 가 DHCP ,
NAS가 IP
- IP : IP IP ,
- : "Jumbo Frames()" 1500
가 CPU
MTU() ()
NAS (1500)
가 MTU
NAS MTU 4074, 7418, 9000

- 가 MTU 가
- NAS QNAP

가 LAN(VLAN) 가
NAS가 VLAN 가 , VLAN

VLAN 가 "Enable VLAN(VLAN)" VLAN ID(0 - 4094)
VLAN ID 가 VLAN 가
VLAN ID NAS , NAS
NAS가 VLAN NAS가 가
LAN VLAN
NAS

: VLAN x86 NAS

D H C P
DHCP() IP
NAS가 가 "Enable DHCP Server(DHCP)"
NAS DHCP

• :
 • DHCP가 IP
 • 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 IP
 NAS
 • 1 DNS : 1 DNS IP
 • 2 DNS : 2 DNS IP

• 1 2 DNS IP ISP . NAS가
 (BT), URL
 DNS
 • DHCP IP 1 2 DNS 가
 "0.0.0.0"

(iii)

LAN 가 (LAN
 NAS).

(iv)

NAS 가
()
(" ")가 (" " 1)
) 가

NAS NAS LAN 가
(i) (ii)
NAS
1. "Port Trunking()" (1+2, 3+4, 5
2. +6 7+8). Port Trunking()
()
3. "Apply()"
4. " "

- 가 NAS
- LAN 가 NAS

NAS		
Balance- rr()	가 Balance- rr	
	가 MAC ()	
Balance XOR	Balance XOR , 가 2 , MAC 가 MAC xmit_hash_policy Balance XOR	

IEEE 802.3ad ()	802.3ad , LACP 가 IEEE 802.3ad 가	802.3ad LACP
Balance-tlb ()	Balance-tlb 가 (). 가 가 MAC 가 Balance-tlb	
Balance-alb ()	Balance-alb balance-tlb IPV4 () ARP 가 ,	

Wi-Fi



Wi-Fi USB NAS NAS가
가 NAS Wi-Fi

:

- , USB ,
- USB Wi-Fi
- USB Wi-Fi [http://www.qnap.com/compatibility "USB Wi-Fi"](http://www.qnap.com/compatibility-USB-Wi-Fi)

• TS- 269H

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

/		
		Wi- Fi
		Wi- Fi 가
		Wi- Fi 가
		Wi- Fi
		Wi- Fi
		Wi- Fi
		Wi- Fi

"Rescan()" Wi- Fi Wi- Fi
"Connect()" "Next(
)" NAS가

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

2: Wi-Fi :
 SSID() Wi-Fi "Connect
 to a Wi-Fi network(Wi-Fi)"

1. (SSID)
 - (): 가
 - WEP: 4 WEP 1
 - WPA- Personal: AES TKIP
 - WPA2- Personal:
- 2.
3. NAS가 Wi-Fi 가 "Finish()"
4. IP "Edit()" DHCP IP

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

- WEP 5 13 ASCII 10 26 16
 (0-9 A-F)
- "N-only(N)" "B/G/N mixed(B/G/N)"
 /AP
- WPA2 Windows 7 NAS
 WEP Windows 7
- IP 가

IPv6

NAS "stateless()" IPv6 IPv6 RADVD(Router
 Advertisement Daemon), RFC 2461 가 NAS IPv6
 IPv6 NAS

- CIFS/SMB
- AFP
- NFS
- FTP
- iSCSI
-
- QTS
- RTRR

- SSH
- Windows Qsync
- NetBak Replicator

NAS가 "Enable IPv6(IPv6)" "Apply()"

IPv6 . IPv6

• "Edit()"

- **IP v 6** : IPv6 가 ,
- NAS가 IPv6
- **IP** : IP IP (: 2001:bc95:1234:5678),
(: 64), NAS
- ISP
 - RADVD(Router Advertisement Daemon) : NAS IPv6 IPv6
IPv6 ,
- **IP v 6 D N S** : DNS DNS
ISP . IPv6
"::"

NAS 가 () . NAS

가 "Apply()"

"Refresh()"

NAS

:

- ()가 NAS
- ,

NAS

D D N S

IP

NAS

DDNS

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

: DDNS .

가 :

- QNAP Turbo NAS
- QNAP NAS DDNS

4.4

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

Security Level Network Access Protection Certificate & Private Key

☐ Allow all connections

☒ Deny connections from the list

☐ Allow connections from the list only

Enter the IP address or network from which the connections to this server will be allowed or rejected.

Add Remove

Genre	IP Address or Network Domain	Time Left for IP Blocking

Apply

Apply All

IP

가

, "Apply()"

가

. IP가

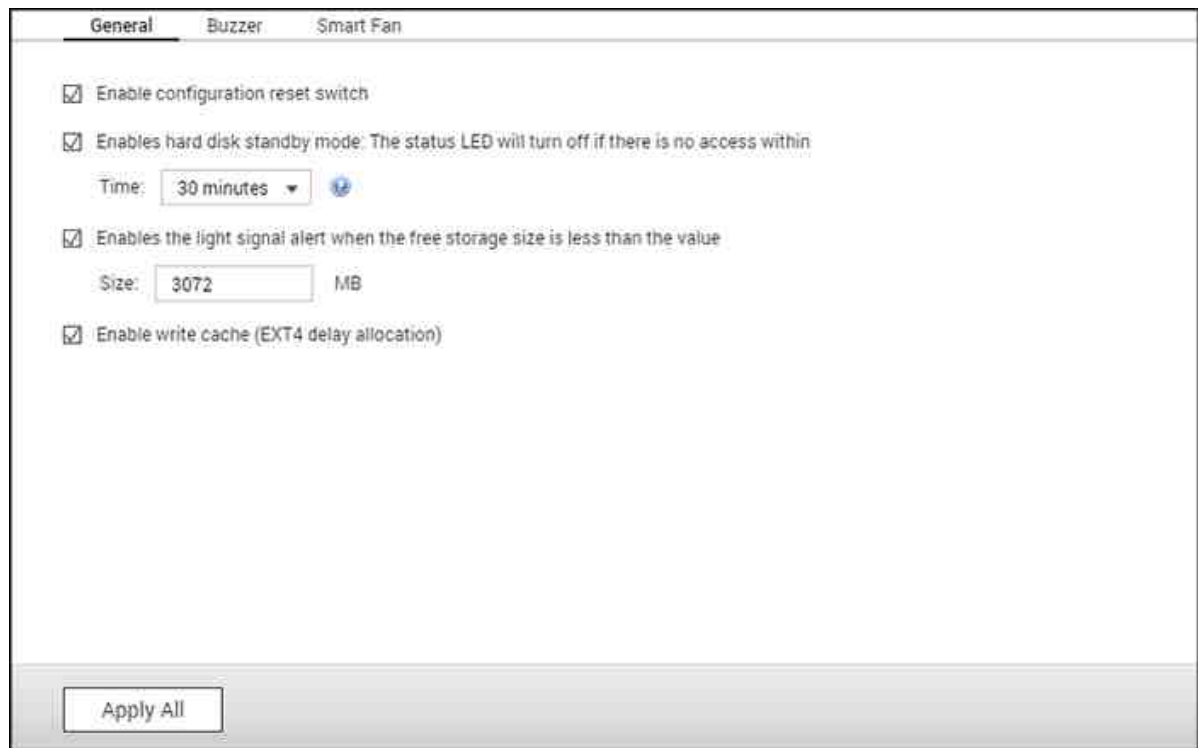
, IP

&

- (SSL) 가
- , SSL NAS 가
- . NAS X.509
- :
- :
- & :

4.5

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



- : 3
 - (NAS) 10
 - 가 .
 - : 가 .
 - : admin.
 - TCP/IP : DHCP IP .
 - TCP/IP :
 - TCP/IP : , 가 "Active Backup (Failover)(())"
 - : 8080()
 - : ()
 - LCD : (); LCD NAS 가
 - VLAN
 - : NAS 가
 - : 가 .
 - NAS가 ("Administration()" > "Restore to

Factory Default()". , NAS

NAS

- 가 NAS 가 NAS
LED가 HDD LED
• **SATA** 가 가
: SATA 가 가
LED가
• **(EXT4)**: NAS EXT4 ,

. Download Station, MySQL , , Surveillance Station. NAS가 가

- :(PSU)가 NAS PSU가
NAS (1U 2U). "System Settings()" >
"Hardware()"
PSU가 NAS가 "System
Logs()" . NAS PSU가
• **LED** : NAS LED (: NAS LED 가 (:
TS- 453mini), LED LED

: (, 가
) ()가 가

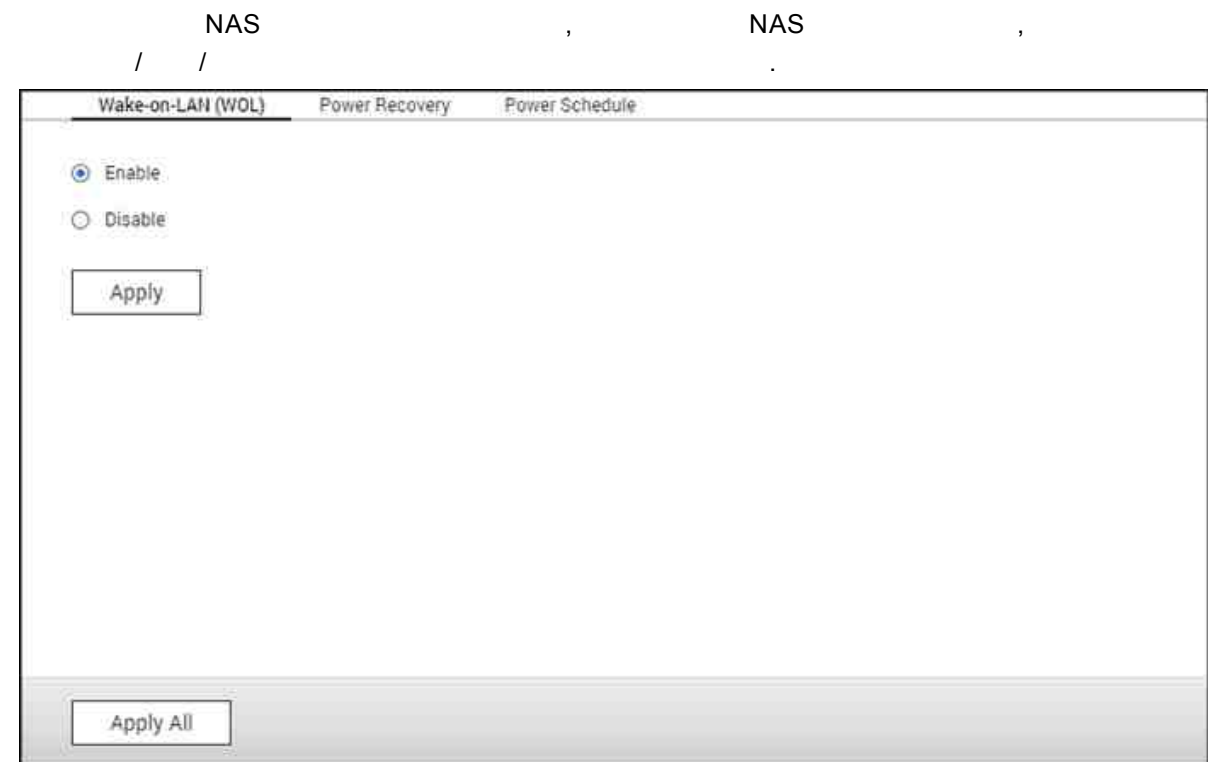
. Download Station SQL

- :
• ():
NAS , CPU , 가
가

• :
.

: NAS가 . NAS

4.6



EuP

EuP() , ,
가 (EU) .

EuP NAS NAS
(1W) .

- Wake on LAN:
- AC : NAS
- , , :

EuP NAS 가 1W . EuP
Wake on LAN, AC ,

NAS .

Wake-on-LAN()

Wake on LAN NAS . NAS
, , 가
Wake on LAN . NAS
, NAS Qfinder Pro Qmanager . NAS

"Control Panel()" > "System Settings()" > "General Settings ()" > "Power()" > "Wake- on- LAN(WOL)(WOL)" WOL

- For Qfinder Pro NAS "Tools()" > "Remote Wake Up (Wake on LAN)()"
- Qmanager NAS ">" "Wake on LAN(WOL)(WOL)"

NAS

AC

NAS

: x86 NAS "Control Panel()" > "System Settings()" > "Power()" > "Power Recovery()" "Turn on the server automatically()"

/ ,

15

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

/ 가 NAS가

-
- NAS QNAP 가 , 가

4.7

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

The screenshot shows the 'Notification' configuration page for a NAS device. The 'E-mail' tab is active. The 'SMTP Server' section contains the following fields: 'Select an e-mail account' (dropdown menu showing 'Custom'), 'SMTP server' (text box with 'smtp.gmail.com'), 'Port number' (text box with '465'), 'E-mail' (text box with 'Serphant@gmail.com'), 'Username' (text box with 'Serphant'), 'Password' (text box with masked characters '*****'), and 'Secure connection' (dropdown menu showing 'SSL'). Below this is the 'Alert Notification' section, which includes a heading 'Alert Notification' and a sub-section 'When the following system events occur:' followed by a list of system events. At the bottom of the page is an 'Apply All' button.

NAS

SMTP

- Select an email account():
 - SMTP Server(SMTP): SMTP (: smtp.gmail.com)
 - Port Number(): SMTP 25
 - E- mail():
 - Username and Password():
 - Secure connection(): SSL TLS NAS SMTP
- Alert Notification(): (/)가 NAS 2

S M S

4.8

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

"Automatically check if a newer version is available when logging into the NAS web administration interface(NAS)" NAS가 가 NAS "Check for Update(")"

1. QNAP . <http://www.qnap.com>.
2. NAS IMG
3. NAS ,
4. "Browse(")" "Update System(")" 가 NAS가

- :
- QTS : NAS
- QNAP

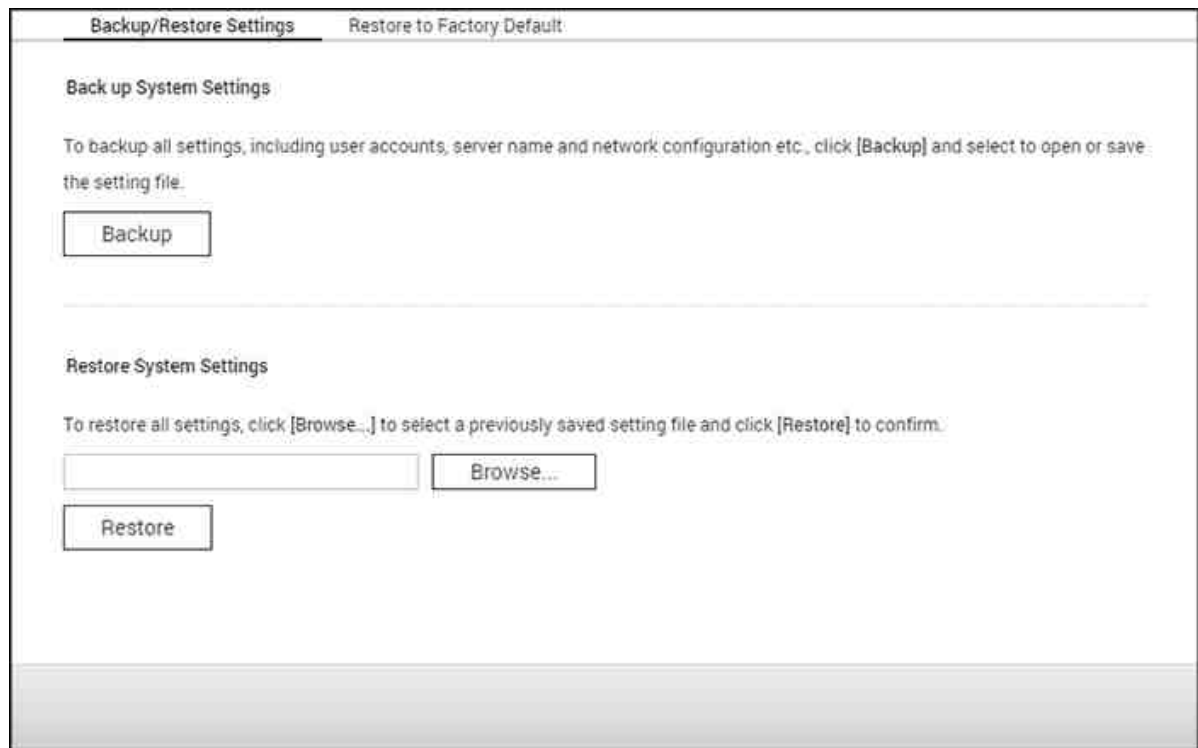
Q N A P Q f i n d e r P r o

1. NAS : NAS "Tools()" "Update Firmware()"
2. NAS
3. NAS : "Start()"

: LAN NAS가 ,
가

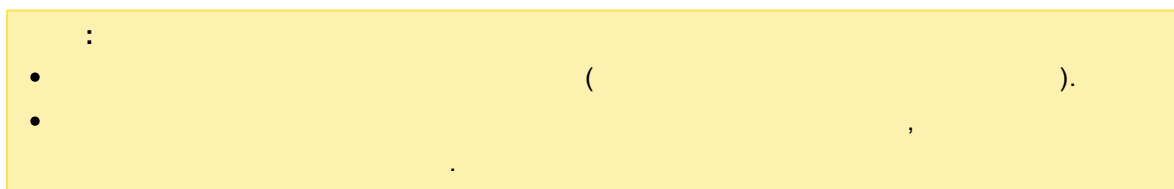
4.9 /

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



/

- : , , "Backup()" . , LDAP, Windows , Mac , NFS, FTP, WebDAV, , SNMP .
- : "Browse()" "Restore()" .



- :
- :

- **NAS** : NAS .

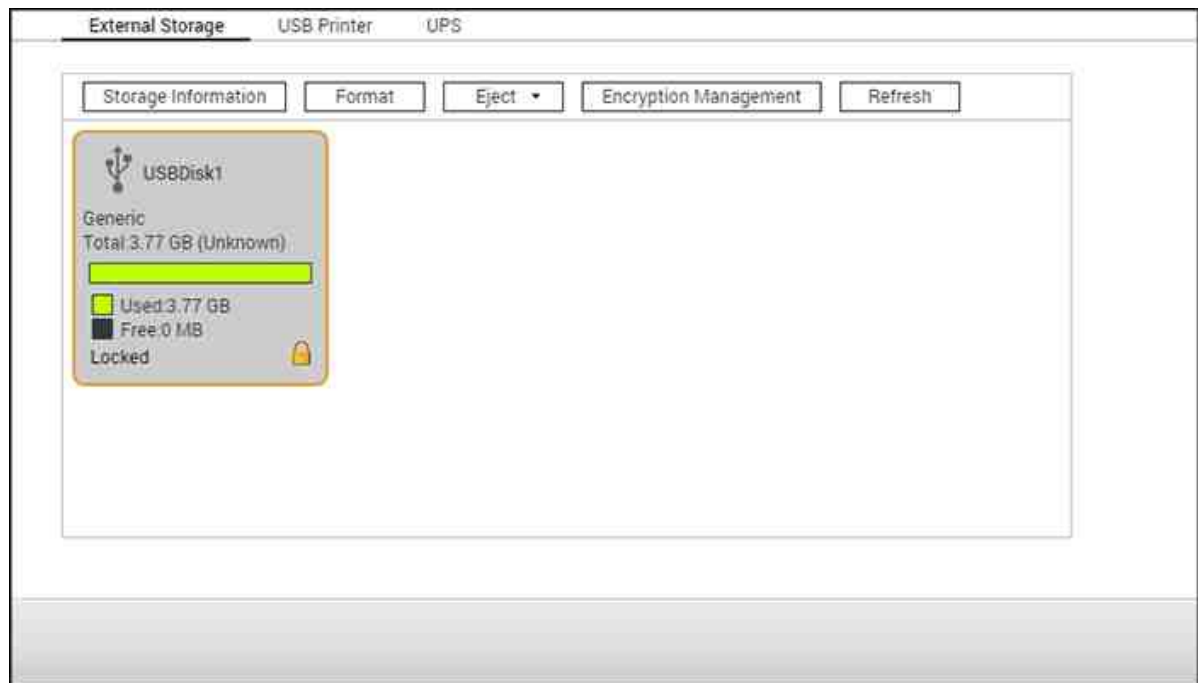
```

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

```

4.10

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



- 102
- USB 105
- UPS 112

4.10.1

NAS USB NAS eSATA USB eSATA 가 .

· :

- 102
- 102
- 102
- 103
- 103

"Storage Information()"
 USB eSATA . NAS가 USB/
 eSATA 가 .

EXT3, EXT4, FAT32, NTFS HFS+(Mac)
 . "Format()"

: QTS 4.1 USB . USB
 EX3 EX4 "Storage Information(
)" File Station USB
 (File Station USB). x69,
 x70, x79 NAS

NAS , "Encryption(
)" : AES 128- , 192- 256-
 (8- 16) . "Save encryption key()" NAS
 가 NAS가
 . "Format()" . "OK()" 가
 가 "Ready()" .

: EXT4, NTFS HFS+ 2TB

"Eject()" 가 . "Disconnect disk partition(
)" . "Remove device()" .

"Eject()"

: 가
(Windows PC "Safely Remove Hardware(
)" , Mac "Eject()" , QTS
"Eject()").

가 NAS , "Encryption Management()" / , /

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

:
• "Format External Storage
Drive()" "Encryption()"
•
"Control Panel()" > "Applications(
)" > "Backup Station" > "External Drive()"

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

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

1- NAS

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

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

4.10.2 USB

NAS Windows, Mac Linux (Ubuntu)
3 USB

NAS USB 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
IP , "Allow printing()"
"Deny printing()" IP (*)
"No limit()"
"Apply()"

: IPP Bonjour Samba

4.10.2.1 Windows 7

Windows 7

- 1.
2. "Add a printer(
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 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)"
가 .
5. 가 . "Continue()"
6. .

4.10.2.3 Mac OS 10.5

Mac OS X 10.5

NAS

가 NAS

가 "USB Printer(USB)"

1. "Network Services()" > "Microsoft Networking(Microsoft)"
NAS 가
2. Mac "Print & Fax()"
3. + 가
4. NAS
5. NAS
- 6.
- 7.

4.10.2.4 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 .

4.10.2.5 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/"
4. "Verify()"
5. 가
- 6.
7. 가
8. 가 "Apply()"
- 9.

4.10.3 UPS

UPS() NAS "UPS" 가 NAS . 1)
 AC NAS NAS가 2) 1
 NAS가 NAS "NAS UPS"
 NAS UPS <
 15% 가 NAS가 30
 ()

- :
- USB ^[112]
 - - USB ^[112]
 - - SNMP ^[112]
 - ^[112]
 - ^[113]
 - NAS UPS ^[113]

U S B

- USB

USB

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

- SNMP

SNMP

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

UPS 가 UPS
 . UPS가 NAS UPS
 UPS

1. NAS("UPS master(UPS)")가 UPS
2. "Enable network UPS Support(UPS)" NAS가 USB UPS
3. AC NAS 가 NAS가 NAS가 NAS가
4. UPS "IP address(IP)"
5. "Apply All()" NAS

1. NAS가 UPS
2. "Protocol()" "Network UPS slave(UPS)" NAS가 NAS가
3. UPS IP
4. AC NAS 가 NAS가 NAS가
5. "Apply All()" NAS가 NAS가

:	UPS	가 NAS	SNMP
NAS IP	UPS		

NAS UPS

- 3 가
 - 1 :
 - 2 : UPS 가
 - 3 : UPS 가
- 1 :
- NAS가 UPS . UPS
- < 15%가 가 ().
- NAS가 30 가 ().
- UPS > 15%가 NAS가 "UPS"

가

NAS

2 :

"UPS"

-

:

NAS가

NAS

- NAS

:

-

NAS가

- NAS

3 :

"UPS"

-

:

NAS

- NAS

NAS "System Settings()" > "Power

Recovery()"

4.11

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

System Information	Network Status	System Service	Hardware Information	Resource Monitor
Summary				
Server name			NAS04EF14	
Model name			TS-259 Pro+	
Serial number			Q108100557	
Total memory			997.2 MB	
Firmware version			4.2.1 Build 20151214	
System up time			0 day 8 Hour 30 Minute(s)	
Time zone			(GMT+08:00) Taipei	
Filename encoding			English	

, CPU, , , 가

: CPU NAS .

NAS가

NAS














- NAS CPU , ,
• CPU Usage(CPU): NAS CPU .

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

: NAS

4.12

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

System Event Logs		System Connection Logs		Online Users		Syslog Client Management	
All events ▾		Clear All		Save		Content Search 	
Type	Date	Time	Users	Source IP	Computer Name	Content	
	2015/12/16	17:56:31	System	127.0.0.1	localhost	Network connection resumed.	
	2015/12/16	17:56:10	admin	172.17.32.25	—	[TCP/IP] Changed configuration of network interfaces [Trunking Group 1] from [STANDALONE] to [active-backup]	
	2015/12/16	17:56:09	admin	172.17.32.25	—	[Port Trunking] Enabled.	
	2015/12/16	17:47:01	admin	172.17.32.25	—	[iSCSI] Start target service in port "3260" successfully.	
	2015/12/16	17:46:59	admin	172.17.32.25	—	[iSCSI] Change target service setting successfully.	
	2015/12/16	17:00:15	System	127.0.0.1	localhost	Drive 2 plugged in.	
	2015/12/16	15:14:39	System	127.0.0.1	localhost	[App Center] QcloudSSLCertificate enabled.	
	2015/12/16	15:14:39	System	127.0.0.1	localhost	[App Center] QcloudSSLCertificate 1.0.38 installation succeeded.	
	2015/12/16	15:12:55	System	127.0.0.1	localhost	[Media Library] Media Library Server started.	
	2015/12/16	15:12:55	System	127.0.0.1	localhost	[Media Library] Database upgrade ended.	
<div> Page 1 /1 </div> <div>Display item: 1-33, Total: 33 Show 50 items</div>							

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(
)"

: AFT SSH ,

NAS 가 .

: IP IP .

Syslog

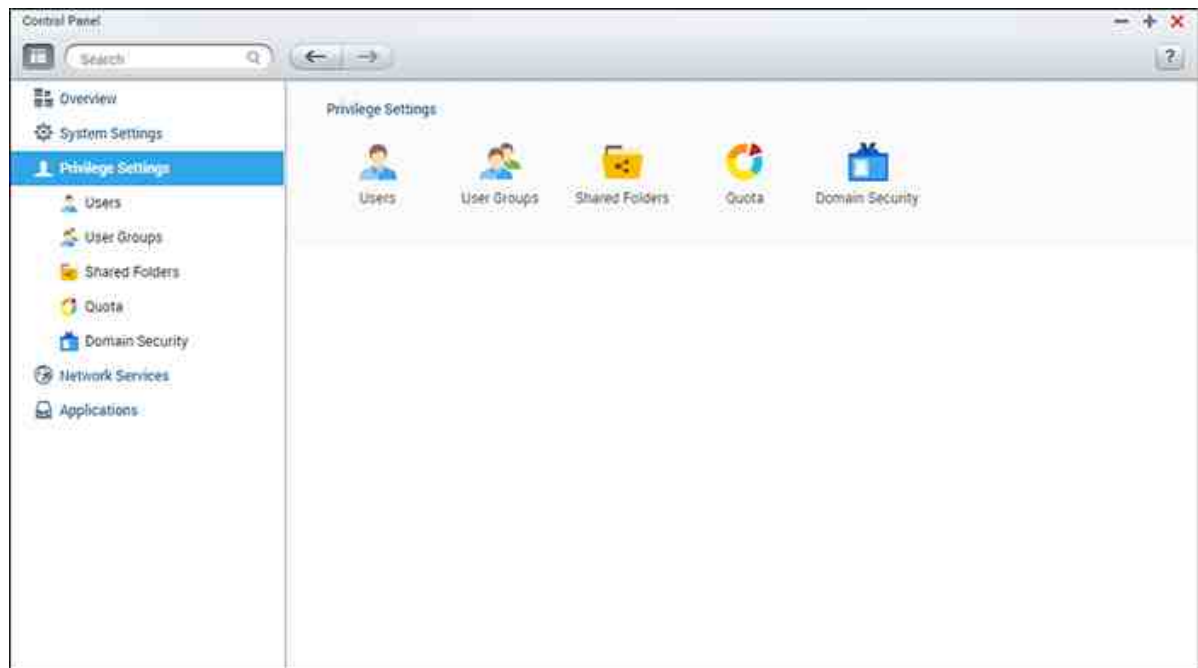
Syslog IP . CSV
Syslog .

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

IP "Search()" , , , ,
IP .

5.

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



- 120
- 124
- 125
- 133
- 134

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
64 .
 - 120
 - 121
 - 가 / 121
 - 122

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

가

. NAS 가

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

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

NAS TXT, CSV BIN 가 .

TXT

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

, NAS

CSV (Excel)

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

BIN (NAS)

QNAP NAS BIN .

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

NAS

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

"Homes"

```

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()"
NAS

Shared Folder Advanced Permissions Folder Aggregation							
<div>Create Remove Restore Default Shared Folders</div>							
	Folder Name	Size	Fold...	Files	Hi...	Volume	Action
<input type="checkbox"/>	Download	4 KB	1	1	No	Single Disk: Drive 1	  
<input type="checkbox"/>	Invention	4 KB	1	1	No	Single Disk: Drive 1	  
<input type="checkbox"/>	Multimedia	11.36 MB	6	107	No	Single Disk: Drive 1	  
<input type="checkbox"/>	Public	4 KB	1	1	No	Single Disk: Drive 1	  
<input type="checkbox"/>	Recordings	4 KB	1	1	No	Single Disk: Drive 1	  
<input type="checkbox"/>	Web	8 KB	1	2	No	Single Disk: Drive 1	  
<input type="checkbox"/>	homes	20 KB	7	4	No	Single Disk: Drive 1	  
<div>Page: 1 / 1 Display item: 1-7, Total: 7 Show 10 Items</div>							




- :
-  125
 - ISO  130
 -  131

NAS
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-

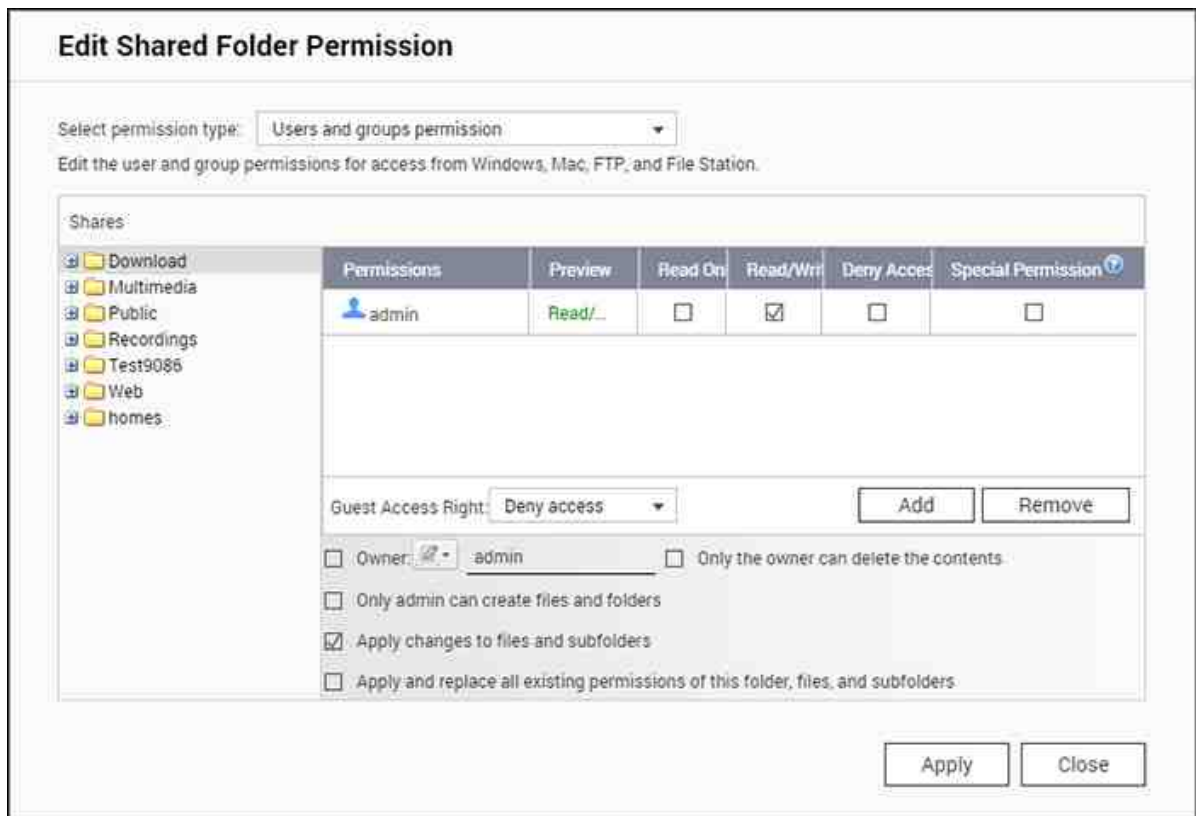
	879U-RP, TS-EC879U-RP, TS-1279U-RP, TS-EC1279U-RP
--	---

-) (
1. "Create()" > "Shared Folder()"
 2.
 - :
" / \ [] : ; | = , + * ? < > ` ' "
 - :
 - :
 - : NAS가
 3. :
/
 4. Advanced settings():
 - :
 - : (
 - Hide Network Drive():
Networking Microsoft
 - Lock file () (Oplocks): Windows 가
(oplock)
Oplocks ,
가 가
 - Enable Network Recycle Bin():
"Restrict the access of Recycle Bin to administrators
only for now()"
 - :
 5. "Next()"
 6. "Finish()"
- "Remove()" . "Also delete
the data(Mounted ISO image files will not be deleted)(
ISO))"
- NAS 가

		/ , oplocks, , / , () FTP
		
		

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

NAS
, /
.
1. "Privilege Settings()" > "Shared Folders()" > "Advanced Permissions
()" . "Enable Advanced Folder Permissions(
)" "Apply All()"
2. "Privilege Settings()" > "Shared Folders()" > "Shared Folders(
)" (: "Dept") "Folder Permissions(
)" 가
가 가
(Dept)
"+
Add(+ 가)"
3. "Add(가)"
4.
○ :
○ :
5. "Folder Property()"



6. "Set()"
- : (: "Dept")
가
/ Admin, HR,
"Apply changes to files and subfolders(
)" "Apply and replace all existing permissions of this folder, files, and
subfolders(,)"
- admin :
admin
"Dept" Admin, HR, Production
Dept / 가
Admin01, Admin02, HR1 HR2
- :
가 "Only
the owner can delete the contents(
can create files and folders(admin
)" "Only admin
)"
- , :

contents() "Only the owner can delete the
 folders(admin) "Only admin can create files and
 "Read only() "Read/Write(/) 가
 가 Microsoft Networking "admin"
 "Read/Write(/)" 가 , 가
 Windows
 가 "admin" . NAS "admin"
 가 가 가
 7. "Apply()" "YES()"

- 230
- "deny access()"
- "read only access()"
- /
- "Only admin can create files and folders(admin
)" ().
- "Control Panel()">"Privilege Settings()">"Shared Folders(
)">"Shared Folder()" "Access Permissions(
)" ID(500)가
 , ID "Remove()"
- ID

Microsoft Networking

NAS Samba(Windows)
 IP :
 1. "Folder Permissions()"
 2. "Microsoft Networking host access(Microsoft
 Networking)"
 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
: 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"

ISO

ISO ISO NAS . 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).

ISO NAS

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

NAS ISO

File Station

File Station  216

- :
ARM NAS ISO
(가).
ISO

• Mac OSX # 가 WebDAV

Microsoft NAS 가 NAS 10 NAS

1.

2. "Create A Portal Folder()"

3.

4. "Action()" "Link Configuration()" 가 가 가

5. , NAS

• Microsoft Windows AD

• 가 NAS AD 가 가

"Advanced Folder Permissions()" "Windows ACL"

	FTP, AFP, File Station, Samba	3(, & ,)	NAS UI
Windows ACL	Samba	13(NTFS)	Windows File Explorer
	FTP, AFP, File Station, Samba	(https://www.qnap.com/i/en/trade_teach/con_show.php?op=showone&cid=6)	Windows File Explorer

"Advanced Folder Permissions()" NAS

"Shared Folders()" "Advanced Folder Permissions()" "Folder Permissions()" "> "

Windows ACL

"Windows ACL" Windows File Explorer Windows ACL NTFS
: <http://www.ntfs.com/ntfs-permissions.htm>

•

- "Advanced Folder Permissions()" Windows ACL
Windows File Explorer NAS
FTP, AFP File Station NAS

가

- Windows ACL 가 NAS
AFP, File Station FTP ()
/) Windows ACL

: (AFP, NFS, FTP, WebDAV) " " / "
" " " / " "

5.4

가

-
-

"Generate ()" CSV
"Download ()"

5.5

NAS, Microsoft Active Directory (Windows Server 2003/2008/2012)
 Lightweight Directory Access Protocol (LDAP) . NAS
 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 AD
NAS 가 . AD NAS
Windows Server 2008 R2 NAS
V3.2.0 NAS AD .

NAS Active Directory()

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

:

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

Quick Configuration Wizard() NAS Active Directory(AD)

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

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

Windows 2003

AD AD "System Properties()" "Full
2003 ,
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)"
 - LDAP : LDAP IP
 - LDAP : NAS LDAP :
 - ldap:// = LDAP (: 389).
 - ldap:// (ldap + SSL) = SSL (: 686). LDAP
 - Ldap:// (ldap + TLS) = TLS (: 389). LDAP
 - BASE DN: LDAP : dc=mydomain,dc=local
 - DN: LDAP cn=admin, dc=mydomain,dc=local
 - :
 - DN: 가 (OU). : ou=people,dc=mydomain, dc=local
 - DN: (OU). ou=group,dc=mydomain, dc=local
4. "Apply ()"
 , NAS LDAP
5. LDAP
 - 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

L D A P

Microsoft (Samba) LDAP :

1. LDAP LDAP Samba
2. Samba LDAP 가 .

A. : 가 Samba LDAP :

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

B. Samba schema:

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

samba schema :

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

/etc/ldap/slapd.conf (openldap)
:

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

LDAP

:

1. Linux OpenLDAP

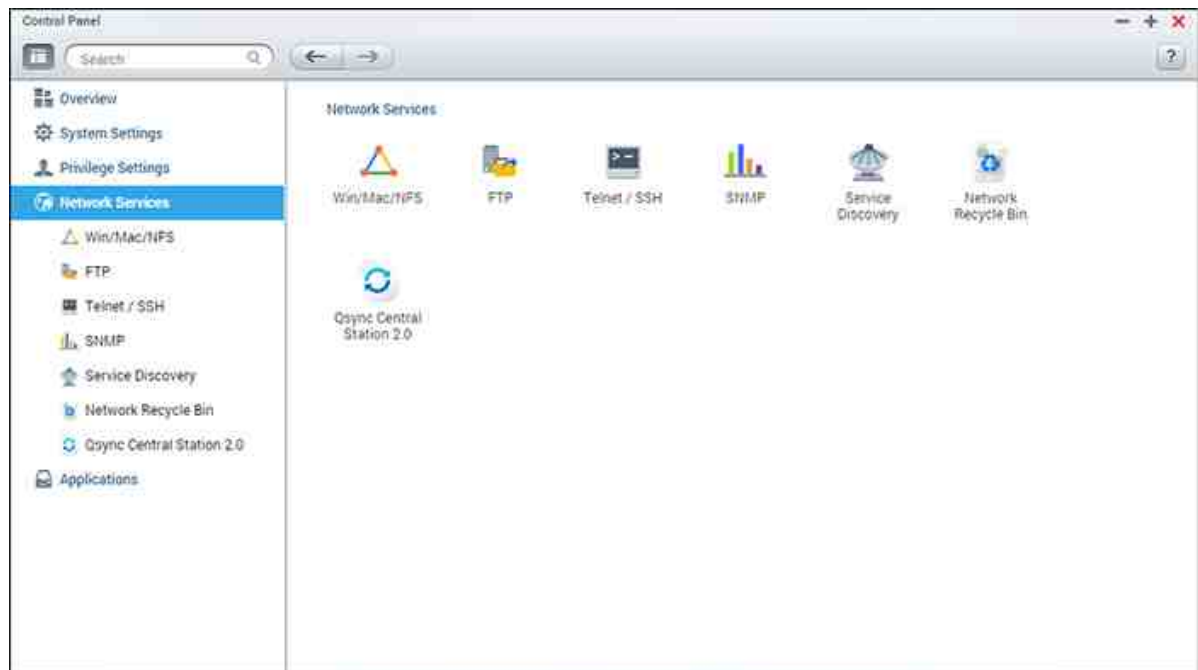
- DN: dc=qnap,dc=com
- DN: cn=admin,dc=qnap,dc=com
- DN: ou=people,dc=qnap,dc=com
- DN: ou=group,dc=qnap,dc=com

2. Mac Open Directory

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

6.

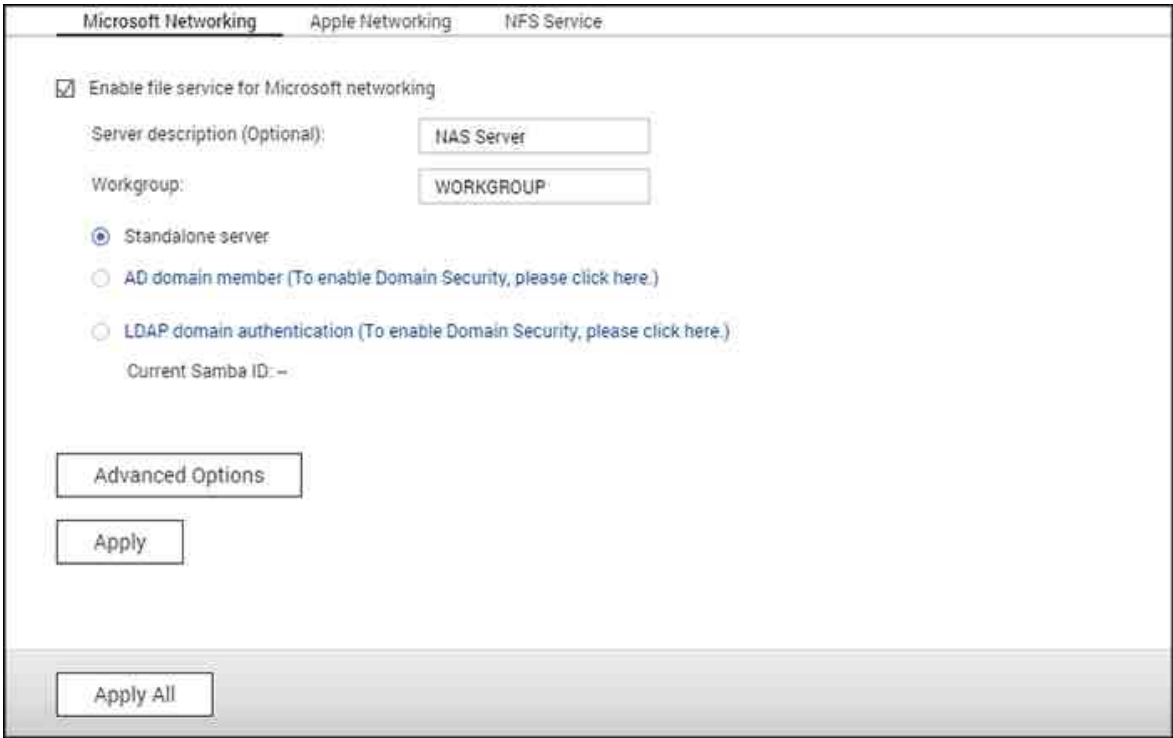
"Control Panel()" > "Network Services()" 가 NAS



- Win/Mac/NFS [141]
- FTP [145]
- Telnet/SSH [147]
- SNMP [148]
- [149]
- [150]
- Qsync Central Station [152]

6.1 Win/Mac/NFS

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



- Microsoft 141
- Apple 143
- NFS 143

Microsoft

Microsoft Windows Network NAS Microsoft

- NAS "Privilege Settings()" > "Users()"
- (): 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 IP WINS
가 , WINS IP

- : Windows
PC

가 , 가
"Domain Master()" NAS

- **NTLMv2** : NMLMv2 NT LAN Manager 2 ,
Microsoft Networking NTLMv2
NTLM(NT LAN Manager) NTLMv2

- : IP DNS WINS
가 . NAS WINS WINS
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 . (. NAS .)

Apple

Mac NAS Apple Filing Protocol . AppleTalk
가 NAS
. (*)
. Mac OS X 10.7 Lion NAS "DHX2
Authentication Support(DHX2)" . "Apply()"
. Mac . "Go()" >
"Connect to Server()" , 가 "Command+k"
. "afp://YOUR_NAS_IP_OR_HOSTNAME" "Server Address()"
가 .

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

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

NFS

Linux NAS NFS . NAS
NFS "Privilege Settings()" > "Share Folders(
)" . "Action()" Access Permission()
. NFS
. " / " " " , NFS IP

- Read/Write(/): 가
- Read only(): 가

NFS NAS

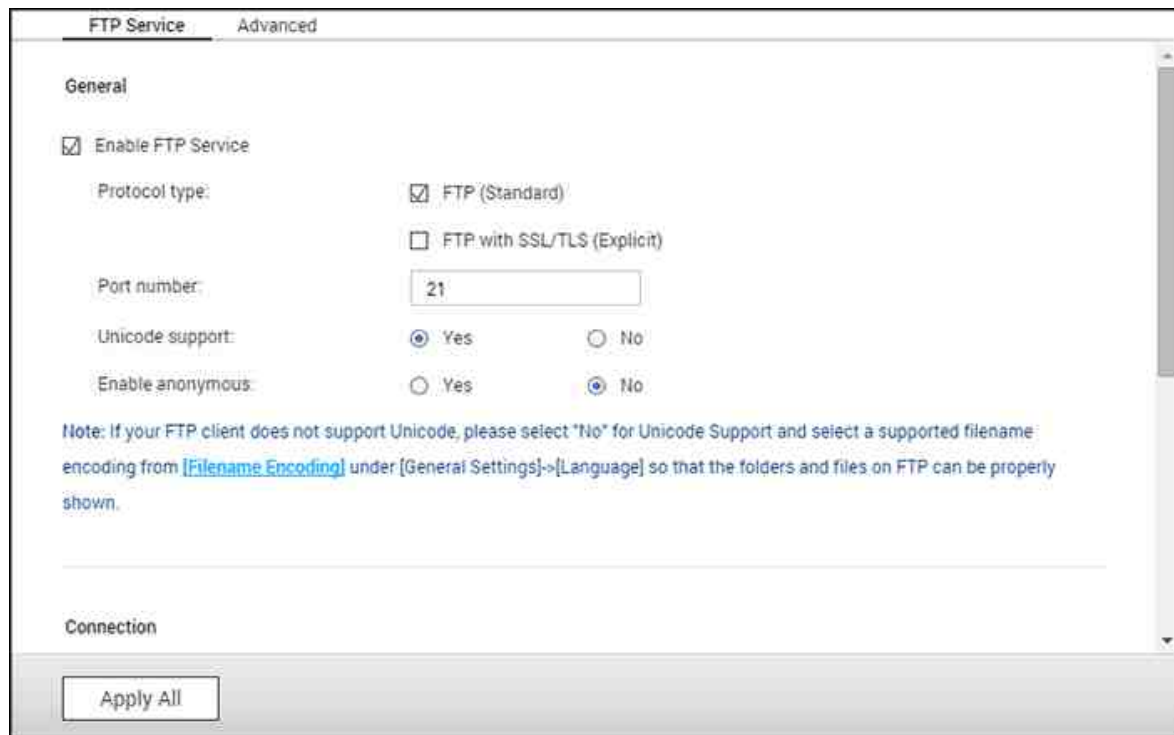
Linux .
mount -t nfs <NAS IP>:/<Shared Folder Name> <Directory to Mount>
, NAS IP 가 192.168.0.1 /mnt/pub "public(
)"
mount -t nfs 192.168.0.1:/public /mnt/pub

: "root()" .

ID ,
.

6.2 FTP

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



FTP

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

	FTP	NAS	RAM
• NAS	가 1 GB	, 256	.
• NAS	가 2 GB	, 512	.
• NAS	가 3 GB	, 1024	.

- **FTP** : (55536- 56559) 1023

- **FTP** **IP** : FTP FTP
가 , 가 WAN FTP
IP FTP 가 FTP

NAS FTP NAS RAM
가 1 GB , 256 . - NAS 가 2 GB ,
512 . - NAS 가 3 GB , 1024 .

6.3 Telnet/SSH

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

After enabling this option, you can access this server via Telnet or SSH connection.

Note: Only the account admin can login remotely.

☐ Allow Telnet connection

Port number: 13131

☒ Allow SSH connection

Port number: 22

☒ Enable SFTP

Apply

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

6.4 SNMP

SNMP (Simple Network Management Protocol)

SNMP 가 PC SNMP (SNMP)
 . NAS , 가 NAS (SNMP)

SNMP

SNMP

After enabling this service, the NAS will be able to report information via SNMP to the managing systems.

☒ Enable SNMP service

Port number:

161

SNMP trap Level:

☐ Information☐ Warning☐ Error

Trap address 1:

Trap address 2:

Trap address 3:

SNMP version:

SNMP V1/V2

Community:

public

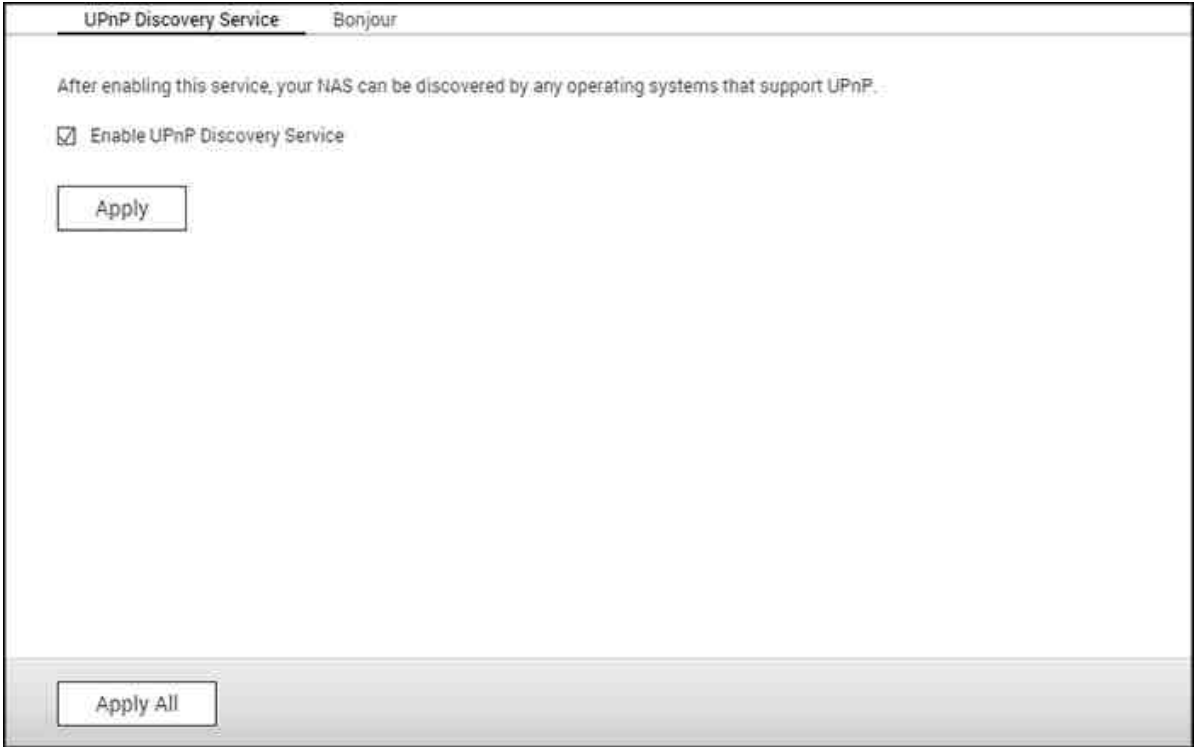
SNMP MIB

Apply

SNMP	SNMP
	SNMP IP 3
SNMP MIB()	MIB SNMP NAS ASCII SNMP MIB (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 .



U P n P

UPnP 가 , UPnP 가 UPnP NAS .

B o n j o u r

Bonjour , Mac IP DNS
NAS (FTP)

: NAS가
Bonjour .

6.6

	NAS		QTS
@Recycle	가	(1- 180)	
	가		
			Samba, AFP, FTP, QNAP File Station



- "Empty All Network Recycle Bin(
)"
 - @Recycle
 - "RECOVER()"
 - @Recycle
 - "Del (from recycle)"
 - "Empty Recycle Bin(
)"
- , "Control Panel
()" > "Privilege Settings()" > "Shared Folders()" 가 ,
"Action()" "Property()" "Restrict the access of Recycle
Bin to administrators only for now()"

" eSATA	: 가	"@Recycle"	"	. .	USB/
------------	--------	------------	---	--------	------

6.7 Qsync Central Station

Qsync Central Station 2.0 NAS
Qsync 가 NAS



- [152]
- Qsync Client [153]
- [153]
- [154]
- [155]
- [156]
- [157]
- Qsync [159]
- [160]

Qsync 3

1. NAS
2. Qsync Client , Qfile
3. NAS(Qsync) ("Qsync ").

1. NAS

- "Control Panel()" > "Privilege Settings()" > "Users()" > "Create()" ("Qsync Central Station 2.0" > "Users()")

- > "Create a User()").
- NAS .

2. Qsync Client

- "Overview()" (NAS NAS
- > "Qsync Central Station 2.0" > "Overview()") QNAP
- . "Support()" > "Download()" >
- "Utilities()".
- Qsync Client (Windows 가).
- iOS Android Qfile

3. Qsync Client

- Qsync Client .
- 1. LAN NAS "Search()" IP
- (IP : 10.8.1.20 192.168.1.100). NAS (
-) myQNAPcloud (: andy@myQNAPcloud.com).
- 2. NAS .
- 3. PC Qsync .
- 4. Qsync PC .
- 5. "Apply()" .
- 6. NAS .

: NAS 가 IP 가 .
IP . (: 8080)

Qsync Client

- Windows Qsync 가 Qsync 가 .
- Qsync Client .
- Qsync / (Qsync Client가
- NAS) PC 가
- 가

- 가 . Qsync Central Station Qsync Client가
- NAS Qsync
- 1. PC Qsync .
- 2. (Qfile) Qsync .
- 3. NAS File Station Qsync .

- Qsync " " Qsync 가 ().
- Windows File Explore .
- Qsync가 LAN 50GB .
- Qsync SAMBA, FTP AFP . File Station
- Qsync Client .
- Qfile .

Station 가 가 Qsync Central

Qsync Client

Windows :

1. Qsync "Share the link()"
2. .
3. SSL , , "Settings()"

NAS File Station Qsync "Share()"

, Qfile Qsync

"Share()"

- 가
1. NAS .
 2. Qsync Client가 .
 3. Qsync "Share this folder as a team folder()"
 4. .

- :
- 가
- NAS /home

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

- :
- NAS LAN
- LAN NAS LAN NAS
-

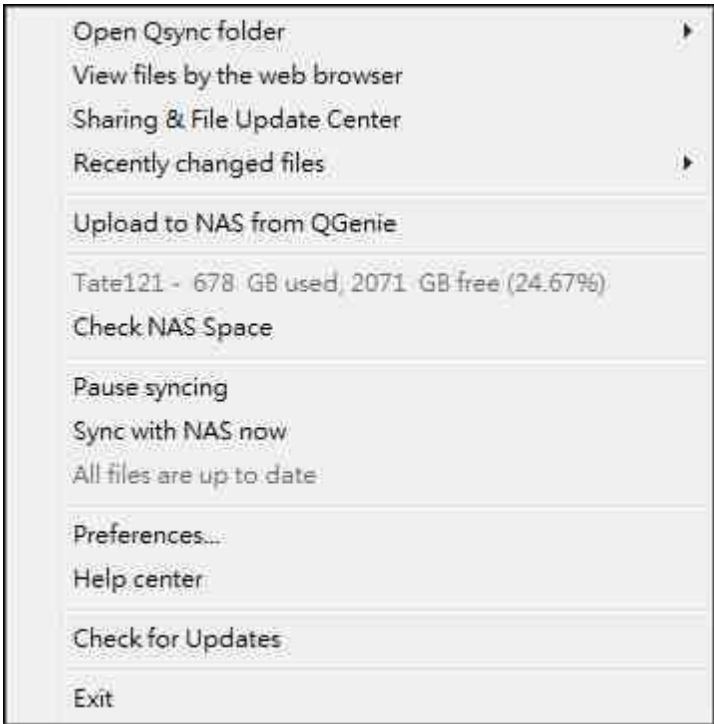
Qsync Central Station
 Qsync

Qsync

1. NAS Qsync Central Station Qfile
2. Qfile
3. "Settings()"
4. "Auto upload from photo gallery()"
"Set up now()"
5. NAS
- 6.
7. " (/Qsync/) "Set up manually()"
- 8.
9. "Limit to Wi- Fi(Wi- Fi)" 가 Wi- Fi
10. Qsync Qsync "Camera Uploads()"

: "Camera Uploads()"

Qsync Client



1. 가 NAS :
 - a. Qsync : Qsync 가 .
 - b. : File Station Qsync .
2. :
 - a. / :
 - b. NAS : Qsync가 .
3. :
 - a.
 - i. : 가 .
 - ii. : .
 - b. : .

4. :
- a. :
- i. : 가 . "Logout()"
- ii. : Qsync .
- b. :
- i. : 가,
- ii. 가 : USB 가 "DCIM" 가
USB
- iii. : QGenie 가
- iv. 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) PC SMTP
- e. :
- i. . Qsync
- f. :
- i. : NAS

: "Sync()" "Proxy()" Mac .

가

File Station . File Station Qsync

"Previous Versions()"

("More Action(가)" > "Previous Versions()")

). "Show Right Panel()" > "Version()" . Qsync . Qsync

" "

" "

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

Qsync /

"More Action(가)" > "Show Deleted Files()" .

Qsync / "Previous Versions()" .

, "More Action(가)" > "Previous Versions()" .

"Show Right Panel()" > "version()" .

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

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

/ "Hide Deleted Files()" .

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

NAS Qsync ,

"Version Control()" .

"Enable version control()"

"Enable version for my Qsync folder(Qsync 가

Qsync

"Assign specific subfolder under the Qsync folder(Qsync 가

"Add(가)" 5 가

"Delete()"

"Apply()" "Apply All()"

"Disk Used for Version Control()"

"OK()"

- 가
- "Apply()" "Apply All()"
- 64

Q s y n c

1. NAS Qsync Central Station 2.0 ()
가 File Station Qsync ()
2. Qsync ()
가 Qsync Client
3. Qsync ()
4. 가
 - a. PC
 - b. Qfile "Qfile- Android" "Qfile- iPhone"
 - c. File Station Qsync "Qsync- File Station"
5. 가
6. 가

7. :
/ ,

8. : 가
9. :

NAS

Qsync

()

1. NAS > "Qsync Central Station 2.0" > Management settings()
2. "Edit default settings()" NAS
3. "Synchronize()" NAS
4. "Policy()" NAS
5. "Mails()" NAS
6. "Apply()" NAS

가

1. NAS > "Qsync Central Station 2.0" > Management settings()
2. "Central Configuration Mode()" 가 Qsync
3. "Apply()" NAS

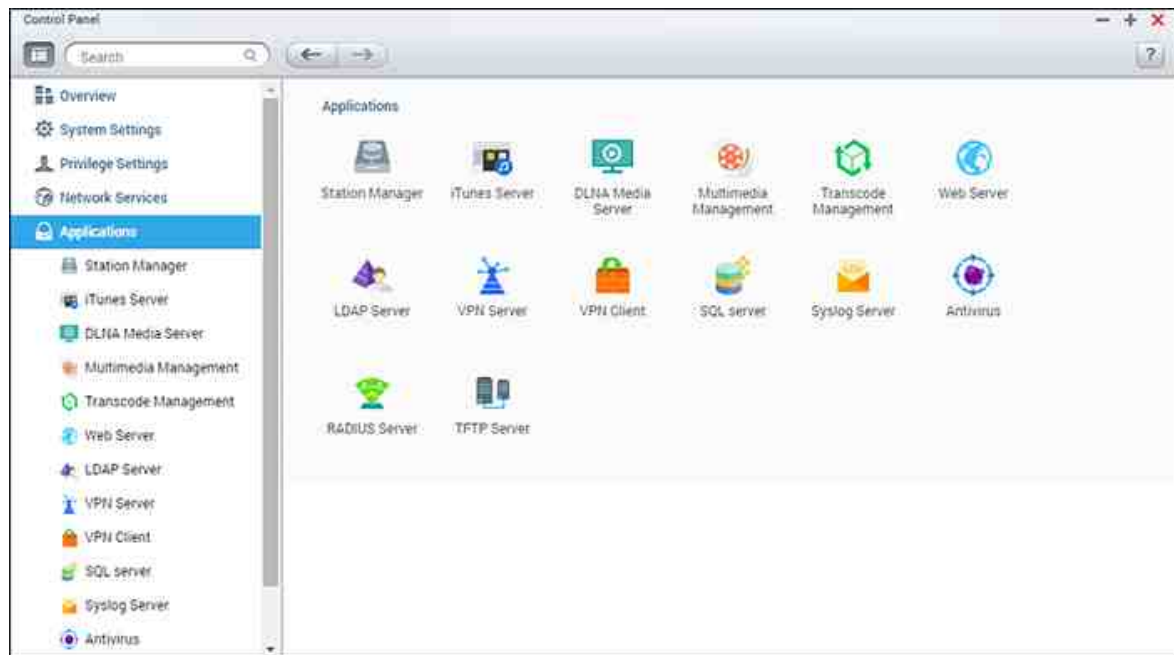
Qsync















1. NAS Qsync Central Station "Devices()" NAS
2. "Action()" "Edit settings for Qsync utility(Qsync)" NAS
3. (, ,) NAS

1. NAS Qsync Central Station "Management Settings()" NAS
2. "Enable your management password()" NAS
3. "Lock()" NAS

7.

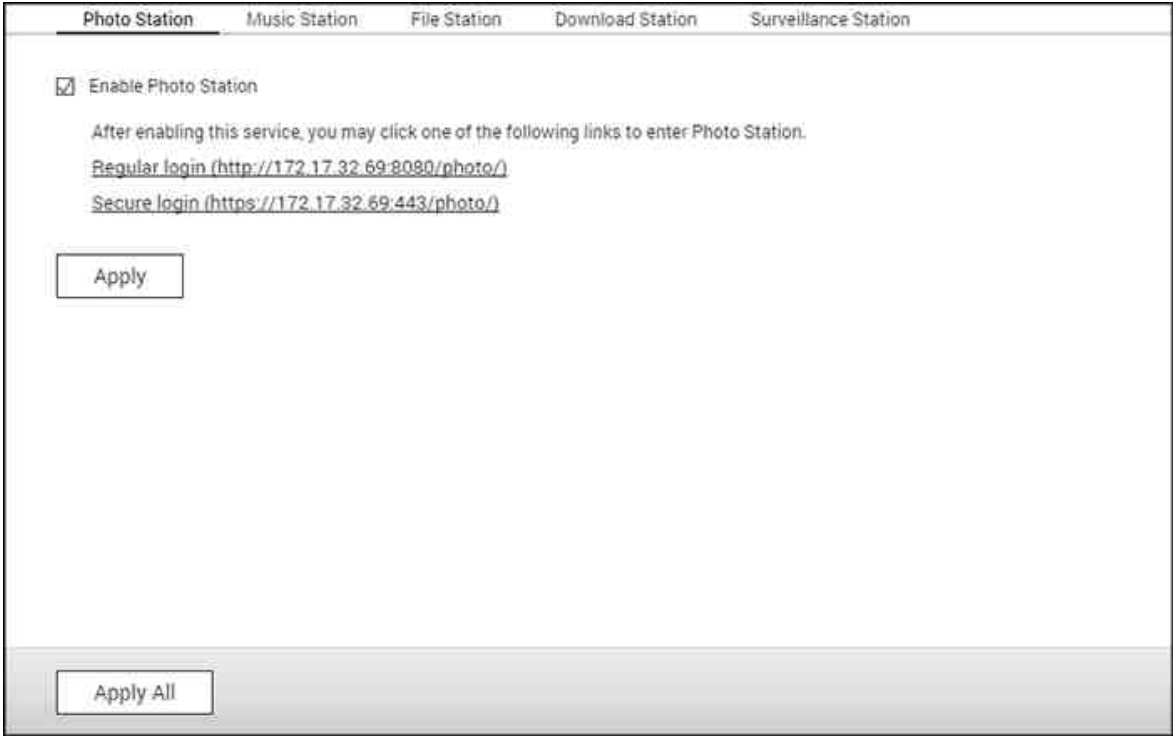
"Control Panel()" > "Applications()" 가 NAS



-  162
- iTunes  164
- DLNA  165
-  167
-  169
-  171
- LDAP  176
- VPN  178
- VPN  182
- SQL  185
- Syslog  187
-  189
- RADIUS  192
- TFTP  193

7.1

QNAP



"Enable Photo Station()"

"Show the photos of Sharing Management on the login screen()"

가

241

"Enable Music Station()"

256

"Enable File Station()"

216

"Enable Download Station()"



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 https://www.qnap.com/i/en/
trade_teach/con_show.php?op=showone&cid=49
- Windows IE 10, Chrome Firefox
- Mac QNAP Surveillance Client for Mac(Mac QNAP
) QNAP Surveillance Client for
Mac(Mac QNAP) http://www.qnap.com/download

"License Management()"

7.2 iTunes

NAS Qmultimedia/ Multimedia mp3 iTunes
 LAN iTunes가 NAS ,
 iTunes , iTunes(www.apple.com/itunes/)
 NAS Qmultimedia/ Multimedia

After enabling iTunes server, all the iTunes clients on the same subnet can play the music files in "Multimedia" folder on the server.

☒ Enable iTunes Server

☒ After enabling this service, click the following link to enter iTunes Web Server configuration page.

<http://172.17.32.64:3689/>

Username: admin

Password:

Apply

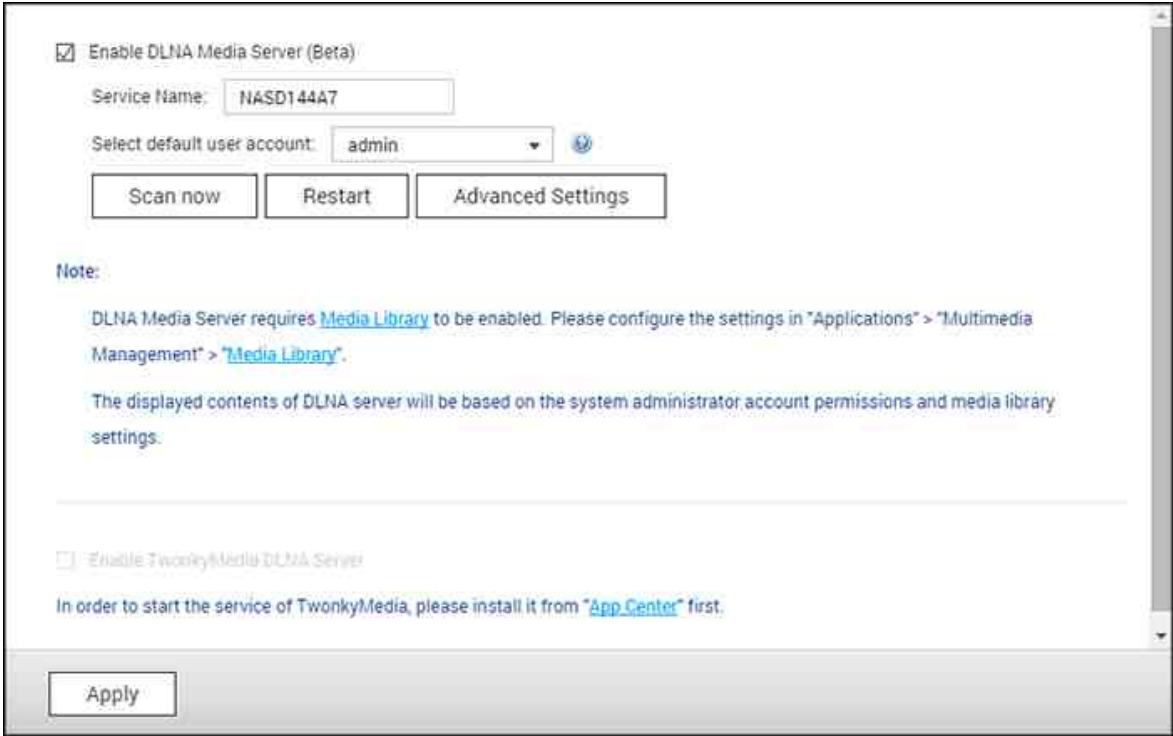
: iTunes 가 : x70U,
 x79 Pro x79U. iTunes 44 "System
 Administration()"

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

- 가 :
- QNAP iTunes

7.3 DLNA

QNAP Turbo NAS 가 DLNA : QNAP
Twonky DLNA .



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

- :
Multimedia Management()
Shared Folder123()
• Twonky NAS
(http://www.qnap.com/products).

```

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

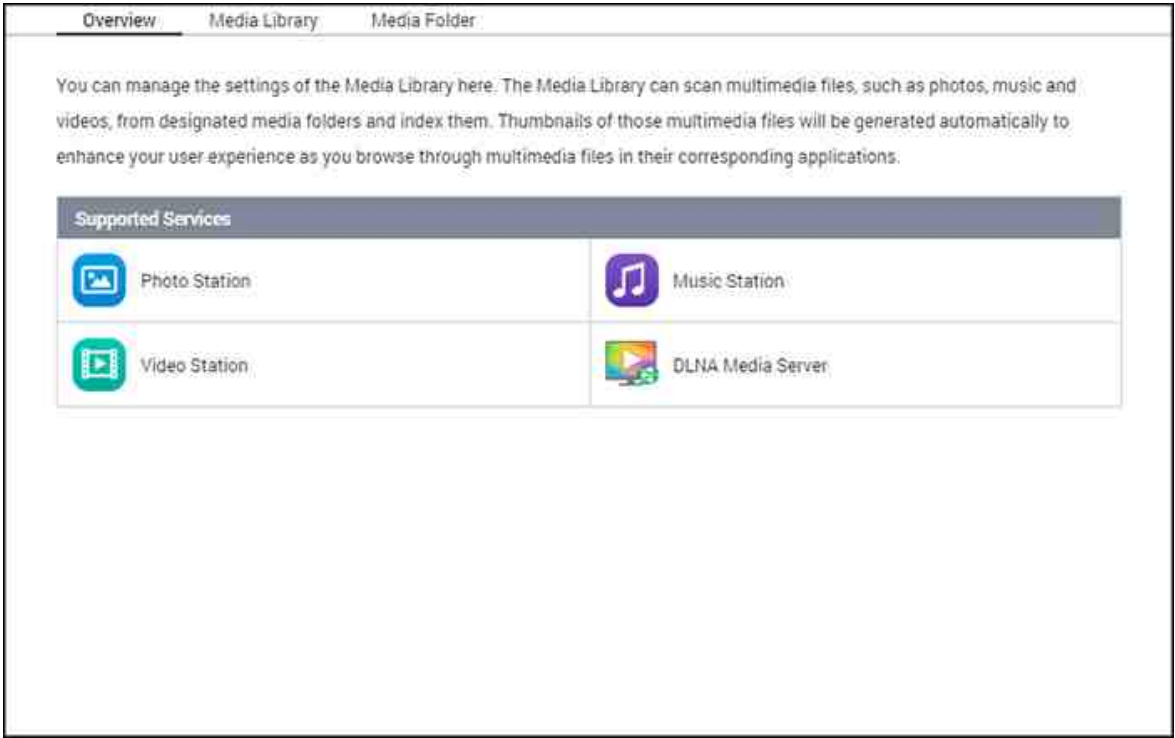
```

```

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

```

7.4



- : 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 , 44 " "
- Photo Station Music Station
- DLNA Media Server가
- : 가 400

NAS

"/Multimedia()" "/Home()" NAS (QTS 4.1

NAS

). 가 , "Add(가)" ,

, "Add(가)"

, "Apply()"

, "Delete()" "Apply()"

7.5

가 TV
(*.MP4)
가
가






CPU Turbo NAS 가
, CodexPack CPU
가

		
---	--	--

: x86 . QNAP (www.qnap.com) ()
)
 .

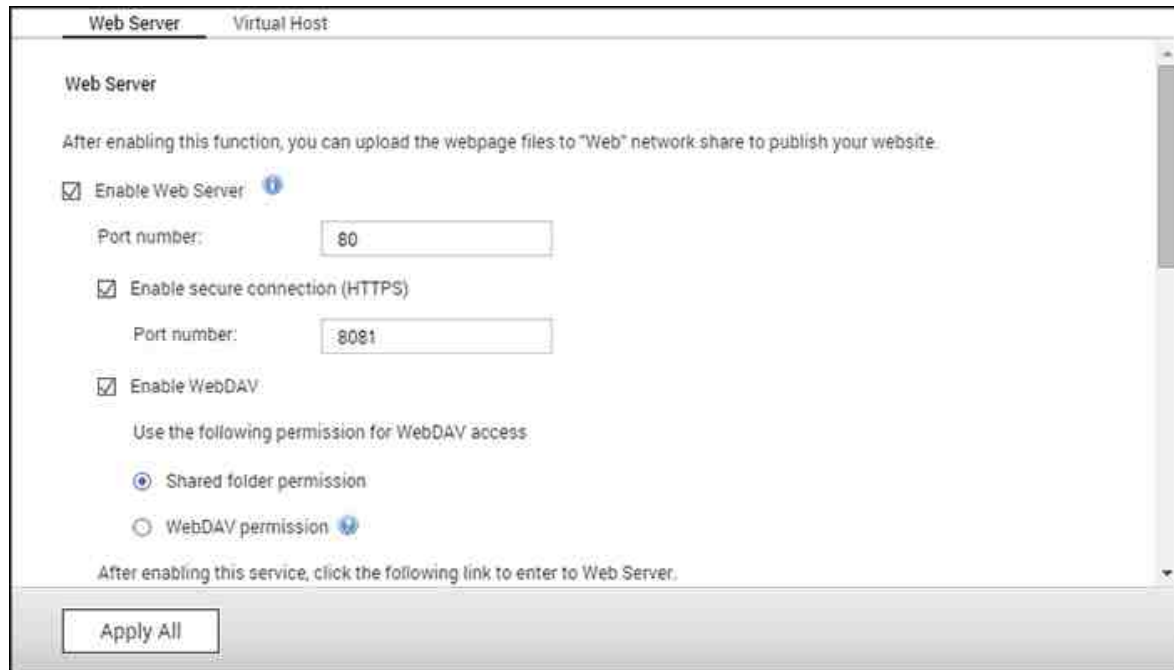
Video Station CPU File Station, Photo Station
 240p, 360p, 480p, 720p 1080p 가
 "@Transcode"

가 ,
 . "Add(가)"
 가 , () 가 .

7.6

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



NAS가 Joomla!, PHP and MySQL/SQLite

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

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

WebDAV

WebDAV(Web- based Distributed Authoring and Versioning) HTTP

NAS PC
"Privilege Settings()" > "Shared Folders()"

: WebDAV NAS AD
LDAP

NAS PC WebDAV

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

Windows Vista

Windows Vista "Software Update for Web Folders(KB907306)(KB907306))" 32

Windows Vista 가 <http://www.microsoft.com/downloads/details.aspx?FamilyId=17c36612-632e-4c04-9382-987622ed1d64&displaylang=en>

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

Mac OS X 10.6 10.4

Ubuntu
 Ubuntu WebDAV NAS
 : Ubuntu 9.10 Desktop

1. "Places()" > "Connect to Server...()"
2. NAS "WebDAV(HTTP)" "Secure WebDAV(HTTPS)"
 (WebDAV(HTTPS))
 WebDAV "Connect()"
3. WebDAV가 가

MySQL

phpMyAdmin NAS Web Qweb
 URL

: MySQL	"root"	"admin"
phpMyAdmin		

SQLite

SQLiteManager SQLiteManager- *.tar.gz?

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

7.6.1 가

가 ()

(32) NAS

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

7.7 LDAP

NAS LDAP

NAS

LDAP

LDAP

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

4. LDAP 2 NAS 가 : NAS

LDAP 가 LDAP 가 NAS

NAS LDAP 가 , NAS "Privilege Settings(

)" > "Domain Security()"

"LDAP authentication(LDAP

)"

, "LDAP server of a remote NAS(NAS LDAP)"

. NAS DNS IP , LDAP

LDAP . "Apply()"

LDAP /

NAS LDAP , "Back up Database()"

, NAS . LDAP

, *.exp "Import(가)"

. "Apply()"

- : LDAP , NAS
- , LDAP NAS

7.8 VPN

NAS 가
(VPN)

NAS 가
NAS VPN

- VPN (178)
- VPN (179)
- (181)
- (181)

VPN

1. Enable PPTP or OpenVPN service(PPTP OpenVPN): NAS VPN
PPTP OpenVPN

- PPTP: (PPTP) VPN 가
Windows, Mac, Linux, Android iPhone
VPN IP (,
, DNS).
- OpenVPN: OpenVPN SSL VPN
OpenVPN , PC OpenVPN Client
"Download Configuration File(NAS VPN
/ OpenVPN
VPN IP (VPN
, DNS , VPN
).

2. Configure port forwarding by auto router configuration()
): NAS UPnP()
. "MyCloudNAS Service(MyCloudNAS)" > "Auto
Router Configuration()" UPnP
PPTP OpenVPN .
3. Register myQNAPcloud service(myQNAPcloud): WAN IP
myQNAPCloud NAS . myQNAPcloud
myQNAPcloud myQNAPcloud (http://www.
myqnapcloud.com).
4. Add VPN users(VPN 가): "Applications()" > "VPN Server(VPN
)" > "Privilege Settings()" "Add VPN Users(VPN 가)"
. NAS 가 . VPN (PPTP, OpenVPN
) . "Add(가)" .
5. Connect to the private network by a VPN client(VPN
) : VPN VPN NAS
.

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

- 가 :
- L2TP/IPsec App Center VPN
가 . NAS 가 291 .

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)((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. OpenVPN <http://openvpn.net/>
2. Windows OpenVPN C:\ Program
Files\ OpenVPN
3. OpenVPN
4. NAS OpenVPN ("Applications()" > "VPN Server(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. OpenVPN <http://openvpn.net/index.php>
2. Linux OpenVPN
3. NAS OpenVPN ("Applications()" > "VPN Server(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. OpenVPN . <http://code.google.com/p/tunnelblick/>
- 2.
3. NAS OpenVPN ("Applications()" > "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

```

VPN

```

Add VPN Users(VPN      가 )
"Add VPN Users(VPN      가)"

```

:	VPN
---	-----

```

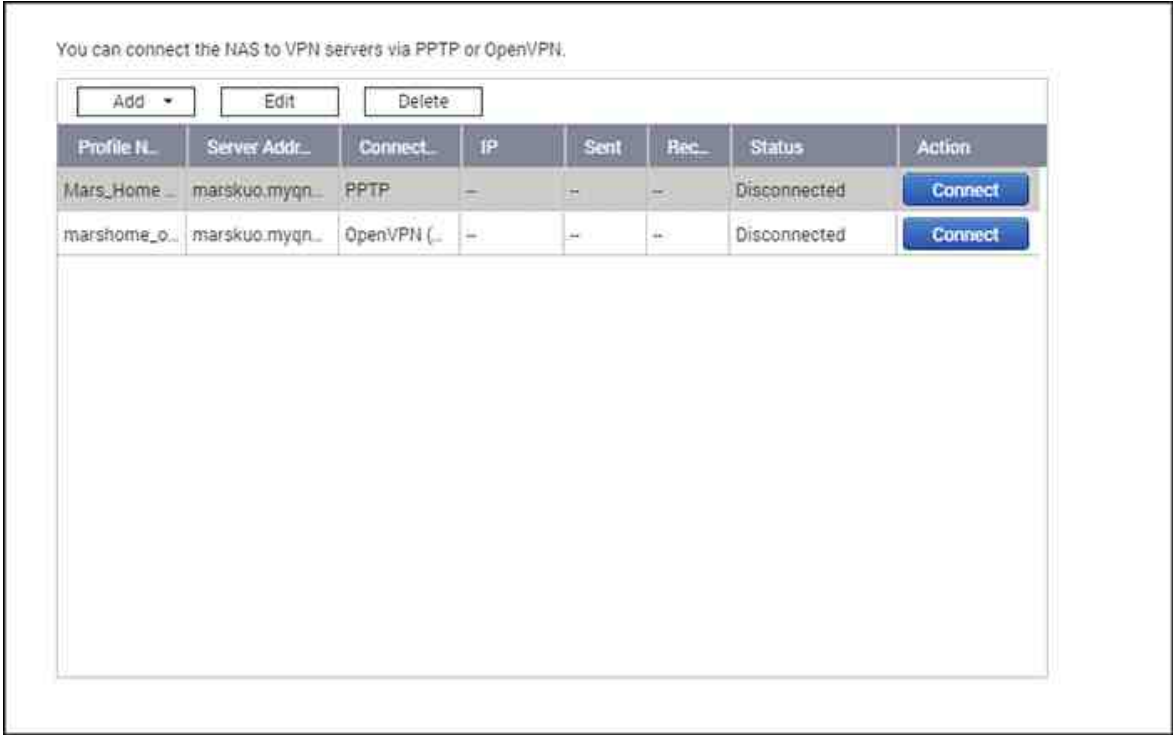
Delete VPN users(VPN      )
VPN      "Delete(      )"      VPN

```

VPN

7.9 VPN Client

NAS PPTP OpenVPN VPN VPN
 . NAS VPN



- :
182
- PPTP VPN 182
- OpenVPN VPN 183

VPN Turbo NAS가

-
- QTS 4.1.2
- VPN 가

PPTP VPN

1. (PPTP) VPN ,
(Windows, Mac OS X, Linux)
 2. "Control Panel()" > "VPN Client(VPN)" .
 3. "Add(가)" > "PPTP" VPN .
3. , () VPN

4. "Authentication()"

VPN

- MS- CHAPv2: 가 Microsoft CHAP 2
- MS- CHAP: 가 Microsoft CHAP 1
- PAP: 가
- CHAP: 가 CHAP

5. MS- CHAP MS- CHAPv2 " "

- : VPN
- (AES 40/128): VPN 40 128
- (AES 256): VPN 256 (가 가)

6.

- Use the default gateway on remote network(): VPN
- Allow other network devices to connect to the VPN through the NAS(가 NAS VPN): NAS LAN VPN
- Reconnect when the VPN connection is lost(VPN): VPN

7. "Connect()"

: "Use the default gateway on remote network()"
Turbo NAS 가 VPN

"Allow other network devices to connect to the VPN through the NAS(가 NAS VPN)" NAS VPN

. Windows PC :

1. "Control Panel()" > "Network and Sharing Center()" > "Change adapter settings()"
2. "Properties()"
3. "Internet Protocol Version 4 (TCP/IP)(4 (TCP/IP))" "Properties()"
4. "Use the following IP address(IP)" Turbo NAS VPN IP (, 192.168.1.14) "OK()"

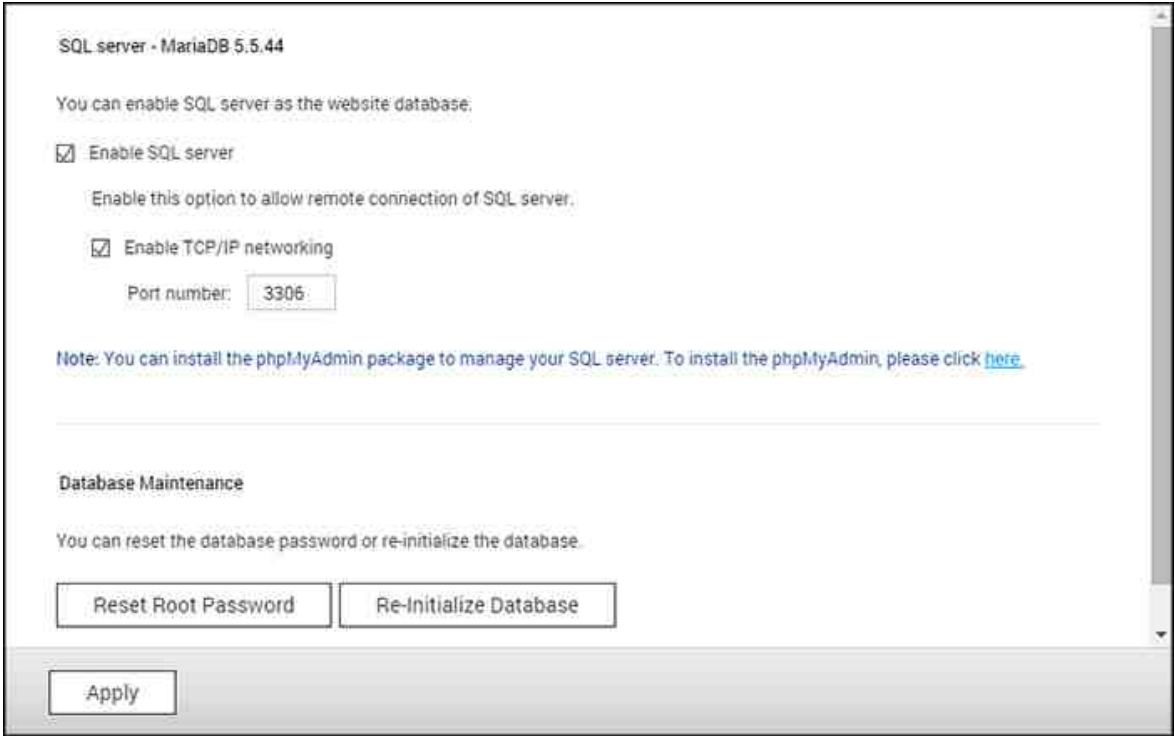
OpenVPN VPN

NAS VPN OpenVPN SSL/
TLS VPN . Windows, Mac OS X, Linux, ;
Android iOS

- OpenVPN VPN
1. NAS "Control Panel()" > "Application()" > "VPN Client
(VPN)" > 가 "Add(가)" VPN
"OpenVPN"
 2. , () VPN
"Server Port()" OpenVPN
 3. "Certification()" OpenVPN (ca.crt) 가
 4.
 - Enable compressed VPN link(VPN): VPN
 - Use the default gateway on remote network(): VPN
 - Allow other network devices to connect to the VPN through the NAS(가 NAS VPN): NAS LAN
VPN
 - Reconnect when the VPN connection is lost(VPN): VPN
 5. "Connect()"
 - "Use the default gateway on remote network()" Turbo NAS 가 VPN
 - "Allow other network devices to connect to the VPN through the NAS(가 NAS VPN)" ,

7.10 SQL

SQL



: ARM (TS- x21, TS- x20, TS- x19, TS- x12 and TS- x10) , MySQL
SQL ARM , MariaDB
App Center

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

7.11 Syslog

NAS Syslog , Syslog Syslog .

The screenshot shows a configuration window with three tabs: "Server Settings", "Filter Settings", and "Syslog Viewer". The "Server Settings" tab is active. It contains two sections: "Server Settings" and "Log Settings".

Server Settings:

- ☒ Enable Syslog Server
- ☒ Enable TCP
 - TCP port: 514
- ☒ Enable UDP
 - UDP port: 514

Log Settings:

- Maximum log size (MB): 50
- Log file: Download / messages

At the bottom of the window is an "Apply All" button.

- : NAS Syslog syslog
Syslog . NAS가 (TCP / UDP)
syslog 514
"Apply()"
 , 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()"

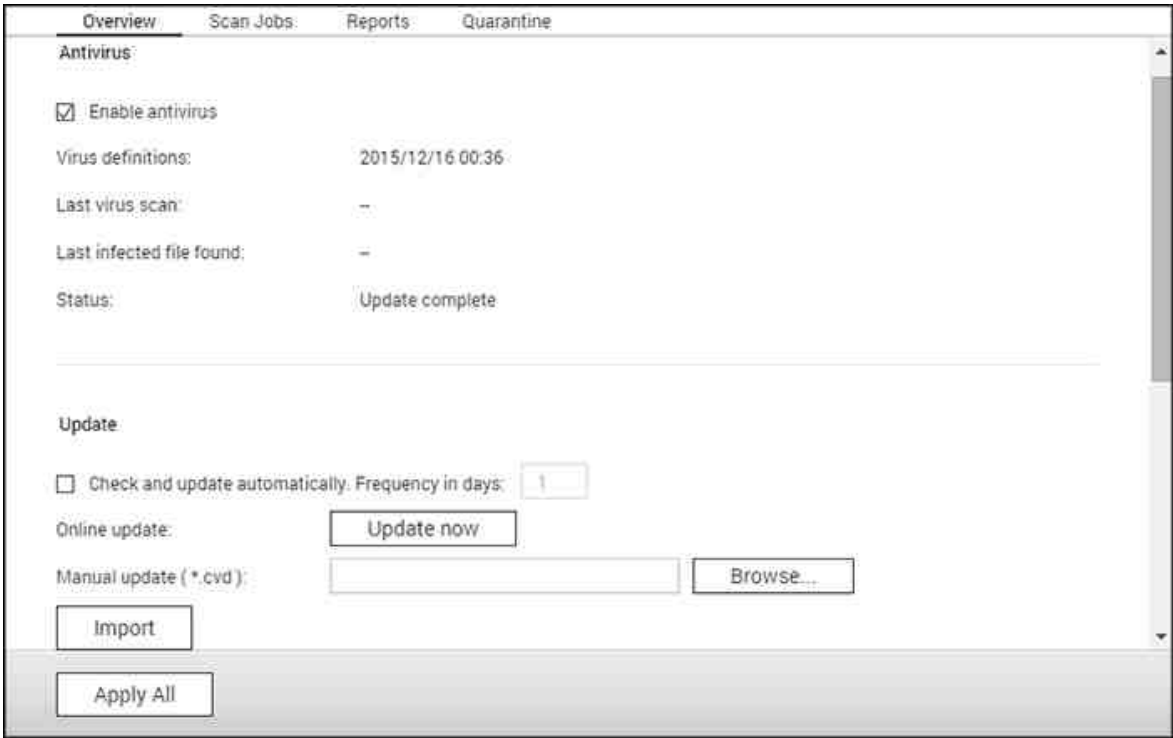
	(가)	
0	:	0-4 syslog
1	:	가 1-4 syslog
2	:	2-4 syslog
3	:	3-4 syslog
4	:	4 syslog

- syslog
syslog NAS syslog
1. "Add a New Filter(가)"
 2. "Add (가)"
"Manual Edit()"
"Apply ()"
 3. 가 NAS syslog

Syslog

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

7.12



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




: "Enable antivirus()"
App Center²⁸¹ QTS

NAS

5



64

1. "Application Servers()" > "Antivirus()" > "Scan Jobs()"
 . "Add a Scan Job(가)" .
2. "Add(가)" . ,
3. "Delete (X)" "Next()"
 "Next()" . " "
4. "Exclude files or folders()"
 , :
 ○ /Public/testfile.txt
 ○ /Download
 ○ *.log
 ○ *.exe *.com
 ○ *.txt; "Next()"
 "Next()"
 ○ (1- 4096 MB)
 ○ "Scan compressed files()"
 (1 ~ 4096MB)
 (가).
 ○ NAS 가
 ○ MS Office Mac Office , RTF, PDF, HTML , "Deep scan for document files()"
 "Finish()"
6. : 가 "Reports()"
 :
 "Reports()"
 "Quarantine()" /
 :
 : , "System Settings()"> "Notification()" > "SMTP Server(SMTP)" SMTP
 "Finish()"
- 7.




NAS

		WordPad
		

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

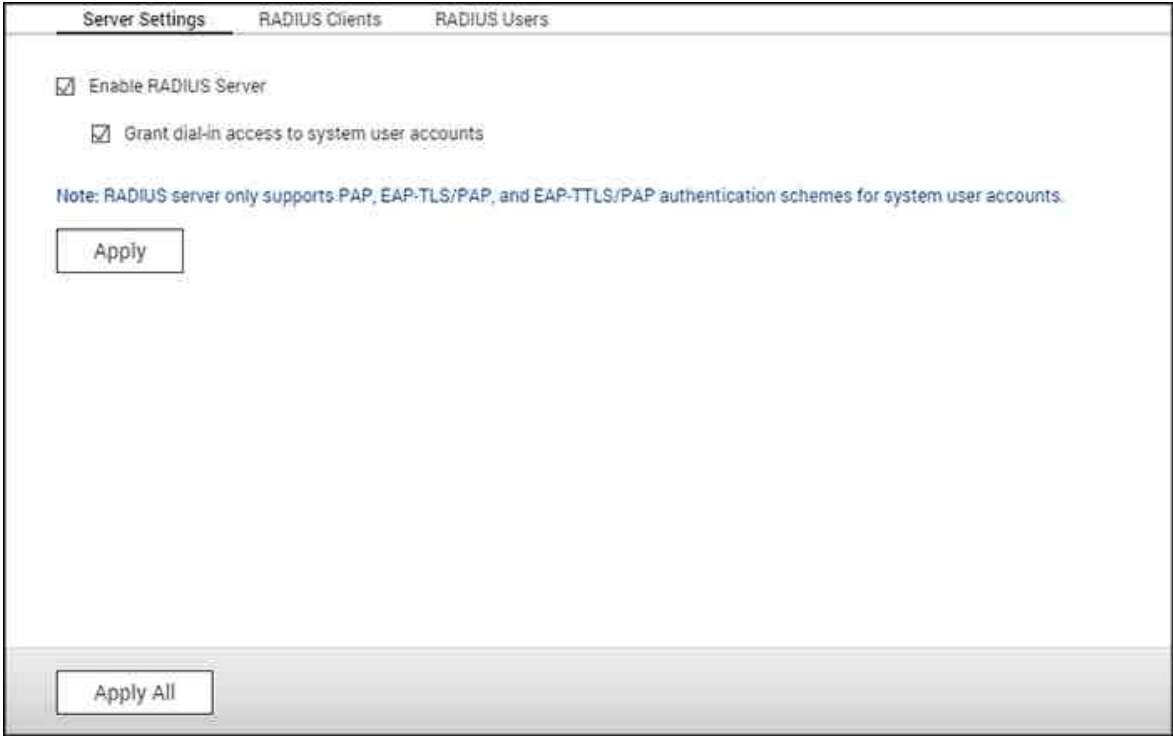
NAS

가

		
		
		가 ().

7.13 RADIUS

NAS , , RADIUS (Remote Authentication Dial In User Service)

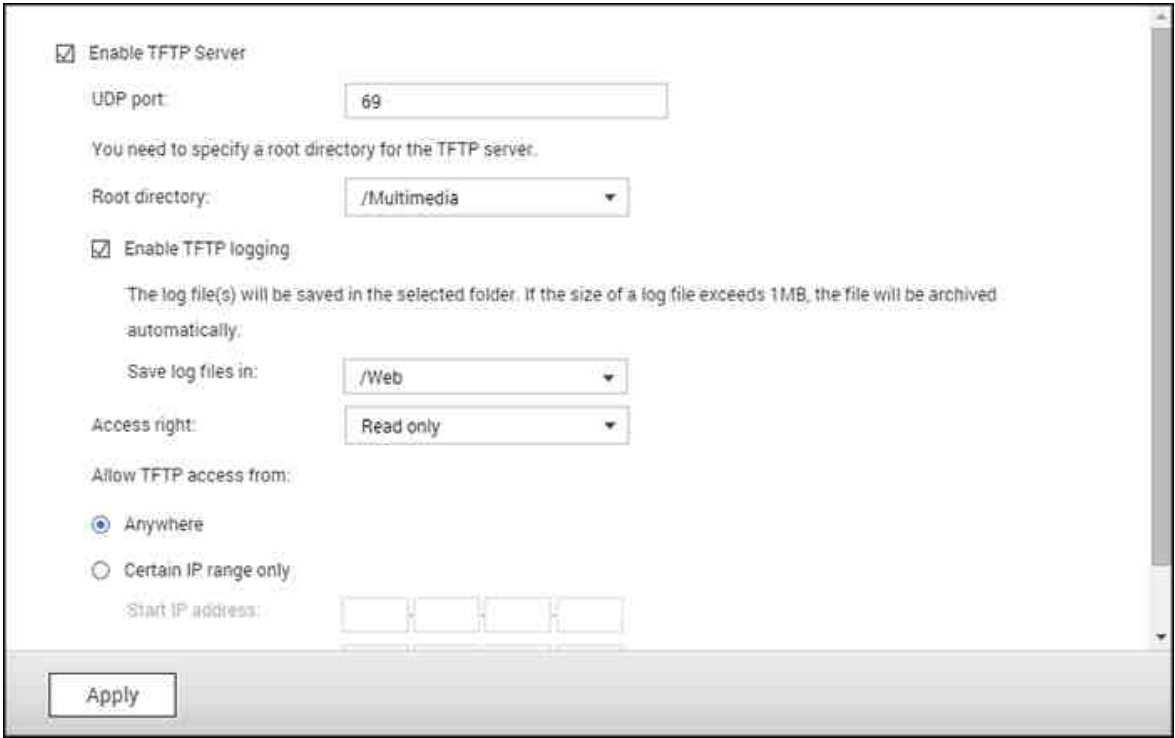


1. "RADIUS Server (RADIUS)" > "Server Settings ()" NAS RADIUS
"Apply()"
2. "RADIUS Server (RADIUS)" > "RADIUS Clients (RADIUS)" NAS
Wi- Fi VPN RADIUS 가 RADIUS
10 "Create a New Client()"
"Apply()"
3. 가
4. 가
5. "RADIUS Server(RADIUS)" > "RADIUS Users(RADIUS)" RADIUS
RADIUS
NAS가 RADIUS NAS
Users(120() " "
6. (a-z A-Z) (0- 9)
8- 32 (a-z, A-Z, 0- 9 가) "Apply()"
7. NAS NAS NAS 가
NAS RADIUS
"Apply()"

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

7.14 TFTP

NAS
TFTP (Trivial File Transfer Protocol) .TFTP FTP
. TFTP . TFTP FTP
. TFTP FTP



1. "Enable TFTP Server(TFTP)"
2. UDP 69
3. NAS TFTP
4. TFTP : TFTP (opentftp.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()"
DHCP Server(DHCP)

8. QNAP

QNAP

- [\[195\]](#)
- myQNAPcloud [\[209\]](#)
- File Station [\[216\]](#)
- Video Station [\[230\]](#)
- Photo Station [\[241\]](#)
- Music Station [\[256\]](#)
- Download Station [\[264\]](#)
- HybridDesk Station [\[271\]](#)
- App Center [\[281\]](#)

8.1

NAS , , Backup Station .



- _____ [196]
- _____ [198]
- _____ [204]
- _____ [205]

8.1.1

Rsync

- Rsync NAS Rsync NAS 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(Rsync NAS):** Rsync (NAS) Rsync NAS

: NAS 64 .

RTRR

NAS "Enable Real-time Remote Replication Server()" 8899 . 0 . NAS RTRR NAS 가 NAS 가 IP "Allow all connections()" . IP "Allow connections from the list only()" "Add(가)" IP IP "Read Only ()" "Read/Write(/)" IP "Read/Write(/)" "Finish ()" "APPLY()" NAS가 NAS NAS Incoming List() " (, NAS, NAS,) Incoming List(NAS) "

Time Machine

OS X

NAS

Mac

NAS :

1. .
2. .
3. NAS .
4. 4095GB .
5. "Apply()"

가

Mac :

1. Mac "Select Backup Disk()"
2. NAS TMBBackup "Use for Backup()"
3. QNAP NAS "Connect()"
- : TimeMachine
- : NAS
4. "ON()"
- 가
- 120

Mac

Mac OS

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

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

8.1.2

- NAS NAS 198
- RTRR 199
- 203

NAS NAS Rsync

Rsync NAS NAS Rsync

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

1. "Create a Replication Job()"

2. NAS Rsync "

3. IP , , 873 / 가 "Test()" "Apply ()"

4. .

5. "Add(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 () 가
- Handle sparse files efficiently(): 가

8. "Apply()"

NAS

: 5

		
		
		Rsync ().
		
		
		

"Options()"

- Timeout(second)(): 가
- Number of retries(): NAS가
- Retry intervals (second)(): , 600 , 3 , 60 , 600
가 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. (,) " " 가

		/	
	✓	✓	
	✓	✓	✓
		✓	✓

가

- , 가 가
- (NAS FTP)
- (NAS FTP)
-
- , 가
-

4. IP 가 가 NAS ; NAS 가 (FTP RTRR).
- **FTP** : SSL/TLS() FTP . FTP 가 , / 가 " " .
 - **RTRR NAS** : RTRR 가 IP . RTRR 8899 . RTRR " " .
 - **Windows Share(CIFS/SMB)** : Windows IP "Next()" .

- 5.
6. 5 가 "Add(가)"
7. , , :
- Replicate Now():
 - Periodically():
 - Hourly():
 - Daily():
 - Weekly():
 - Monthly():
 - 1 : 1 1

- :
- 가
 - QTS 4.1 , RTRR FTP (/) FTP 가 FTP
 - 가
 - 7 " " "1 "

- RTRR Rsync Bandwidth Control() ()
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()"
가
SMTP NAS ("System Settings()" >
"Notification()")
"Policy()" , "Filter()" RTRR

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

8.1.3

Amazon S3

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

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

8.1.4

-  205
- USB  207

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 NAS
 - c.
 - d. "Next()"
5. 128 "Next()" 'ADD(가) "






:
 •
 • / ,
 • 16 8

6. , ,

- :
 ○ Replicate Now():
 ○ Periodically():

5

- Hourly(): , 01
01 , 1:01, 2:01, 3:01...
 - Daily(): , 2 2 02:02
 - Weekly():
 - Monthly():
 - : NAS가
- 7.
8. , "Configure policy and filter()"
- "Next()" . " "
- :
- Delete extra files(가): 가
 - Detect sparse files():
 - 가
 - Check file contents(): 2 , ,
 - Ignore symbolic links():
9. :
- File size():
 - File date/time(/):
 - Include file types():
 - Exclude file types():
10. 63
- " "
11. "Next()" .
12. "Finish()" .
13. 가 .

		
		
		
	/	
		

"Schedule Type()" , "Edit()" "Settings()" >
 "Disabled()" "OK()"

1. , "Options()"
2. "Event Logs()" "Download Detailed Logs()"
3. 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 가
 "USB One Touch Copy(USB)"

U S B

- "USB "
- : USB NAS ,
- : 가 가
 (YYYYMMDD)
 YYYYMMDD- 1, YYYYMMDD- 2...
- Copy():
- Synchronize():

- Handle sparse files efficiently():

- : "Add (가)" 9
- : "Options ()" , SMS, (IM)
- USB : USB LED NAS USB
8- 10
- :
○ :
○ : USB 가

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

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

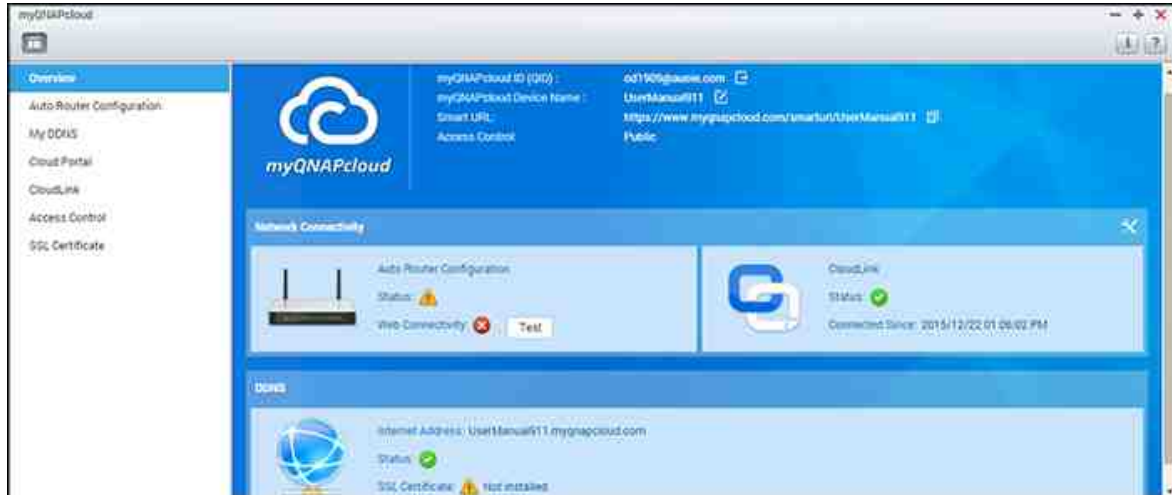
: , NAS

:

가 USB ,

8.2 myQNAPcloud

myQNAPcloud가 NAS에 UPnP 기능을 활성화하면, NAS가 myQNAPcloud에 UPnP 기능을 사용하여 NAS IP를 자동으로 등록합니다.



myQNAPcloud NAS가 UPnP 기능을 사용하여 myQNAPcloud에 자동으로 등록됩니다.

- NAS myQNAPcloud (209)
- (210)
- DDNS (210)
- (210)
- CloudLink (211)
- (211)
- SSL (212)

- myQNAPcloud Portal (213) (NAS)

myQNAPcloud Wizard

1. "Get Started()"
2. "Start()"
3. myQNAPcloud ID(QID) "Next()" ("Create myQNAPcloud account(myQNAPcloud)" myQNAPcloud)
4. NAS "Next()"
5. myQNAPcloud (, DDNS, , CloudLink) "Next()"

6. 가 .
7. "Finish()"

Auto Router Configuration

"Auto Router Configuration()" UPnP /
UPnP NAS

: 가 NAS

```

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

```

- NAS가 UPnP를 지원하는지 확인 : http://www.qnap.com/UPnP_Router_Compatibility_List
- NAS가 UPnP를 지원하는지 확인 : http://www.qnap.com/UPnP_Router_Compatibility_List
- NAS가 UPnP를 지원하는지 확인 : http://www.qnap.com/UPnP_Router_Compatibility_List
- NAS가 UPnP를 지원하는지 확인 : http://www.qnap.com/UPnP_Router_Compatibility_List

DDNS

```
myQNAPcloud DDNS                                     NAS
. myQNAPcloud DDNS
"here(      )"          DDNS      가      "Update(      )"
```

NAS (File Station, Photo Station, Music Station, Secure File Station, Secure Web Server, Secure Photo Station, Secure Music Station) . <http://www.myqnapcloud.com>. NAS

myQNAPcloud DDNS	NAS WAN IP	가	NAS가
myQNAPcloud	. myQNAPcloud		NAS가
UPnP	.		

- QNAP NAS myQNAPcloud . myQNAPcloud NAS
- myQNAPcloud 120 , NAS가 가
- DDNS

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

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

Cloud Link

CloudLink UPnP가 NAS QNAP (/) 가 NAS

myQNAPcloud NAS CloudLink

- Public(): myQNAPcloud

- ```

• Private(): myQNAPcloud CloudLink
 NAS
• Customized(): myQNAPcloud
 가
 myQNAPcloud 가
 "Device access controls(
)" "Customized()"
 가 "Add(가)" QID

```

**S S L**

myQNAPcloud SSL NAS  
가  
myQNAPcloud HTTPS( : https://noss1.myqnapcloud.com)  
NAS 가  
가 NAS  
가

myQNAPcloud SSL                      DDNS              NAS

|                   |         |     |
|-------------------|---------|-----|
| : myQNAPcloud SSL | QTS 4.2 | NAS |
|-------------------|---------|-----|

## myQNAPcloud SSL

1. myQNAPcloud myQNAPcloud "SSL Certificate (SSL )"
2. .
3. (
4. ) myQNAPcloud "SSL Certificate(SSL )"

myQNAPcloud SSL

- ```

1. NAS myQNAPcloud .
2. "SSL Certificate(SSL )" >"SSL Certificate(SSL )"
   ( )"
3. > "Confirm( )"
   .
   NAS myQNAPcloud,> "SSL
   " "Release( )"
   myQNAPcloud SSL

```

myQNAPcloud "SSL Certificate(SSL)" > "Transaction record()"

- Apply(): 가
- Release(): 가
- Reissue(): DDNS 가
- Extend(): .

30

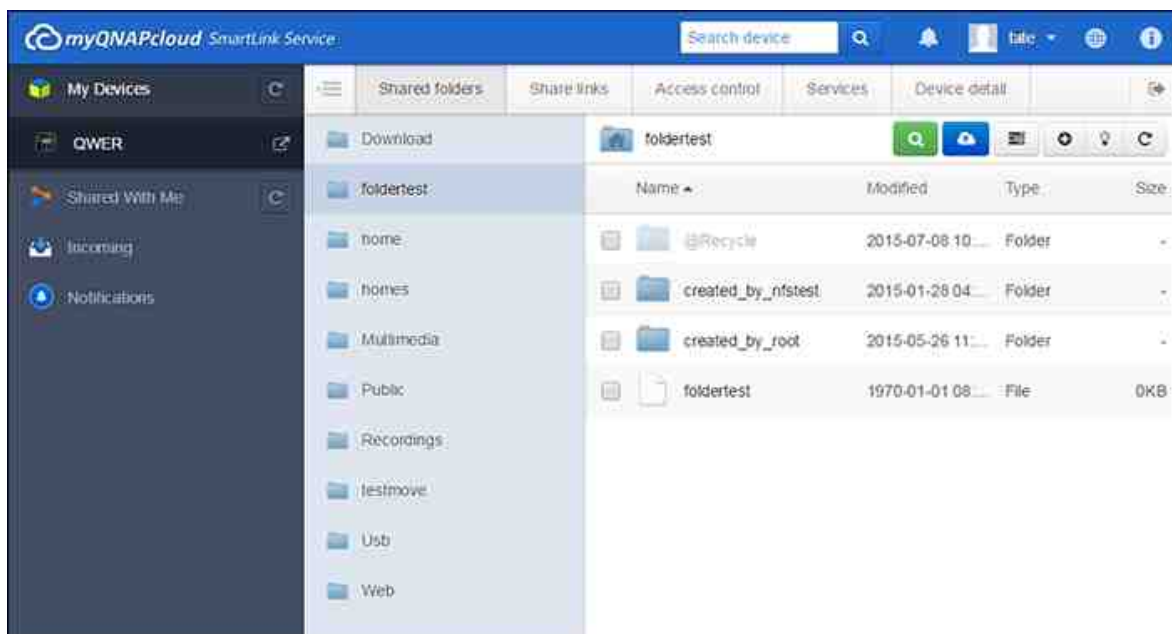
myQNAPcloud "SSL
Certificate(SSL)" > "Certificate License()" .

- myQNAPcloud SSL QTS 4.2 NAS
- App Center myQNAPcloud SSL QPKG

myQNAPcloud

myQNAPcloud (www.myqnapcloud.com)

- myQNAPcloud
- NAS
- NAS
- .
- myQNAPcloud



myQNAPcloud

myQNAPcloud

myQNAPcloud

myQNAPcloud

myQNAPcloud (myQNAPcloud) > "User Profile()"

-
- myQNAPcloud
- 가
-
- myQNAPcloud

myQNAPcloud

myQNAPcloud NAS "My Devices()" NAS

- File Station
-
- (211).
- .(
- 210 .)
-

- :
- myQNAPcloud 가
 - myQNAPcloud
App Center CloudLink QPKG

myQNAPcloud

NAS

"Shared with me()" 가

1. myQNAPcloud
- 2.
3. "Add to Shared With Me(가)" ()
4. "Shared with me()" .
5. 가
- 6.

myQNAPcloud

myQNAPcloud ,

myQNAPcloud

- 1.

```

2.         "My Devices(      )"
3.
4.
5. "Share(      )"
    )
    > "Next(      )" >
    . > "Share(      )"

myQNAPcloud
)"
    가
    "Incoming(

```

: App Center CloudLink QPKG

myQNAPcloud

- myQNAPcloud 가 가
- 가
- 가

myQNAPcloud

1. myQNAPcloud
2. "Notifications()"()

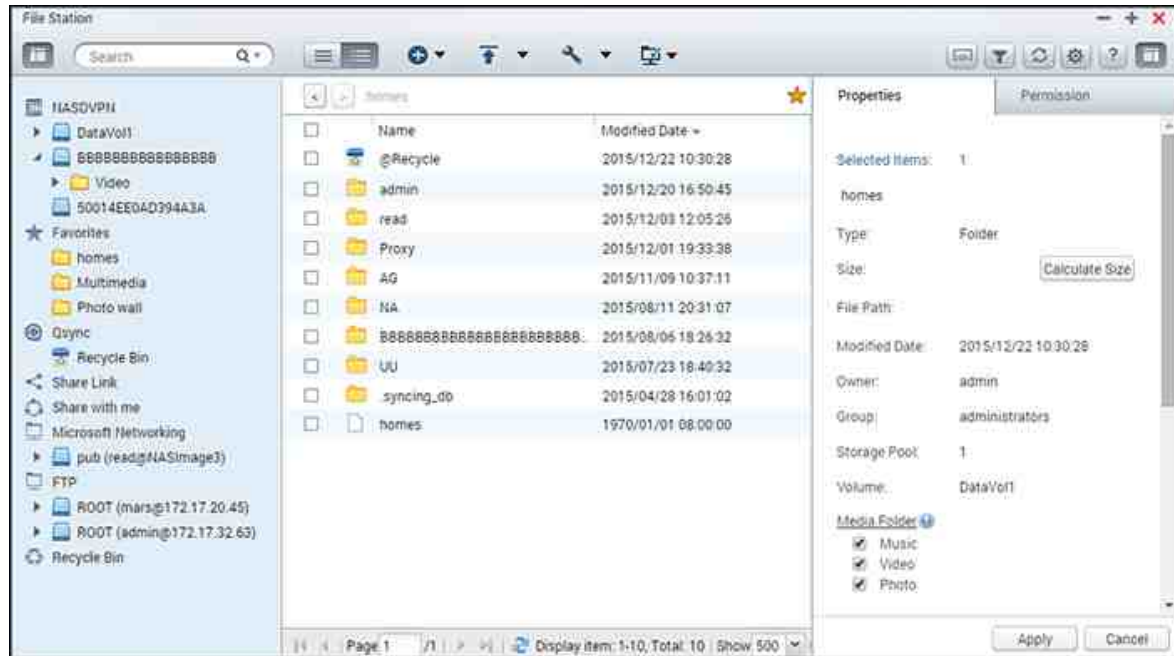
8.3 File Station

File Station

. File Station

NAS

NAS



- File Station 216
- File Station 216
- File Station 220
- 228

File Station

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

File Station



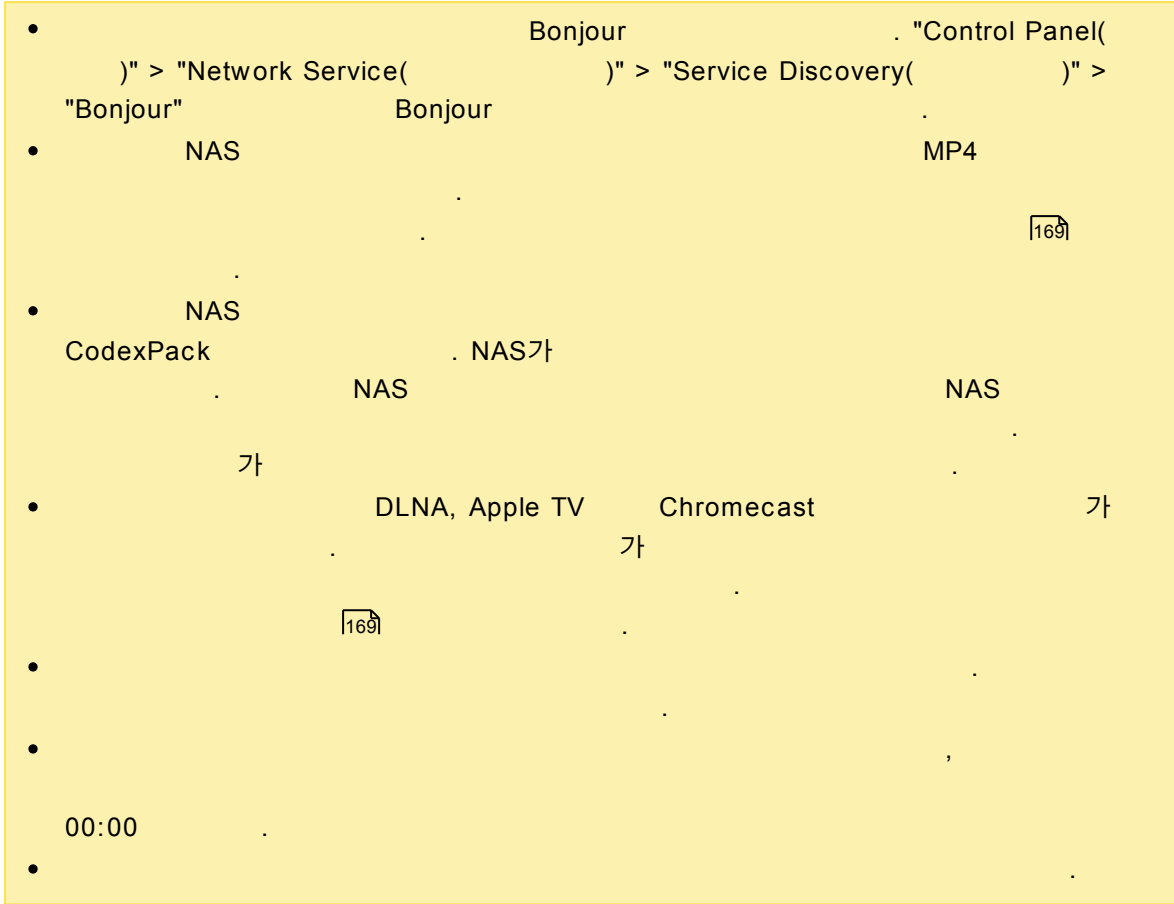
1		.
2	Search Bar()	(,)
3	Browsing Mode()	(: /)
4	Create()	/ .(NAS 227)
5	/	/ /
6	Upload()	. A
7	Share()	/ , / / NAS (226)
8	More Action()	<ul style="list-style-type: none"> • "Favorites()" 가 • , , , / , , , 가 , , / . (가) • . • , (, NAS)
9		<ul style="list-style-type: none"> • Create remote connections() • (228)
10	Network Media Player()	.
11	Smart File Filter()	, .

12		.
13		<p>: <ul style="list-style-type: none"> • PC : PC <p>. File Station PC Windows , Java가 (http://java.com).</p> <ul style="list-style-type: none"> • NAS : • 가 • : • A • : "@Recycle" • "Share to NAS user (NAS)" • : 1) File Station 가 2) • : (,) </p>
14		.
15	Right Panel()	.

: Google Chrome PC File Station &
1 GB
File Station

:

- Network Media Player HDMI Chromecast
Media Streaming Add- On App Center



- Volume(): NAS 가
NAS 가 "Download(), "homes(),
"Multimedia(), "Public(), "Recordings(), "USB" "Web()"
"+" . A
- Local folders(): PC 가
Java JRE
- Favorites(): 가
- Qsync: Qsync
- Share Link(): NAS 가
- Share with me(): NAS 가 가
- :

Right Panel()

- Properties(): ,
"Calculate Size()"

- Permission(): " / " .

File Station

, , , " +" "Create()"

Sort By()	, , .
Create folder()	.
Copy/Paste(/)	.
Share()	<ul style="list-style-type: none"> • Share the selected folder via email(); • Publish the selected folder on social network(); •
Open()	.
Download()	.
Rename()	.
Move()	NAS .
	.
Cut/ Paste(/)	.
Add to Transcode(Beta) (가())	. "Add to Transcode(Beta)(가())"
	: x86 .
Cancel/Delete Transcoding(/)	/

Transcode Information()	.
Add to Favorites(가))" 가 . "Favorites(
Compress()(Zip)	.
Properties()	.

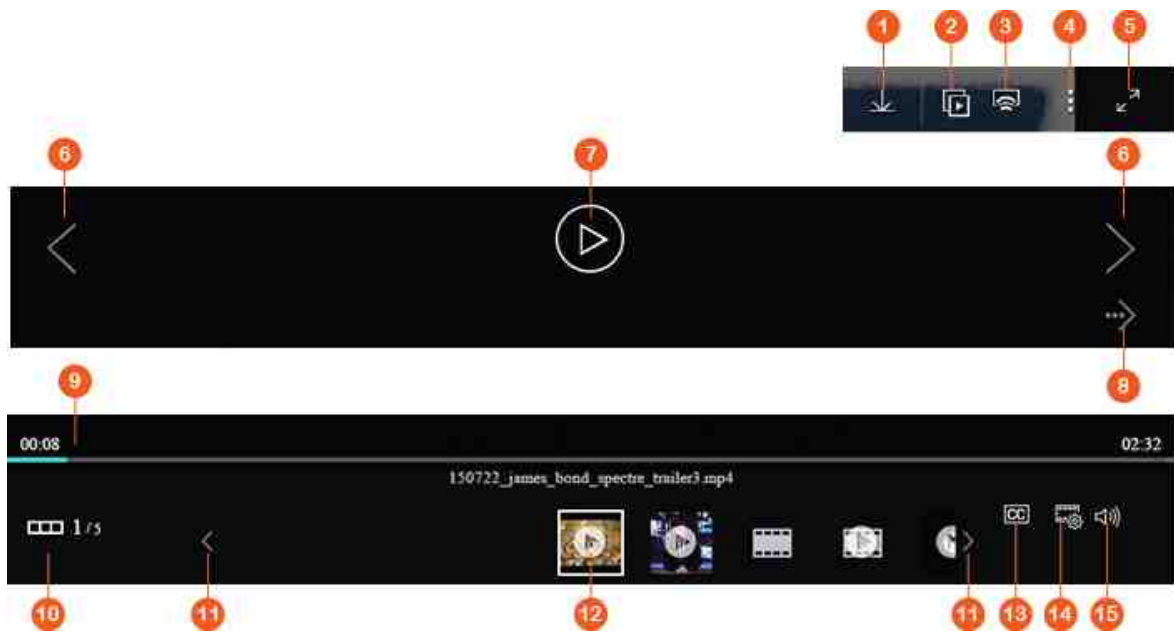
:	가	가	.	가	가
• Ctrl + C:	/	.			
• Ctrl + V:	/	.			
• Ctrl + X:	/	.			
• Ctrl + A:	/	.			
• Del:	/	.			
• F2:	/	.			
• F5:	.				

Sort By()	, , .
Copy/Paste(/)	.
Share()	/ , , NAS 226
View in Office Online (Office Online)	Office Online 가 NAS Office Online Office myQNAPcloud . A
View in Google Docs (Google Docs)	Office Docs 가 NAS Office Online Office myQNAPcloud .
Open with Chrome Extension(Chrome Extension)	Chrome Microsoft Office (Chrome "Office Editing for Docs, Sheets & Slides" Chrome .)

Streaming to (Network Media Player) ((Network Media Player))	(, ,) 가
Play()	Media Viewer
Open()	PC A
Open with VLC(VLC)	(VLC .)
Download()	
Rename()	
Move()	NAS
Cut/ Paste(/)	
Add to Transcode (Beta)(가())	Transcode(Beta)(가())" "Add to : x86
Cancel/Delete Transcoding(/)	/
Transcode Information()	
Extract()	
Compress()(Zip)	
Mount ISO(ISO)	ISO ISO ISO가)" "Unmount(
Properties()	

- IE 8 Java plug-in File Station NAS File Station
2GB
- Google Chrome File Station
가
- Chrome File Station &
- ARM NAS ISO
(가
) . ISO
- Mac OSX # 가 WebDAV
- File Station Microsoft Office Mac
OSX WebDAV # 가
- "View in Office Online(Office Online)" "View in Google Docs(Google Docs)" , myQNAPcloud
: .doc, .docx, .xls, .xlsx, .ppt, .pptx.
- Network Media Player HDMI Chromecast
Media Streaming Add- On App Center
- Bonjour "Control Panel(
)" > "Network Service(
)" > "Service Discovery(
)" > "Bonjour" Bonjour
- NAS MP4

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



1	Download()	.
2	Slideshow()	().
3	Network Media Player()	.
4	More Action()	QTS /
5	Full Screen()	.
6	Previous Item/ Next Item(/)	/
7	Play/ Pause (videos)(/ ())	/
8	Play/ Pause (photos)(/ ())	/
9	Seek Bar()	.
10	Show/Hide Preview Bar(/)	.
11	Last Item/ Next Item(/)	/

- Via email(): (NAS , , , / IP,) URL SSL(https://) "More settings(가)" .

: / **QTS**
 > "Options()" > "E- mail Account()" .

- To social networks(): (, , / IP,) URL SSL(https://) " 가 " .
- Create share links only (generate a link to provide on instant messengers or store for later use)((/ IP) URL SSL(https://) "More settings(가)" .

- To NAS users(NAS): NAS
 - NAS () / IP, , URL SSL(https://) "More settings(가)" "Share Now()" "Preview()" .
 - () / IP, , URL SSL(https://) "More settings(가)" "Share Now()" "Preview()" .
- 4가 "Allow file upload to this folder(가 가 가)" .

"To NAS users(NAS)" NAS ()가 NAS
 File Station > "Share with me()" .

NAS

NAS

File Station

1. "Create()" ("+") > "Share space with a user()" .
2. "Create a User()" .
3. "Control Panel()" > "Privilege Settings()" > "Quote()" .
4. () () .

5. (NAS), , , / IP
6. "Create()"

(Google Drive, Dropbox, OneDrive) (CIFS/SMB, FTP, WebDAV)

Create remote connections()

1. "Menu Bar()" > "Create Remote Connection()" > "Remote Connection()"
2. SMB/CIFS, FTP WebDAV
3. (, / IP, / ,)
(QNAP NAS QTS 4.2).
4. "Create()"

1. "Menu Bar()" "Connection record()" > "Remote Connection()"
2. , , / IP, ,
- 3.

1. "Menu Bar()" "Current connection status()" > "Remote Connection()"
2. , , / IP, ,
- 3.

- :
- NAS 256
 - OneDrive for Business
 - "System Settings()" > "Notification()" > "SMTP Server(SMTP)"
 - 1000

- . IE 9+, Firefox 3.6+, Safari 5+ Chrome.
- ()
- App Center Connect to Cloud
- Drive
- NAS가
- 가
- 가
- CIFS/SMB
- 가
- PC
- 가

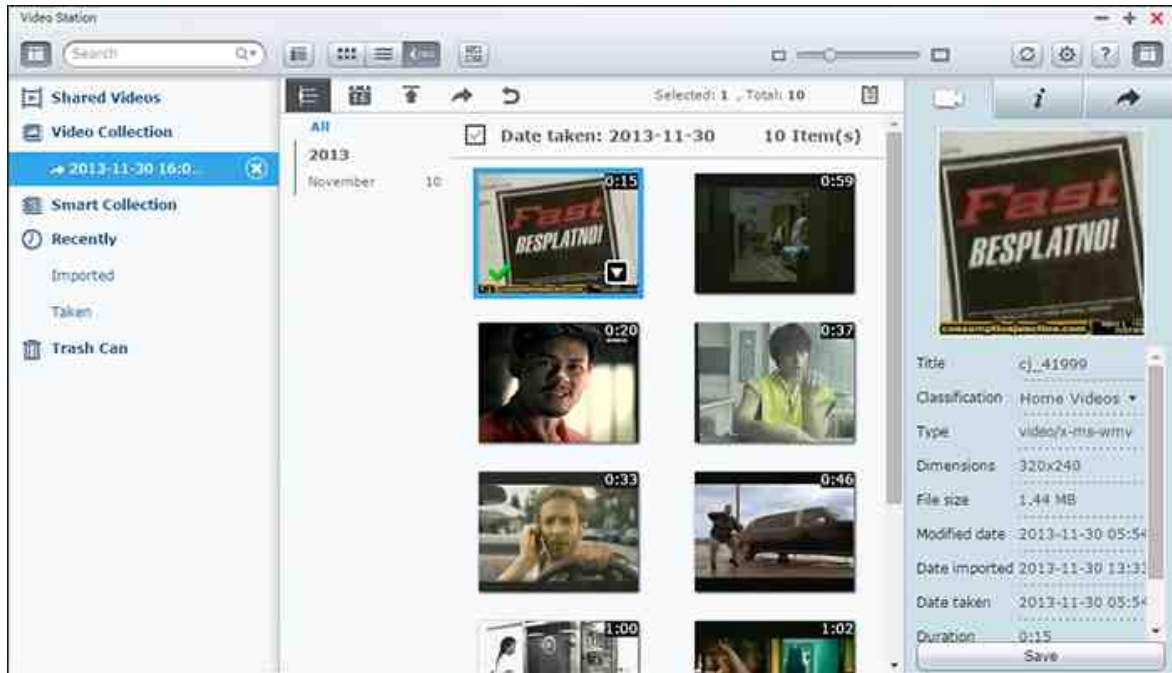
8.4 Video Station

Video Station(2.3) NAS

가

Video Station

, TV



- Video Station 230
- Video Station 231
- Video Station 235
- 239

Video Station

Video Station App Center(QTS 4.1)

1. NAS : NAS 가

1) Qfinder Pro PC Mac

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

NAS

- : 2GB
- 2GB

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

- Video Station NAS
- Video Station : MP4.

Video Station



1		
2	Search Bar()	, , ,
3	Browsing Mode()	: / /
4	Multi- select()	
5	Resizing Bar()	
6	Select DLNA/AirPlay Player (Network Media Player)(DLNA/AirPlay Player())	
7		

8		<p> , ; . </p> <ul style="list-style-type: none"> : 가, (, , TV) : Video Station : (" " .) : Video Station (OpenSubtitles Shooter) : "Always ask me to enter my password when accessing Private Collection and Qsync(Qsync)"
9		, .
10	Right Panel()	.
11	Timeline()	.
12	Date Filter()	.
13	Import(가)	가 .
14	Sharing()	.
15	Return(가)	"Video Collection()" "Smart Collection()"
16	Sharing History()	.

1 7	Tag Filter()	.
--------	---------------	---

:

- Network Media Player HDMI Chromecast
Media Streaming Add- On App Center
- Bonjour "Control Panel()" > "Network Service()" > "Service Discovery()" > "Bonjour" Bonjour
- NAS MP4
- NAS CodexPack NAS가 NAS NAS
- 가 DLNA, Apple TV Chromecast 가
- 169
-

- Shared Videos(): NAS ("/home" "Qsync")
- Private Collection(): "/home"
- Qsync: Qsync
- Video Collection(): 가
- Smart Collection(): NAS Video Station , , TV , 가
- Recently(): 가 ()
- Trash Can():

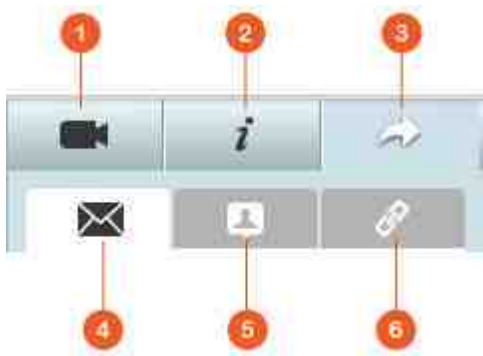
(가 가)

-
- ```

graph TD
 Root[⋮] --> Home[""/home""]
 Home --> Station["가 Video Station"]
 Station --> File120["120"]
 Station --> File167["167"]

```

**Right Panel(**



| 1 | Video Property<br>( )     | ..                                                                      |
|---|---------------------------|-------------------------------------------------------------------------|
| 2 | Tag and<br>Description( ) | .                                                                       |
| 3 | Sharing( )                | ( 가 : ,<br>)..)                                                         |
| 4 | Email( )                  | . , ,<br>"Send( )"<br>. QTS<br>> "Options( )" > "E- mail<br>Account( )" |
| 5 | Social Sharing<br>( )     | .                                                                       |
| 6 | Link( )                   | . "Select Videos(                                                       |

|  |  |                                                                                                                                                                             |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | )" "Select Link Format(<br>, LAN IP WAN IP<br>. (myQNAPcloud.com<br>myQNAPcloud<br>.) myQNAPcloud<br>HTML ( URL , HTML ,<br>vB Forum Alt Forum ). "Create(<br>가<br>URL<br>. |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

:  
 "Video Property(  
 .

### Video Station

가 가 .

1. "Create New  
Collection(  
)"
2. "Video Collection(  
)" & .

, , , ,  
 ( , , "Collection Settings(  
)" "Share with the  
public(  
)" 가 .)

"Smart Collection(  
)" "+"  
 , ( , , tv , ) ( )  
 . , , , ,  
 ,  
 ( , , "Collection Settings(  
)" "Share with the public(  
)" 가  
 .)

NAS ( NAS  
 / )  
 ( )  
 .  
 "Email(  
)" ,  
 "Publish(  
)" ,

가

```
"Select Videos(
"Link()"
```

"Sharing History(

QTS

1. "Settings( )" > "Social Network Binding( )"
2. ("Accessible Folder( )")
3. "Bind with Facebook(Facebook )"
4. Video Station
5. Video Station(http://NAS\_IPorName/video/)

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| 1 | /                 | / |
|---|-------------------|---|
| 2 |                   |   |
| 3 | Seek Bar( )       |   |
| 4 | Mute/ Volume( / ) | / |
| 5 | Resolution( )     |   |
| 6 | Subtitles( )      |   |
| 7 | Streaming to( )   |   |
| 8 | Full Screen( )    |   |

:

• HD , HD

•

- :
- :
- :
- :
- : /

• Network Media Player HDMI Chromecast  
Media Streaming Add- On App Center

• NAS MP4

Video Station ( , , )

1. ( > "Information( )" > "Video Property( )" "Movies( )" .)

2. "Movies( )"
  3. > "Movie information( )"
  4. 가 "Movie information( )"  
"Edit( )"
  5. 가 "Edit( )" PC  
URL  
가 ,  
가
- 가 :  
a. "video.avi" "video.eng.srt" . ( "video.cht.srt" .)  
b. "CC" > "Import subtitles( 가 )" .  
c. "CC" > "Search for subtitles( )"
  - Adjust Subtitles( ): "CC" > "Adjust subtitles ( )"

- :
- "Import subtitles( 가 )" "Search for subtitles( )" 4.2.0
  - : .srt, .ass, .ssa.
  - , Aegisub

Video Station 가

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Video Station  
/

- :
- x86 NAS , "/recording" "/web" 가

. ARM NAS , "/multimedia" "/homes"  
가  
.  
• "/home" NAS  
가 ( ). "/home"  
"Private Collection( )" . Video Station 가  
.

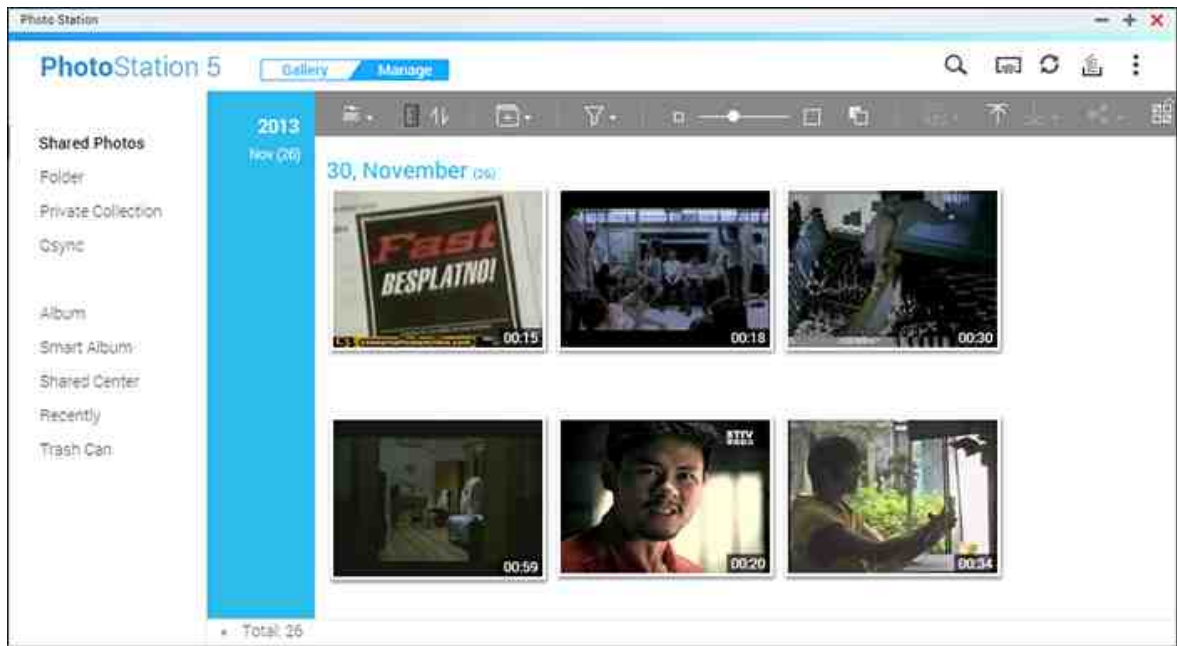
"Control Panel( )" > "Multimedia Management( )" >  
"Media Library( )" 가 .

: Media Library Photo Station, Music Station, Video  
Station DLNA Media Server .  
가 가



8.5 Photo Station

Photo Station(5.0) NAS  
Photo Station  
가  
가  
/ 가  
NAS



- Photo Station 241
- Photo Station 242
- Photo Station 247
- 254

Photo Station

NAS Photo Station  
(QTS 4.1 App Center Music Station  
)

1. NAS 가 NAS  
3가 가 . 1) Qfinder Pro PC Mac  
NAS  
"Shared Photos( )" "Private Collection( )" 2)  
"Import(가 )" PC 가  
가 NAS  
("Shared Photos( )" 가 "Multimedia  
( )" , "Private Collection( )" "/home"  
(.) "Album( )" 3)  
NAS

#### Photo Station

|  |                                |
|--|--------------------------------|
|  | BMP, JPG, JPE, PNG, TGA, GIF . |
|  | API, MP4 .                     |

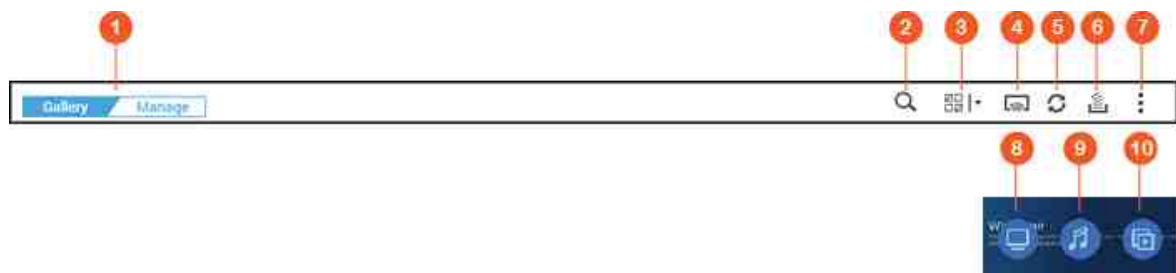
- :  
2GB .
- 2GB .

2. / 가 Photo Station  
Photo Station . [http://NAS\\_Name\\_or\\_IP/photo/](http://NAS_Name_or_IP/photo/)

|                       |           |
|-----------------------|-----------|
| : Photo Station admin | NAS admin |
|-----------------------|-----------|

#### Photo Station

#### Photo Station







|    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6  |                         | <p>Photo Station<br/>Photo Station</p> <p>가 가</p> <ul style="list-style-type: none"> <li>• : Photo Station 가</li> <li>• "( ) : 1677</li> <li>• : 가 Photo Station</li> <li>• Backup/Restore( / ):</li> <li>• : 가</li> <li>• : Photo Station</li> <li>• Automatically create matching album( ):</li> <li>• "Album( )"</li> <li>• Always start in Manage mode( ):</li> <li>• Photo Station</li> <li>• 가</li> </ul> |
| 7  | Browsing Mode( )        | ( / / , )                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8  | Timeline( )             |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9  | Sort( )                 |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10 | Add Album( 가)           |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 11 | Photo/Video Filter( / ) |                                                                                                                                                                                                                                                                                                                                                                                                                 |

|        |                              |                 |
|--------|------------------------------|-----------------|
| 1<br>2 | Zoom in/<br>Zoom out(<br>/ ) |                 |
| 1<br>3 | Background<br>Color( )       |                 |
| 1<br>4 | Slideshow(<br>)              | , .             |
| 1<br>5 | Import(가<br>)                | 가 .             |
| 1<br>6 | Download(<br>)               | (<br>가 ).       |
| 1<br>7 | Share( )                     | ,<br>.<br>[248] |
| 1<br>8 | Multi- Select<br>( )         | .               |

:

- Network Media Player HDMI Chromecast  
Media Streaming Add- On App Center
- Bonjour . "Control Panel(  
)" > "Network Service(  
)" > "Service Discovery(  
)" >  
"Bonjour" Bonjour
- NAS MP4

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- Shared Photos( ): 가 ("/home" "Qsync").
- Folder( ): NAS , , ("/home" "Qsync").
- Private Collection( ): "/home" 가 .
- Qsync: Qsync 가 .



3가 가 .

1. 2가 . "Create a Smart Album( )"  
 "Convert subfolder to Smart Album( )".  
 "Create a Smart Album( )"  
 . "Convert subfolder to Smart Album( )"  
 가 "Smart Album( )"
2. "Smart Album( )"
3. "Smart Album( )" > "Add Album( 가)"  
 > "Create( )"

"Smart Album( )"

- Email( ): "More setting( 가 )" ( "Create( )"
- Social network( ): ( , , "Create( )"
- Sharing link( ): , SSL "Create( )"

Photo Station

Photo Station(<http://>

NAS\_Name or IP/photo/)



/ NAS ( NAS 가 ) ( QTS ( ) )

"Shared Center( )"

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

가

| Rotation( ( ))             | 90 ( ) |
|----------------------------|--------|
| View( ( ))                 | ( )    |
| Information( )(i)          | ( )    |
|                            | ( )    |
| Rotation( ( ))             | 90 ( ) |
| View/ Play( / )            |        |
| Open in new browser tab( ) |        |
| Open with VLC(VLC )        | .( )   |

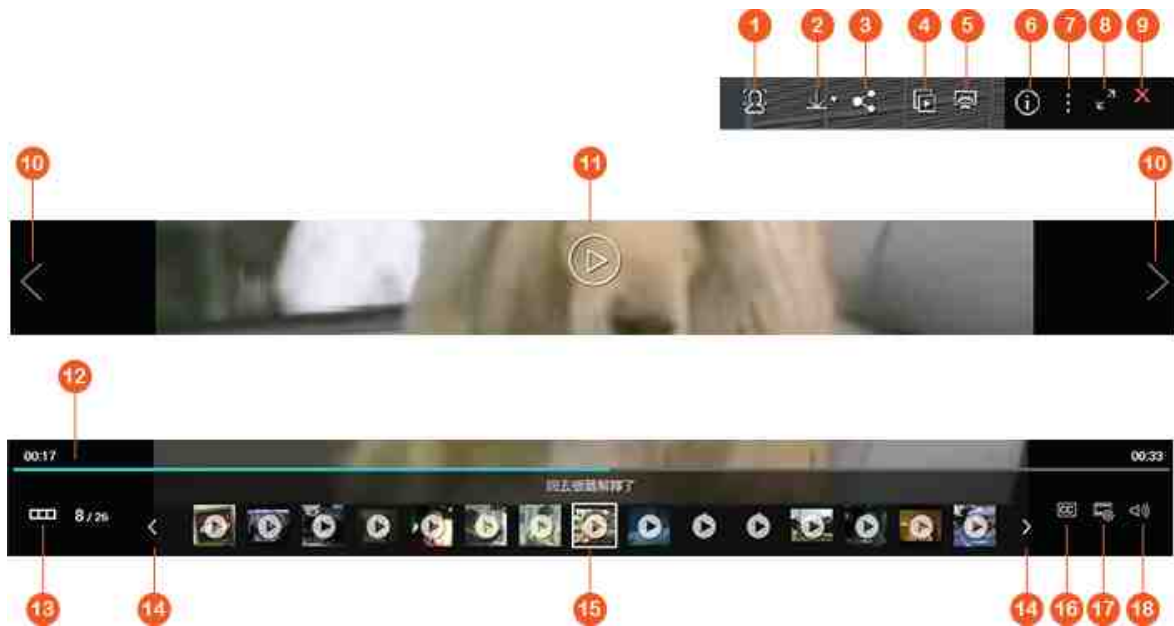
|                                                            |                                                                                    |
|------------------------------------------------------------|------------------------------------------------------------------------------------|
| Streaming to (Network Media Player)((Network Media Player) |                                                                                    |
| Share( )                                                   |                                                                                    |
| Download( )                                                | <p>4가 가 가</p> <p>("Original( )")</p> <p>("small( )", "medium( )", "large ( )")</p> |
| Add to Album(가)                                            | 가                                                                                  |
| Add to Transcode(가)                                        | <p>240P, 360P, 480P SD, 720P HD, 1080P Full HD( ).</p> <p>: <b>x86</b></p>         |
|                                                            | <p>Pixlr Editor Pixlr Express ( ).</p>                                             |
| Rebuild thumbnail( )                                       |                                                                                    |
|                                                            |                                                                                    |
| Information( )                                             | , , /                                                                              |
| Set Coordinates( )                                         | GPS ( ).                                                                           |
| Add Tag(가)                                                 | 가                                                                                  |
| Rating( )                                                  |                                                                                    |
| Color Label( )                                             |                                                                                    |

/ /

"Multi-select( )" ( Ctrl )

, ,

"Display(     )"



| 1 | Face Detection(     )           | 가<br>가 253                                                                                 |
|---|---------------------------------|--------------------------------------------------------------------------------------------|
| 2 | Download(     )                 | , , , 4가 가 가<br>("Original(     )",<br>("small(     )",<br>"medium(     )", "large(     )" |
| 3 | Share(     )                    |                                                                                            |
| 4 | Slideshow(     )                | /<br>252                                                                                   |
| 5 | Network Media Player<br>(     ) |                                                                                            |
| 6 | Information(     )              | , , /                                                                                      |

|        |                                                  |                                                                            |
|--------|--------------------------------------------------|----------------------------------------------------------------------------|
| 7      | Miscellaneous Settings<br>( )                    | / QTS                                                                      |
| 8      | Full Screen( )                                   | .                                                                          |
| 9      | Return to Photo Station<br>(Photo Station<br>가 ) | / Photo Station                                                            |
| 1<br>0 | Last Item/Next Item(<br>/ )                      | /                                                                          |
| 1<br>1 | /                                                | /                                                                          |
| 1<br>2 | Seek Bar( )                                      | .                                                                          |
| 1<br>3 | Hide/Show Preview<br>Bar(<br>/ )                 | .                                                                          |
| 1<br>4 | Rewind/Forward(<br>/ )                           | /                                                                          |
| 1<br>5 | Preview Bar(<br>)                                | .                                                                          |
| 1<br>6 | CC(<br>)                                         | .                                                                          |
| 1<br>7 | Resolution( )( )<br>(NAS )                       | <ul style="list-style-type: none"> <li>• (NAS ).</li> <li>• VLC</li> </ul> |
| 1<br>8 | Volume( )( )                                     | .                                                                          |

"Slideshow( )"



가

"Faces( )"

## PDF

Photo Station

PDF

PDF

PDF

가

- :  
Extension PDF App Center Photo Station  
x86 NAS  
, PDF x86 ARM NAS
- NAS

Photo Station

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Photo Station

/

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

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

|         |                                           |                                          |
|---------|-------------------------------------------|------------------------------------------|
| Station | : Media Library<br>DLNA Media Server<br>가 | Photo Station, Music Station, Video<br>가 |
|---------|-------------------------------------------|------------------------------------------|

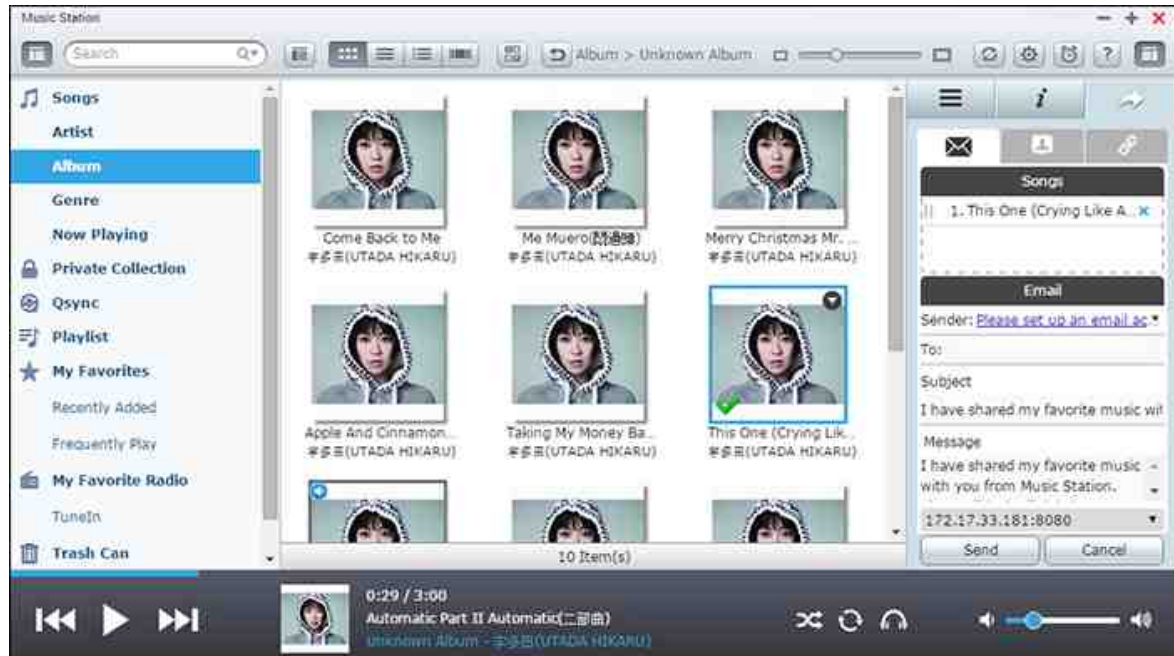
## 8.6 Music Station

Music Station(4.0)

가 NAS

, 가

NAS



- Music Station <sup>[256]</sup>
- Music Station <sup>[257]</sup>
- Music Station <sup>[260]</sup>
- <sup>[262]</sup>

### Music Station

NAS

Music Station

App Center

Music Station

(QTS 4.1

1.

NAS

NAS

3

가 가

1) Qfinder Pro

PC

Mac

NAS

<sup>[24]</sup>

2)

"Songs( )"

"Private Collection(

)"

(

)

PC

가

가 NAS

가

"Multimedia( )"

,"Songs( )"

, "Private Collection( )"

"/home"

.)

"Recently Added( 가 )"

3)

NAS



- Music Station admin NAS admin
- Music Station

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2. / 가 Music Station  
Music Station . [http://NAS\\_Name\\_or\\_IP/musicstation/](http://NAS_Name_or_IP/musicstation/)

Music Station



| 1  |                      |                   |
|----|----------------------|-------------------|
| 2  | Search Bar(<br>)     | , ,               |
| 3  | Browsing Mode<br>( ) | ( :<br>/ /<br>/ ) |
| 4  | Multi- Select(<br>)  |                   |
| 5  | Resizing Bar(<br>)   |                   |
| 6  |                      |                   |
| 7  |                      | , NAS ,           |
| 8  | Music Alarm(<br>)    |                   |
| 9  |                      | ,                 |
| 10 | Right Panel(<br>)    |                   |

Player( )



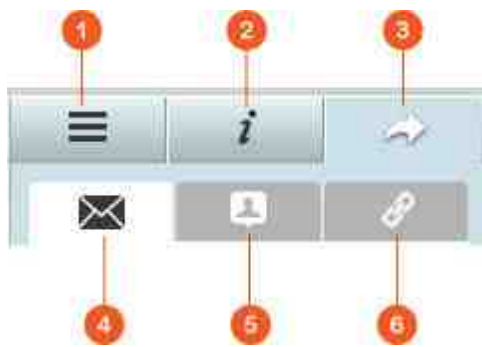
| 1 | Seek Bar( )                                                            | .                                      |
|---|------------------------------------------------------------------------|----------------------------------------|
| 2 | Previous Item ( )                                                      | .                                      |
| 3 | /                                                                      | /                                      |
| 4 | Next Item( )                                                           | .                                      |
| 5 | Shuffle( )                                                             | .                                      |
| 6 | Repeat( )                                                              | , , .                                  |
| 7 | Streaming Mode (Network Media Player) / USB Audio Passthrough( ) / USB | . USB ( ) "NAS Audio Output(NAS )" USB |
| 8 | Volume( )                                                              | .                                      |

- :
- Network Media Player HDMI Chromecast Media Streaming Add- On App Center
  - Bonjour "Control Panel( )" > "Network Service( )" > "Service Discovery( )" > "Bonjour" Bonjour

- Songs, Artist, Album, and Genre( , , , ):
  - PC ( " / Multimedia" ) 가
- Now Playing( ): "Now Playing( )"
- Private Collection( ): "/home"
- Qsync: Qsync
- Playlist( ):
  - 200
  - 600
  - "Playlist( )" "+" 가
  - "Now Playing( )" 가
- My Favorites( ): 1
  - "Rating( )" 가
- Recently Added( 가 ): 가
- Frequently Played( ): 가
- My Favorite Radio( ): URL Tuneln Radio
  - 가 1024
  - URL 가 MP3
- Tuneln: Tuneln
- Trash Can( ):

- "Playlists( )"
  - ' , \$ . / | \ : ? < > \* "
- "Recently Added( 가 )"
  - .
- Music Station
  - . MP3, FLAC, OGG, WAV, AIF, AIFF .

Right Panel( )



| 1 | Lyrics(가 )                  | 가 가 .                                                                                                      |
|---|-----------------------------|------------------------------------------------------------------------------------------------------------|
| 2 | Information<br>( )          | .                                                                                                          |
| 3 | Sharing(<br>)               | " " ( 3가 : , , ).                                                                                          |
| 4 | Email(<br>)                 | "Send( )" ..<br>"Control<br>Panel( )" > "System Settings( )" > "Notification(<br>)" > "SMTP Server(SMTP )" |
| 5 | Social<br>Sharing<br>(<br>) | .                                                                                                          |
| 6 | Link( )                     | . "Link Code( )"<br>, LAN IP WAN IP<br>(myQNAPcloud.com myQNAPcloud<br>myQNAPcloud<br>) "Save( )" URL      |

## Music Station

가  
Music Station .

"Playlist( )"  
"OK( )"

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

NAS ( NAS 가  
 / )  
 ( )  
 "Email(  
 )" "Publish( )"  
 "Link Code( )"  
 가

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

- Network Media Player HDMI Chromecast  
Media Streaming Add- On App Center
- Bonjour "Control Panel(  
)" > "Network Service(  
)" > "Service Discovery(  
)" >  
"Bonjour" Bonjour

Music Station NAS (USB , , HDMI),  
 (DLNA, Chromecast, AirPlay)  
 가  
 "streaming mode(  
)"  
 ( )  
 가

- HDMI Chromecast App Center
- USB QNAP
- 3.5mm USB

•

가 가

1. Music Station "Artist( )" "Album( )"
2. > "Change cover( )"
3. "Upload( )" PC "Search( )"

• / /

• "Info( )"

• ( Ctrl )

"My Favorites( )"

( ) Music Station

Music Station /

:

• "/home" 가 NAS

(NAS ). "/home"

"Private Collection( )"

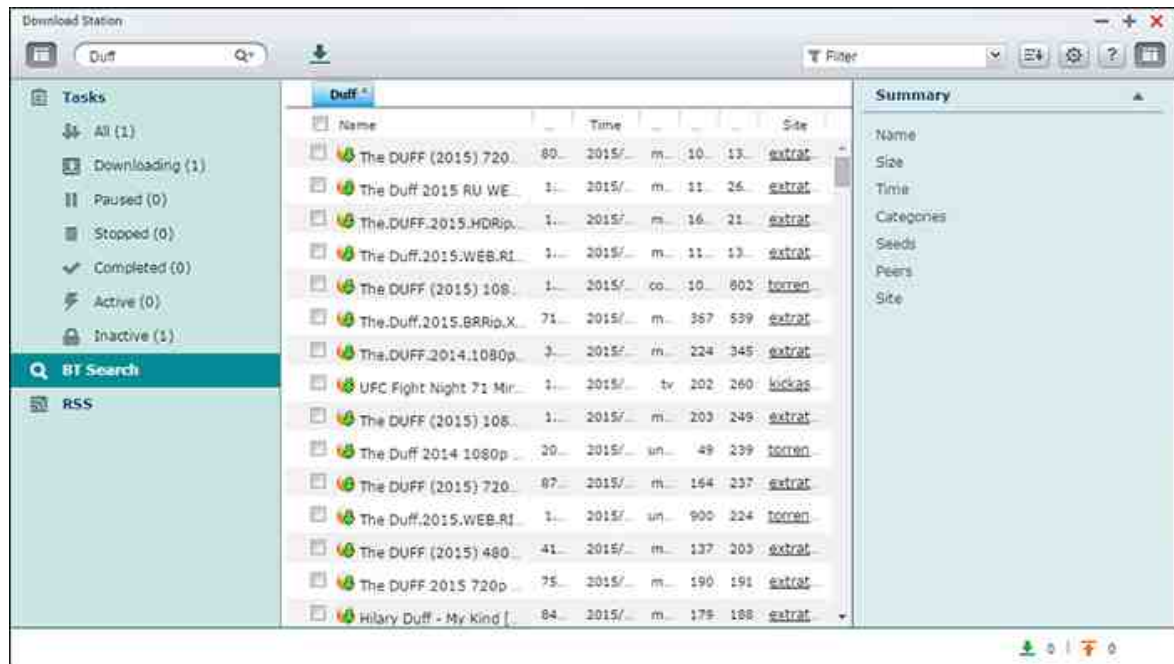
• "Control Panel( )" > "Privilege Settings( )" >

"Shared Folders( )"

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

|                 |                   |                                     |   |
|-----------------|-------------------|-------------------------------------|---|
| : Media Library |                   | Photo Station, Music Station, Video |   |
| Station         | DLNA Media Server | .                                   | . |
|                 | 가                 |                                     | 가 |

|                  |                                                                   |
|------------------|-------------------------------------------------------------------|
| Download Station | BT, PT, Magnet Link, HTTP/HTTPS, FTP/FTPS, Xunlei, FlashGet, qqdl |
| Baidu Cloud      | RSS                                                               |
| NAS              | . BT                      BT .                                    |



- Download Station 264
- Download Station 265
- Download Station 266
- Download Station 268

## Download Station

: PT, PT  
 . Download Station(libtorrent) PT  
 , App Center

## Download Station



NAS                      Download Station                      App Center  
 (QTS 4.1                      ).  
 /                      가                      Download Station                      가  
 Download Station                      . [http://NAS\\_Name\\_or\\_IP/downloadstation/](http://NAS_Name_or_IP/downloadstation/)

## Download Station



| 1      | Search Bar( ) | BT > "BT Search(BT )" "Settings( )" > "BT" |
|--------|---------------|--------------------------------------------|
| 2      | Add( 가)       | URL BT 가 PC                                |
| 3      | Start( )      | BT                                         |
| 4      |               | BT                                         |
| 5      |               | BT                                         |
| 6      |               | BT BT                                      |
| 7      |               | ,                                          |
| 8      | Download ( )  | BT                                         |
| 9      | Filter( )     | BT                                         |
| 10     | Sort( )       | ..                                         |
| 1<br>1 |               | BT RSS ( Download Station ).               |

- Tasks( ): BT ( , , , , , )  
, , , BT ( )
- BT Search(BT ): BT BT ( ),  
BT URL
- RSS: RSS , 가, ,

## Download Station

Download Station "Settings( )" .

### Global Settings( )

- Download Schedule( ): "Full speed( )" ( ) . "Limited( )" .
- Notification( ): (SMTP "System Settings( )" > "Notification( )" .)
- Search( ): BT .

### HTTP

- Connection(FTP ): HTTP .
- Bandwidth Limit( ): HTTP . 0 (x86 NAS HTTP 30 , ARM NAS 10 ).

### FTP

- Connection(FTP ): FTP .
- Bandwidth Limit( ): FTP . 0 (x86 NAS FTP 30 , ARM NAS 10 ).

### BT

- Connection Setting(BT ):
  - BT . 6881- 6889 .
  - Enable UPnP port mappin(UPnP ): UPnP .

- Enable DHT network(DHT ): 가 NAS가 DHT UDP
- Protocol encryption( ): DHT
- Bandwidth Limit( ): BT
  - Global maximum concurrent downloads( ): BT
    - (x86 NAS 30 , ARM NAS 10 .)
  - Global maximum upload rate( )(KB/s): BT
    - . 0
  - Global maximum download rate( )(KB/s): BT
    - . 0
  - Maximum upload rate per torrent( )(KB/s):
    - . 0
  - Global maximum number of connections( ):
  - Maximum number of connected peers per torrent( ):
- Seeding Preferences( ):
- : BT
  - IP
- BT Search(BT ): Download Station BT BT

RSS  
 Update(RSS ): RSS NAS가 RSS  
 가

**Add-on( 가 )**  
 BT ,  
 BT , 가 Download  
 Station

: Download Station  
 . [http://download.qnap.com/dev/download-station-addon-developers-guide\\_v4.pdf](http://download.qnap.com/dev/download-station-addon-developers-guide_v4.pdf)

**File Hosting Account( )**

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

## Download Station

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

- :
- x86 NAS 60 (30 BT/PT 30 HTTP/FTP) ,  
 ARM NAS 20 (10 BT/PT 10 HTTP/FTP)
  - &BT PC Download Station Chrome Firefox

**HTTP, FTP, Magnet** 가  
 HTTP, FTP Magnet 가 "Start( )" .  
 URL ( ).  
 . HTTP/FTP Magnet Link. 가  
 NAS 가  
 "Use credentials( )" ( > )  
 "OK( )" . NAS  
 가 .

: 30 .

## BT

BT  
 "Edit Downloads( )" .  
 /  
 Download Station "Settings( )" > "HTTP", "FTP" "BT" >  
 "Bandwidth Limit( )" .

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

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

## RSS

Download Station     RSS

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

RSS     RSS     RSS  
 Download Manager     RSS     가,     ,     .

## RSS Download Manager

RSS Download Manager     BT

- 가     RSS Download Manager     "Add(     가)"     .
- .
- RSS     .
- (     가     "All(     )"     ).
- Episode number(     ):  
    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(     )"     BT     "Share Time(     )"  
 )"

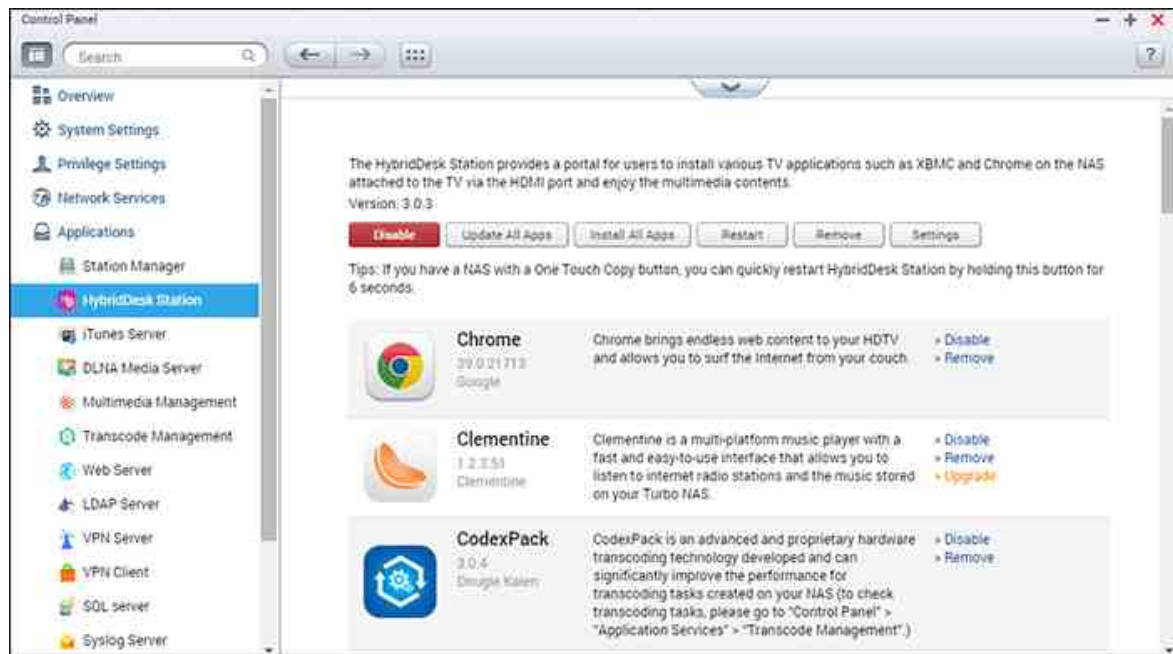
- 가 Download Station NAS
- Download Station . NAS
1. "Control Panel( )" > "Privilege Settings( )" > "Users( )"
  2. "Action( )" "Edit Application Privilege( )"
  3. Download Station > "Apply( )"

- B T** 가 가 :
1. 가 가
  2. NAS가 IP DNS 가
  3. 3 ~ 5
  4. NAS가 NAT . BT 가
    - a. NAT BT NAS LAN IP
    - b. NAS UPnP NAT
      - NAT 가 UPnP NAT
      - NAS UPnP NAT . BT 가

## 8.8 HybridDesk Station

HybridDesk Station

가



- HybridDesk Station 271
- HybridDesk Station 273
- NAS 가 274
- HybridDesk Station 274
- 275

: HybridDesk Station

- HD Station 2.x: x69 (x69U )
- HD Station 3.x: x51, x51+, x53, x53A, x63, x70, x70U, x71, x71U, x79, x79U, x80, x80U, HS-251, HS-251+, IS-400

### 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" "Get Started HybridDesk Station"

## 3.

- HybridDesk Station: TV HybridDesk Station
- XBMC: TV
- Chrome: Chrome NAS HDTV 가
- YouTube TV YouTube
- My NAS: NAS 가 NAS
- Surveillance Station( ): NAS 가 IP

|                      |                    |                    |   |
|----------------------|--------------------|--------------------|---|
| :                    |                    |                    |   |
| • Kodi, Chrome       | NAS                | HybridDesk Station |   |
| 가                    |                    |                    |   |
| •                    | 6                  |                    |   |
| • HybridDesk Station | NAS                | 6                  |   |
| • HybridDesk Station | 2GB                | NAS                |   |
| • Kodi가 AirPlay      | 2GB                | NAS                |   |
| • USB                | HybridDesk Station |                    |   |
| • Kodi               | "Multimedia( )"    | 가                  | , |

TV  
HybridDesk Station





#### 4. HybridDesk Station : HybridDesk Station

XBMC

TV

#### HybridDesk Station

- Qfile TV :
1. Qfile NAS
  - 2.
  - 3.
  4. NAS

- TV HybridDesk Station :
5. TV Kodi
  6. "Pictures( )"
  7. "Multimedia( )"
  - 8.

#### USB

- :
1. USB NAS
  2. "Pictures( )"
  3. "USB Disk"
  - 4.

N A S 가

(Samba, AFP, FTP, NFS) "Multimedia( USB

eSATA

"Multimedia" 가

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

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

Chrome

HybridDesk Station

Chrome

. PC

: Chrome

Qremote

NAS

USB

**Surveillance Station( )**

IP NAS .

YouTube

HybridDesk Station

YouTube .

MyNAS

NAS

가 NAS .

&nbsp;

**H y b r i d D e s k S t a t i o n**

QTS HybridDesk Station

HybridDesk Station

"Settings( )" .

HybridDesk Station .

- HybridDesk Station :
  - App( ): .
  - Display( ): .
  - Preferences( ):
    - HDMI : USB 가 NAS
- QTS HybridDesk Station:
  - Output resolution( ): HybridDesk Station  
HybridDesk Station
  - Overscan( ): HybridDesk Station 가  
가 가 .

- :
- QNAP MCE TS- x70 MCE TS- x69
  - HDMI TS- x69





| R M - I R 0 0 1 |                             |   |  | R M -<br>I R 0 0 2 |        | M C E                       |        | X B<br>M C                      | H D<br>S t a t i<br>o n |
|-----------------|-----------------------------|---|--|--------------------|--------|-----------------------------|--------|---------------------------------|-------------------------|
|                 |                             | 1 |  |                    | 1      |                             | 1      |                                 |                         |
|                 |                             | 2 |  |                    | 1<br>2 |                             | 1<br>3 |                                 |                         |
| Nu m b e r      | 0,1,2,3<br>,4,5,6,<br>7,8,9 | 3 |  |                    |        | 0,1,2,3<br>,4,5,6,<br>7,8,9 | 1<br>8 | 0,1,2<br>,3,4,<br>5,6,7<br>,8,9 |                         |
|                 | Vol+,<br>Vol-               | 4 |  | Vol+,<br>Vol-      | 9      | Vol+,<br>Vol-               | 1<br>2 | Vol+,<br>Vol-                   |                         |
|                 | /                           | 5 |  |                    |        |                             |        |                                 |                         |
|                 |                             | 6 |  |                    |        |                             |        |                                 |                         |
|                 | TV                          | 8 |  |                    |        |                             |        |                                 |                         |

|   |              |        |  |   |        |              |        |  |  |
|---|--------------|--------|--|---|--------|--------------|--------|--|--|
|   |              | 7      |  |   |        |              |        |  |  |
| 가 | Red -<br>( ) | 9      |  |   |        | Red -<br>( ) | 3      |  |  |
|   | ( )          | 1<br>0 |  |   |        | ( )          | 4      |  |  |
|   | ( )          | 1<br>1 |  |   |        | ( )          | 2<br>2 |  |  |
|   | ( )          | 1<br>2 |  |   |        | ( )          | 2<br>3 |  |  |
|   |              | 1<br>3 |  |   |        |              |        |  |  |
|   |              | 1<br>4 |  |   |        |              |        |  |  |
|   |              | 1<br>6 |  |   |        |              |        |  |  |
|   |              | 1<br>5 |  |   |        |              |        |  |  |
|   | CH-          | 1<br>7 |  |   |        |              | 3<br>2 |  |  |
|   | CH+          | 1<br>8 |  |   |        |              | 3<br>3 |  |  |
|   |              | 2<br>0 |  |   |        |              |        |  |  |
|   |              | 1<br>9 |  |   | 1<br>0 |              | 1<br>0 |  |  |
|   |              | 2<br>1 |  |   | 7      |              |        |  |  |
|   |              | 2<br>2 |  |   |        |              |        |  |  |
|   | 가            | 2<br>8 |  | 가 | 1<br>1 |              | 7      |  |  |

|  |   |        |  |  |   |  |        |  |  |
|--|---|--------|--|--|---|--|--------|--|--|
|  |   | 2<br>9 |  |  | 8 |  |        |  |  |
|  |   | 2<br>5 |  |  | 3 |  | 7      |  |  |
|  |   | 2<br>3 |  |  | 2 |  | 7      |  |  |
|  |   | 2<br>6 |  |  | 5 |  | 7      |  |  |
|  |   | 2<br>7 |  |  | 6 |  | 7      |  |  |
|  |   | 2<br>4 |  |  | 4 |  | 7      |  |  |
|  |   | 3<br>0 |  |  |   |  | 1<br>6 |  |  |
|  |   | 3<br>1 |  |  |   |  | 3<br>1 |  |  |
|  |   | 3<br>2 |  |  |   |  | 1<br>5 |  |  |
|  |   | 3<br>3 |  |  |   |  |        |  |  |
|  |   | 3<br>4 |  |  |   |  | 3<br>0 |  |  |
|  |   | 3<br>5 |  |  |   |  | 3<br>3 |  |  |
|  |   | 3<br>6 |  |  |   |  |        |  |  |
|  | / | 3<br>7 |  |  |   |  |        |  |  |
|  |   | 3<br>8 |  |  |   |  | 2      |  |  |
|  |   | 3<br>9 |  |  |   |  |        |  |  |
|  |   | 4<br>0 |  |  |   |  |        |  |  |
|  |   | 4<br>1 |  |  |   |  |        |  |  |

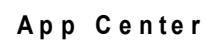
|  |  |  |  |  |  |               |        |  |  |
|--|--|--|--|--|--|---------------|--------|--|--|
|  |  |  |  |  |  | (<br>)        | 1<br>9 |  |  |
|  |  |  |  |  |  |               | 3<br>4 |  |  |
|  |  |  |  |  |  | 16:9 /<br>4:3 | 2<br>7 |  |  |

가 :

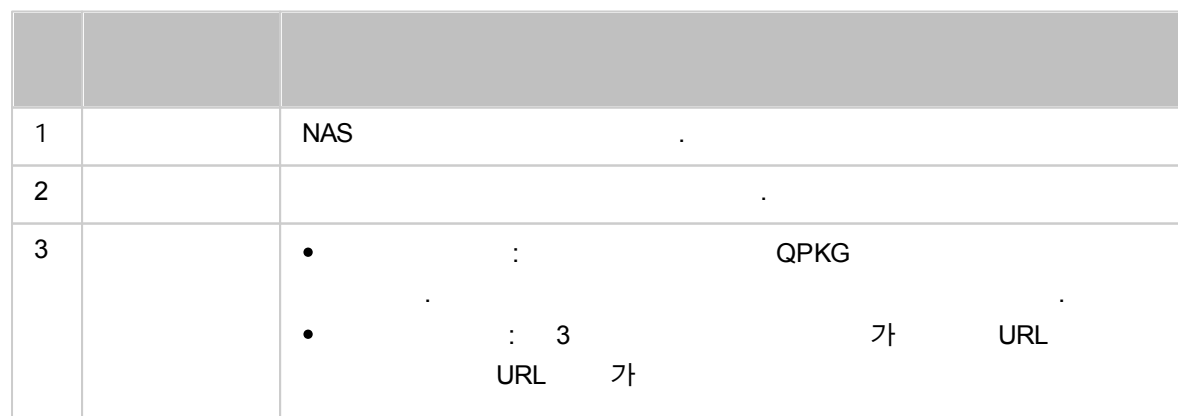
- HD Station Surveillance Station( ) .



App Center NAS . QNAP 3 가  
NAS 가



## App Center



|   |         |            |
|---|---------|------------|
|   |         | 가<br>• QTS |
| 4 |         |            |
| 5 | Sort( ) | ,          |
| 6 |         | NAS        |

- : NAS
- : NAS 가
- : NAS
- QNAP : QNAP
- : QNAP 가 (QNAP 3 가)
- :
- : QNAP 가
- : "Backup/ Sync( / )" "Education( )" 가

### App Center

, ,  
"+ Install(+ )"  
"+ Install(+ )" "O Open(O )" "My Apps( )" A

:

- NAS가
- QNAP /  
QNAP
- 가
- 가
- 가 , App Center

```

 "Update()" "OK()"
 "Update All()" "Refresh(
)" "Open()" 가
("Start()")
 / / 가
 .

```

- :
- on/off
  - QNAP (<http://www.qnap.com/go/qpkg.html>)
- ).

NAS가 QNAP App Center

QNAP (\*.qpkg) (<http://www.qnap.com/go/qpkg.html>)

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

, "Install Manually( )" .

QNAP      가      NAS











QNAP      .


- : 가 NAS
- , 가 : QNAP
- NAS : NAS ( , , ) (Word, PDF, Excel)
- NAS : NAS NAS /

- , 가 : QNAP

- NAS : NAS ( , , ) (Word, PDF, Excel) .


- NAS : NAS / .

- Qfile 
- Qmanager 
- Qnotes 
- Qremote 
- Qmusic 
- Qvideo 
- Qphoto 
- Qget 
- Vmobile 
- Vcam 

- Qmanager 

- Qnotes<sup>285</sup>


- Qremote<sup>[285]</sup>

- Qmusic 

- Qvideo 

- Qphoto  286

- Qget<sup>287</sup>

- Vmobile 

- $V_{cam}$  

Q file

Qfile NAS QNAP NAS 가 PC NAS ,



Qmanager

Qmanager

NAS

CPU

"App Center"

NAS



Qnotes

Qnotes

가

Qnotes

가

, 가 ,



Qremote

Qremote HD Station QNAP Station

Qremote

HD



Q m u s i c

Qmusic

NAS

가



Q v i d e o

Qvideo

NAS

가



Q p h o t o

Qphoto



Qget

Qget NAS  
 . Qget Download Station 가  
 . Qget Magnet 가  
 가 Qget Bit Torrent



Vmobile

Vmobile QNAP ,  
 Surveillance Station Vmobile NAS IP  
 NAS



Vcam

Vcam NAS  
 . Vcam IP 가





## 10.

QNAP NAS

- [\[289\]](#)
- myQNAPcloud Connect[\[289\]](#)
- Qsync 2.0[\[289\]](#)
- NetBak Replicator[\[289\]](#)
- Qget[\[290\]](#)
- vSphere Client plug-in[\[290\]](#)
- Qsnap[\[290\]](#)

Qfinder Pro Windows, Mac Linux , LAN NAS  
QFinder Pro NAS

Download( )

myQNAPcloud Connect

myQNAPcloud Connect NAS  
myQNAPcloud Connect Windows  
myQNAPcloud Connect Turbo NAS Windows Explorer  
&  
Download( )

Qsync 2.0

Qsync 가  
NAS NAS  
Download( )

NetBak Replicator

NetBak Replicator 가 Windows PC , , ,  
QNAP NAS  
NAS PC  
NetBak Replicator FTP WebDAV  
Download( )

Qget

QGet . Windows Mac  
NAS Download Station BT, HTTP, FTP

QGet LAN WAN BT 가, ,  
HTTP FTP URL . QGet  
&

Download( )  
가

vSphere Client plug-in

NAS NAS VMware vSphere Client  
vSphere Client Plug-in 가  
NAS

Download( )  
ESXi 가

Qsnap

Qsnap PC

Download( )

## 11. NAS 가

NAS 가

NAS 가 (QPKG)

- Backup Versioning - Beta [\[292\]](#)
- Gmail Backup - Beta [\[292\]](#)
- Hybrid Backup Sync - Beta [\[292\]](#)

가

- Container Station - Beta [\[292\]](#)
- Virtualization Station - Beta [\[292\]](#)
- Linux Station - Beta [\[293\]](#)
- Notes Station - Beta [\[293\]](#)
- Qsirch - Beta [\[293\]](#)
- Qmail Agent- Beta [\[293\]](#)
- Media Streaming Add-On [\[294\]](#)
- Photo Station Extension - Beta [\[294\]](#)
- OceanKTV - Beta [\[294\]](#)
- L2TP/IPsec VPN Service [\[294\]](#)
- MyQNAPcloud SSL Certificate [\[294\]](#)
- Surveillance Station [\[294\]](#)
- [\[295\]](#)
- CloudLink [\[295\]](#)
- Signage Station [\[295\]](#)
- Diagnostic Tool - Beta [\[295\]](#)
- Q'center [\[295\]](#)

:

- [가](#) NAS [. NAS](#) QNAP [가](#)
- App Center [. NAS](#)
- QNAP  [\(http://www.qnap.com/go/qpkg.html\)](http://www.qnap.com/go/qpkg.html) [.\).](#)

## Backup Versioning - Beta

Backup Versioning RTRR [. RTRR](#)  
["version control\( \)"](#)  
[가](#)

## Gmail Backup - Beta

Gmail [Gmail](#) ,  
[. Gmail](#)  
[.](#)  
[.](#)

## Hybrid Backup Sync - Beta

Hybrid Backup Sync QNAP NAS  
[. ,](#) USB [, Time](#)  
Machine [, RTRR](#) [RTRR](#) , [\(Rsync\), FTP, CIFS/SMB,](#)  
Amazon® S3, Amazon® Glacier, Azure™ Storage, Google Cloud Storage™ , S3/  
OpenStack Swift/WebDAV [가](#) , Google Drive™, Microsoft OneDrive ,  
Dropbox  
[. Hybrid Backup Sync](#) ,  
[.](#)

## Container Station - Beta

Container Station LXC Docker [가](#) [. NAS](#)  
Linux [. Docker Hub](#)  
Registry [,](#)  
[가](#) [가](#) [.](#)

## Virtualization Station - Beta

Virtualization Station NAS Windows, Linux, UNIX, Android  
 NAS 가 (VM) NAS  
 VM  
 NAS VM  
 PC 가  
 Virtualization Station VM NAS  
 NAS  
 NAS VM

#### Linux Station - Beta

Linux Station QTS HDMI Linux  
 Linux NAS PC  
 Linux Station

#### Notes Station - Beta

QNAP Notes Station NAS  
 . NAS ,  
 . Notes Station  
 . Notes Station . NAS  
 . QTS 4.1

#### Qsirch - Beta

Qsirch . NAS  
 ,  
 가 가  
 . Qsirch  
 . Qsirch  
 가 NAS 가  
 . QNAP TF- IDF  
 가

#### Qmail Agent- Beta

Qmail Agent 가 Gmail, Outlook, Yahoo IMAP  
 . Gmail  
 . NAS ,  
 . Qmail Agent NAS  
 Qmail Agent QNAP NAS

Media Streaming Add- On QTS (File Station, Photo Station, Music Station and Video Station), AirPlay, DLNA, Chromecast, HDMI-CEC, DLNA

Photo Station Extension      Photo Station      \*      pdf      가

가      . 가      pdf

OceanKTV QNAP NAS 가 .  
OceanKTV 가 . OceanKTV  
!

L2TP( 2 ) (PPTP) 2 (L2F)  
 . 2 PPTP , L2TP  
 . IPsec , L2TP  
 가 L2TP/IPsec  
 VPN . L2TP/IPsec Windows, Mac, Linux

|                             |             |               |
|-----------------------------|-------------|---------------|
| myQNAPcloud SSL Certificate | myQNAPcloud | (https://www. |
| myqnapcloud.com)            | SSL         | QTS           |
| myQNAPcloud                 | 가           | myQNAPcloud   |
| DDNS                        | QNAP NAS    | .             |

Surveillance Station                      Surveillance Station   App Center                      NAS

                                                         가          IP

Surveillance Station                      ,                ,                ,                ,                ,

NAS

NAS

CloudLink

CloudLink myQNAPcloud가 , myQNAPcloud  
(www.myqnapcloud.com)

가 App Center CloudLink  
myQNAPcloud ID(QID) myQNAPcloud

CloudLink

CloudLink QNAP

Qfile,

Qmanager, PC  
CloudLink

Qsync

QNAP

Signage Station

Signage Station

iArtist Lite

NAS

, Signage Station

NAS

Diagnostic Tool - Beta

NAS

가

RAM

Q'center

Q center

QNAP NAS

. Q Center  
NAS

## 12. LCD

LCD

NAS

<http://www.qnap.com>

NAS가

LCD

NAS가

NAS

IP

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

LCD

IP 가

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

\*"Select"( )

"Enter"( )

5

가

NAS

LCD

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

"Select( )"

RAID 6

가

"Enter"

가

"Select"( )

" "

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



RAID 1, RAID 5 RAID 6 , RAID  
 , RAID NAS LCD  
 . 100% RAID  
 NAS , RAID  
 NAS RAID "Storage Manager(  
 )" > "Volume Management(  
 )" 30- 60  
 MB/s ( , ).

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

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

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

IP 가 . NAS가

가 .

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

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

### L C D

LCD NAS IP 가 "Enter" .

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

TCP/IP

TCP/ IP

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

DHCP

IP\*

7.가

\*IPIP,LAN 1LAN 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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