

QNAP Turbo NAS

(: 4.2)

Turbo NAS :TS-128, TS-131, TS-228, TS-231, TS-231+, TS-251, TS-251+, HS-251, HS-251+, TS-251C, TS-253 Pro, TS-253A, TS-269L, TS-269 Pro, TS-431, TS-431U, TS-431+, TS-451, TS-451+, TS-451S, TS-451U, TS-453S Pro, TS-453 Pro, TS-453A, TS-463U, TS-463U-RP, TS-469 Pro, TS-469L, TS-469U-RP, TS-469U-SP, TS-470, TS-470U-RP, TS-470U-SP, TS-470 Pro, TVS-463, TVS-471, TVS-471U, TVS-471U-RP, TS-453U, TS-453U-RP, TS-453mini, TS-569 Pro, TS-569L, TS-563, TS-651, TS-653 Pro, TS-653A, TS-669 Pro, TS-669L, TS-670 Pro, TS-670, TVS-663, TVS-671, TS-851, TS-853 Pro, TS-853S Pro, TS-853U, TS-853U-RP, TS-853A, TS-863U, TS-863U-RP, TS-869 Pro, TS-869L, TS-869U-RP, TS-870 Pro, TS-870, TS-870U-RP, TS-879 Pro, TS-879U-RP, TVS-EC880, TVS-871, TVS-871U-RP, TVS-863, TVS-863+, TS-EC880U-RP, TS-EC880 Pro, TS-EC879U-RP, TS-1079 Pro, TVS-EC1080+, TVS-EC1080, TS-EC1080 Pro, TS-1253U, TS-1253U-RP, TS-1263U, TS-1263U-RP, TS-1269U-RP, TS-1270U-RP, TVS-1271U-RP, TS-1279U-RP, TS-EC1279U-RP, TS-EC1279U-SAS-RP, SS-EC1279U-SAS-RP, TS-EC1280U-RP, TVS-EC1280U-SAS-RP, TVS-EC1580U-SAS-RP, TS-1679U-RP, TS-EC1679U-RP, TS-EC1679U-SAS-RP, TS-EC1680U-RP, TVS-EC1680U-SAS-RP, SS-EC1879U-SAS-RP, SS-EC2479U-SAS-RP, TS-EC2480U-RP, TVS-EC2480U-SAS-RP.

1.	.....	5
1.1	.....	6
1.2	.....	8
1.3	.....	10
1.4	.....	11
2.	.....	12
2.1	.....	13
2.1.1	.....	14
2.1.2	.....	15
2.2	.....	18
2.2.1	.....	19
2.2.2	.....	20
2.2.3 CD	.....	21
2.2.4 HDMI	.....	22
2.3 가	.....	23
2.4 NAS	.....	24
2.4.1 Windows	.....	25
2.4.2 Mac Linux	.....	26
2.5 NAS	.....	27
2.6 NAS	.....	28
3. QTS	.....	34
3.1 QTS	.....	35
3.2 QTS	.....	37
4.	.....	43
4.1	.....	44
4.2	.....	47
4.2.1	.....	50
4.2.2	.....	52
4.2.2.1	.....	53
4.2.2.2	.....	58
4.2.2.3 가	.....	76
4.2.2.4	.....	78
4.2.3 iSCSI	.....	80
4.2.3.1 iSCSI	.....	81
4.2.3.2 LUN	.....	93
4.2.4 가	.....	97
4.3	.....	99

4.4 Thunderbolt	108
4.5	109
4.6	111
4.7	114
4.8	116
4.9	118
4.10 /	120
4.11	122
4.11.1	123
4.11.2 USB	125
4.11.2.1 Windows 7	127
4.11.2.2 Mac OS 10.6	128
4.11.2.3 Mac OS 10.5	129
4.11.2.4 Mac OS 10.4	130
4.11.2.5 Linux (Ubuntu 10.10).....	131
4.11.3 UPS	132
4.12	135
4.13	137
5.	139
5.1	140
5.2	144
5.3	145
5.4	154
5.5	155
5.5.1 NAS Windows Server 2003/ 2008/ 2012 Active Directory	156
5.5.2 NAS LDAP Directory	158
5.6	161
6.	168
6.1 Win/Mac/NFS	169
6.2 FTP	173
6.3 Telnet/SSH	175
6.4 SNMP	176
6.5	177
6.6	178
6.7 Qsync Central Station	180
7.	189
7.1	190
7.2	193
7.2.1	194
7.2.2	196

7.2.3	.....	202
7.2.4	.....	204
7.2.5	.....	205
7.3 File Station	.....	209
7.4 LDAP	.....	222
7.5 SQL	.....	224
7.6	.....	226
7.7 RADIUS	.....	227
7.8 Syslog	.....	228
7.9 TFTP	.....	230
7.10 가	.....	231
7.11 VPN	.....	234
7.12 VPN	.....	237
7.13	.....	241
7.13.1 가	.....	244
8.	.....	246
8.1 App Center	.....	247
8.2 DLNA	.....	250
8.3 Download Station	.....	252
8.4 HybridDesk Station	.....	259
8.5 iTunes	.....	271
8.6	.....	272
8.7 Music Station	.....	274
8.8 myQNAPcloud	.....	282
8.9 Photo Station	.....	289
8.10	.....	304
8.11	.....	306
8.12 Video Station	.....	308
9.	.....	319
10.	.....	323
11. NAS 가	.....	325
12. LCD	.....	329
13. GNU GENERAL PUBLIC LICENSE	.....	334

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
가

FCC

FCC

A
FCC

15

- 1.
- 2.

: FCC 15 A

가

: QNAP Systems, Inc.
가

FCC가

FCC

B
FCC

15

- 1.
- 2.

: FCC 15 B

(가)

-
-
-
-

가

/TV

: QNAP Systems, Inc.
가

FCC가

C E

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- 1253U- RP, TS- 1253U, TS- 879U- RP, TS- 870U- RP, TS- 853U- RP, TS- 453U- RP, TS- 1079 Pro, TS- 879 Pro, TS- 853U, 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- 451+, 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

1.3

- : 가 .
- : ,
가 .
- : 가 .

1.4

1. NAS 0 -40 0%- 95%
2. NAS (100W, 90- 264V)
3. 가 NAS 가
4. NAS NAS
5. NAS NAS
6. NAS
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

:

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NAS

[28]

2.1

NAS

1.

(HDD)가 NAS

[14]

2. QNAP NAS PC

NAS가

LED

[15]

:

(QIG)

QNAP

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

2.1.1

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

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

: QNAP / / .
: NAS () 가
, 가 .

2.1.2

LED

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

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. Turbo NAS QTS QTS (QTS)

2.2.2

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

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

2.2.3 CD

NAS CD

1. CD-ROM QNAP Qfinder
2. QNAP Qfinder . QNAP Qfinder가
3. Qfinder (QTS Turbo NAS QTS).

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

2.2.4 HDMI

NAS HDMI

1. NAS HDMI

2.

3. HD Station

259 QTS

QTS

.(QTS NAS

)

:

- HDMI 가 NAS
- NAS ID "admin"

2.3 가

QNAP NAS 가 . NAS .

1: QNAP

http://www.qnap.com/ 가 "QTS 4.2" > "For Home(가)"(
"For Business"())
"Mobile Apps()& Utilities()" . "Learn More()"
PC



2: CD-ROM

NAS CD-ROM . QNAP Qfinder,
myQNAPcloud Connect NetBak Replicator.

CD-ROM

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

2.4 NAS

NAS

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

2.4.1 Windows

Windows : NAS 가 가

1: QNAP Qfinder

NAS

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

: Storage Plug & Connect NAS

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

2: My File Explorer()

Run()

NAS

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

2.4.2 Mac Linux

Mac

NAS 가 가 :

1: QNAP Qfinder

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

2:

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

Linux

Linux .

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

, NAS IP 가 192.168.0.1 /mnt/pub "

(public)" ,

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

id ,

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

2.5 NAS

NAS

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

```

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

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

```

: NAS NAT NAS
, NAT 443 NAS LAN IP .
    
```

3. NAS .

2.6 NAS

- () NAS () NAS
 NAS NAS
- NAS가
 가
- NAS "System Administration()"
 > "Backup/Restore Settings(/)" NAS 가
- NAS
1. NAS 28
 2. NAS 30
 3. 32
 4. NAS 32

NAS

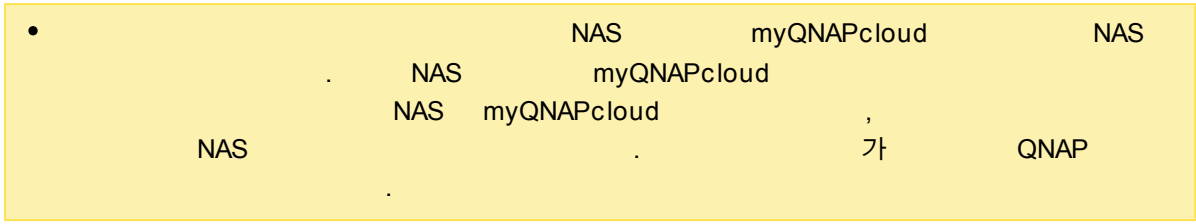
NAS NAS NAS
 NAS

NAS		NAS		
TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8 4.0.x 4.1.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8.x	
		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, 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			
TS-x39, TS-509, TS-809, SS-x39, TS-x59, TS-x59U	3.8 4.0.x	TS-x10, TS-x12, TS-x19, TS-x20, TS-x21, HS-210	3.8.x 4.0.2	

	4.1.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		
TS-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, TS- 431U, HS- 251/251+, TS-x51/x51+, TS-x53, SS- x53, TS-x53S Pro	4.1.x	TS-x31, TS-431U, HS-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		
TS-x69, TS- x69U, TS-x70, TS-x70U, TS- x79, TS-x79U, TS-x80, TS- x80U, TVS-x80	3.8.x	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	
	4.0.2	TS-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	4.1.1	

TS-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, TS-431U, HS-251/251+, TS-x51/x51+, TS-x53, SS-x53	4.0.5 4.1.1

:
 • NAS NAS 가
 • NAS http://
 www.qnap.com/compatibility 가 ..
 • 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- 2-	, JBOD, RAID 0, RAID 1.
4-	NAS	1~ 4- 2- 3 ~ 4- 4- 4-	, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10.
5-	NAS	1~ 5- 2- 3 ~ 5- 4 ~ 5- 4-	, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10.
6-	NAS	1~ 6- 2- 3 ~ 6- 4 ~ 6- 4-	, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, 6- RAID 10.
8-	NAS	1~ 8- 2- 3 ~ 8- 4 ~ 8- 4-	, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, , 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
-

3.1 QTS

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



*

가 Turbo NAS -

가 , , 가
 QNAP Turbo NAS

가
 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 41

QTS



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

3		<p style="text-align: center;">QTS</p>
4		<p style="text-align: right;">(HDD SMART ,) ()</p>
5		<p>USB SATA NAS USB 가 File Station "External Device()" 가 (File Station File Station) ()</p>
6	Notification and Alert()	<p style="text-align: right;">"Clear All()" "Event Notifications()" [137] &nbsp;</p>
7	Options()	<ul style="list-style-type: none"> • Profile(): [137] [46] • Wallpaper(): • 2-step Verification(2): 2 [41] • Change Password(): • E-mail Account(): Music Station, Photo Station, Video Station File Station &nbsp; • Miscellaneous(): <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"> ○ Show the desktop switching button(): (No. 12) 가 ○ Show the link bar on the desktop(): (No. 13, No. 14, No. 15). ○ Show the Dashboard button(): (NO. 10). ○ Show the NAS time on the desktop(NAS): NAS ○ Keep Main Menu open after selection(): 가 / ○ Show a list of actions when external storage devices are detected(가): 가
8		<p style="text-align: right;">NAS /</p> <ul style="list-style-type: none"> • Last login time(): . • Options(): No. 7 . • Sleep(): NAS가 가 가 . • NAS: 1) 가 ; 2) QNAP Qfinder Qmanager Wake-on • LAN(WOL) . WOL • "Control Panel()" > "Power()" > "Wake-on-LAN WOL)" 가 WOL IR002 MCE . 114; 3) RM- . &nbsp; &nbsp; &nbsp; ○ : • Restart(): NAS • Shutdown(): NAS <ul style="list-style-type: none"> ○ : NAS ▪ NAS 1.5 ▪ Qfinder "Tools()" > "Shut down Server()" . • Logout(): .
9		<ul style="list-style-type: none"> • Help(): , QTS , .

		<ul style="list-style-type: none"> • Language(): UI • Desktop Preference(): <ul style="list-style-type: none"> ○ Tab Mode(): NAS ○ Window mode(): <ul style="list-style-type: none"> ○ Frameless Mode(): • Feedback(): • About(): NAS , HDD 가 ()
10	Dashboard ()	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	Network Recycle Bin ()	()	()
----	-------------------------	-----	-----

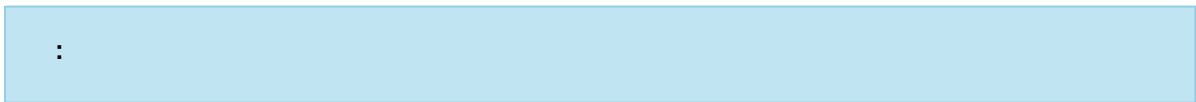
2 - step Verification (2)

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
 , "Verify another way()"
 QTS

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

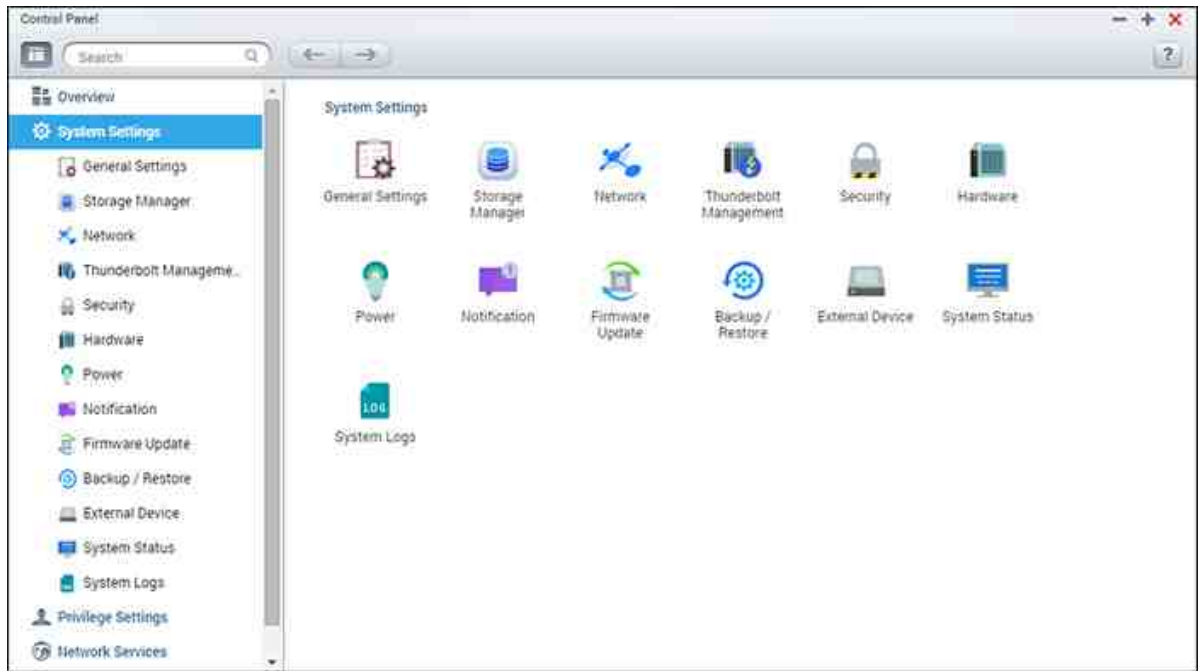


-
- 가
-

- QTS 4.x 1024x768
- NAS QNAP 가

4.

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



- [44]
- - [47]
- [99]
- Thunderbolt [108]
- [109]
- [111]
- [114]
- [116]
- [118]
- / [120]
- - [122]
- - [135]
- [137]

4.1

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

- [44]
- [45]
- [45]
- [45]
- [46]
- [46]
- : NAS . NAS 14 (a-z, A-Z), (0-9) (-) () (.)
 8080 : , File Station, Multimedia Station Download Station.
- (SSL): 가 https NAS " (SSL) " 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.


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

: NTP , 가

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

NAS가

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

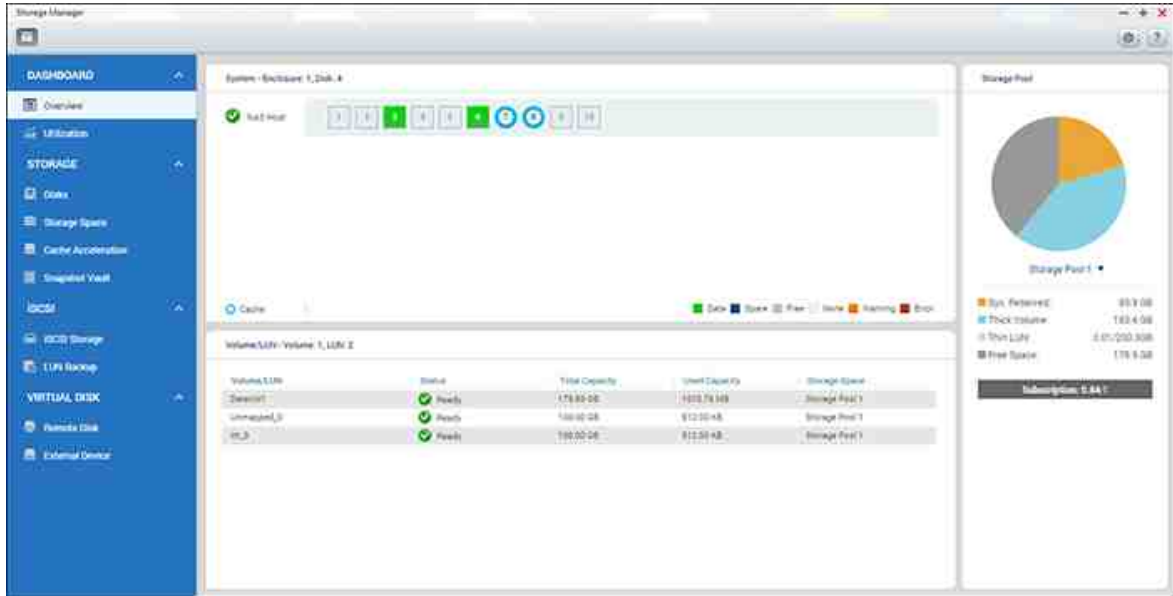
- : " "
- : 가 (QNAP , myQNAPcloud
-)
- : NAS 100 " " 100
" "
" "
 " "
"Preview()" ,
"Apply()"

4.2

QNAP'

NAS

RAID



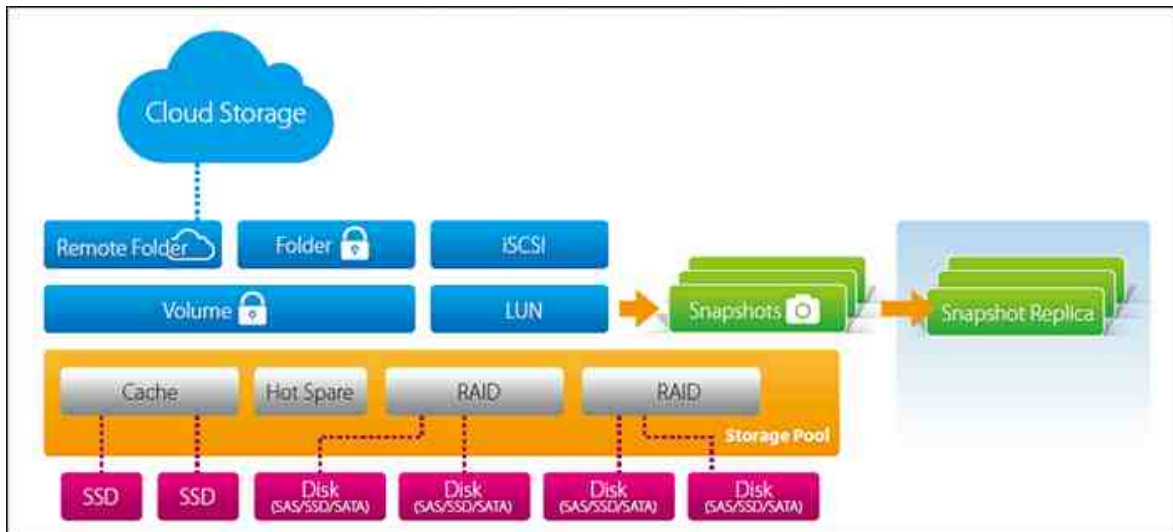
: NAS

QNAP

QNAP

4

: HDD



가

4

:

			QTS 4.1	QTS 4.2
RAID	Y	Y	Y	Y
RAID	Y	Y	Y	Y
LUN	Y	Y	Y	Y
LUN			Y	Y
			Y	Y
SSD		Y	Y	Y
JBOD RAID		Y	Y	Y
JBOD		Y	Y	Y
				Y
				Y
				Y

:

- [50](#)
- [52](#)
- iSCSI [80](#)
- 가 [97](#)

- USB
- QTS 4.2 : https://www.qnap.com/i/au/trade_teach/con_show.php?op=showone&cid=139

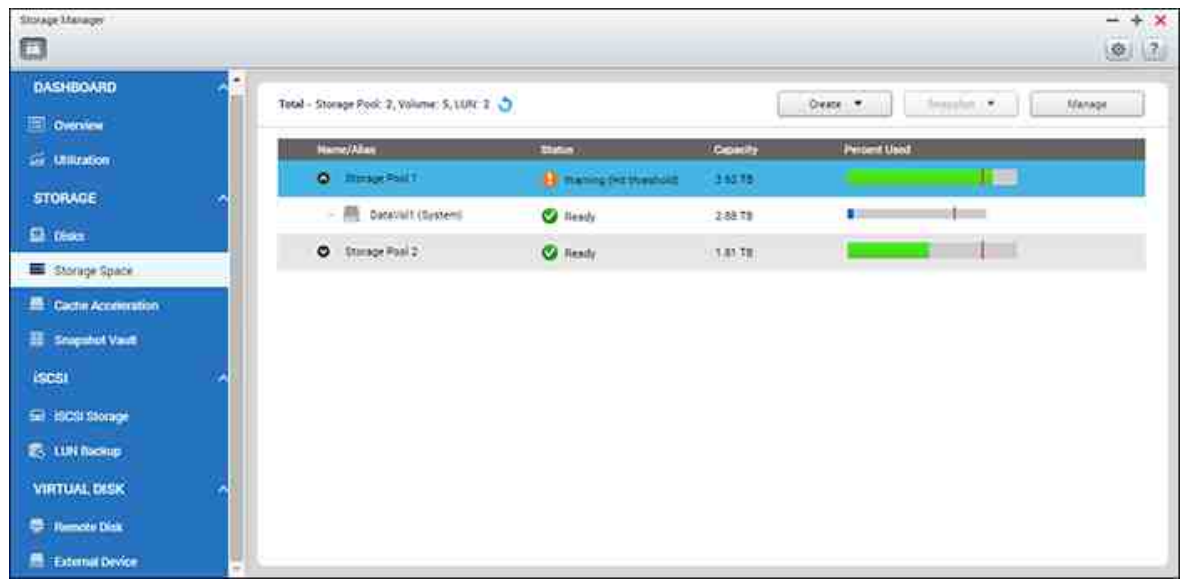
. "Clear

Record()"

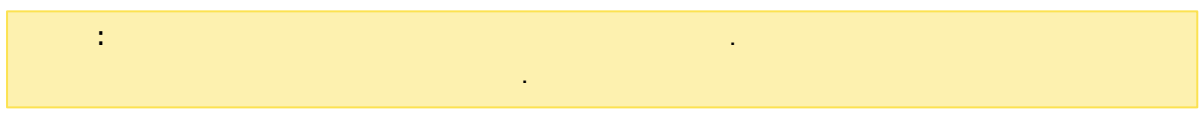
: NAS : TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP, SS- EC2479U- SAS- RP, TS- EC2480U- RP, TS- EC1680U- RP, TS- EC1280U- RP, TS- EC880U- RP, TS- EC1080 Pro, TS- EC880 Pro, TVS- 471, TVS- 671, TVS- 871, TVS- 871U- RP, TVS- 1271U- RP, TVS- 463, TVS- 663, TVS- 863, TVS- 863+.

4.2.2

가



- _____ 53
- _____ 59
- _____ 가 76
- _____ 78



4.2.2.1

가 NAS

NAS

. NAS "NAS Host(NAS)" NAS :

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

NAS "+"

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

	ATA , , , , , ATA

	S.M.A.R.T	S.M.A.R.T
("Action()")	가 "Status()" "bad blocks()" 가	가
("Action()")		LED
("Action()")	RAID 10 RAID	RAID 1, RAID 5, RAID 6 RAID RAID
("Action()")		
("Action()")		64
RAID	RAID	, RAID , RAID
()	SSD), BUS (NAS), (HDD))" IOPS ("Performance test()"))	"Refresh()"

HDD S.M.A.R.T.

() "Disk Health()"

: TS- 470 Pro, TS- 470, TS-670 Pro, TS-670, TS-870 Pro, TS-870, TS-870U-RP, TS-879 Pro, TS-879U-RP, TS-1079 Pro, TS-1270U-RP, TS-1279U-RP, TS-1679U-RP, TS-EC879U-RP, TS-EC1279U-RP, TS-EC1279U-SAS-RP, TS-EC1679U-RP, TS-EC1679U-SAS-RP, SS-EC1279U-SAS-RP, SS-EC1879U-SAS-RP and SS-EC2479U-SAS-RP, TVS-471, TVS-671, TVS-871, TVS-871U-RP, TVS-1271U-RP, TVS-463, TVS-663, TVS-863, TVS-863+.

(REXP)

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

: TS- 470 Pro, TS- 470, TS-670 Pro, TS-670, TS-870 Pro, TS-870, TS-870U-RP, TS-879 Pro, TS-879U-RP, TS-1079 Pro, TS-1270U-RP, TS-1279U-RP, TS-1679U-RP, TS-EC879U-RP, TS-EC1279U-RP, TS-EC1279U-SAS-RP, TS-EC1679U-RP, TS-EC1679U-SAS-RP, SS-EC1279U-SAS-RP, SS-EC1879U-SAS-RP and SS-EC2479U-SAS-RP, TVS-471, TVS-671, TVS-871, TVS-871U-RP, TVS-1271U-RP, TVS-463, TVS-663, TVS-863, TVS-863+.

1. "Recover()" : SAS
가 active()" 가 "Error()" RAID "Not

2. ID : ID

3. : NAS

: "Recover()" 가




4.2.2.2

NAS

, iSCSI LUN

/
가

/ RAID
RAID

-  59
-  64
- RAID  71

RAID

- [59]
- [59]
- [60]
- [60]
- [61]
- [62]
- [62]
- iSCSI LUN [62]

• NAS : TS- 269L, TS- 269 Pro, TS- 469 Pro, TS- 469L, TS- 469U- RP, TS- 469U- SP, TS- 470 Pro, TS- 470, TS- 569 Pro, TS- 569L, TS- 669 Pro, TS- 669L, TS- 670 Pro, TS- 670, TS- 869 Pro, TS- 869L, TS- 869U- RP, TS- 870 Pro, TS- 870, TS- 870U- RP, TS- 879 Pro, TS- 879U- RP, TS- 1079 Pro, TS- 1269U- RP, TS- 1270U- RP, TS- 1279U- RP, TS- 1679U- RP, TS- EC879U- RP, TS- EC1279U- RP, TS- EC1279U- SAS- RP, TS- EC1679U- RP, TS- EC1679U- SAS- RP, SS- EC1279U- SAS- RP, SS- EC1879U- SAS- RP and SS- EC2479U- SAS- RP, TS- EC880 Pro, TS- EC1080 Pro, TS- EC880U- RP, TS- EC1280U- RP, TS- EC1680U- RP, TS- EC2480U- RP, TVS- 471, TVS- 671, TVS- 871, TVS- 871U- RP, TVS- 1271U- RP, TVS- 463, TVS- 663, TVS- 863, TVS- 863+.

• 가 16 RAID 512MB RAM . NAS
8 NAS 8GB RAM

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
2. "Create()" > "New Storage Pool()" .
3. , RAID "Create ()"
4. .
5. 가 "OK()"
6. .

- "Storage Manager()" > "STORAGE()" > "Storage Space()"
-
- "Remove()" > "Remove Pool()"
- "Apply()"
-

: LUN

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Remove()" > "Safely Detach Pool()"
4. "Apply()"
- 5.

: iSCSI LUN

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Expand Pool()"
4. RAID 가 "Adding new hard drive(s) to an existing RAID group(RAID 가)"("Create new RAID groups(RAID)")
RAID "Next()"
5. "Next()"
6. "Expand()"
7. 가 "OK()"
- 8.

: RAID 0, RAID 1, JBOD 가 RAID

RAID

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Expand Pool()" > "Create and add a new RAID group(RAID)"
4. "Next()" > "Next()"
5. RAID > RAID > "OK()"
6. "Expand()"
7. 가 > "OK()"
- 8.

- RAID 1, 5, 6, 10, RAID 0, JBOD
- RAID 가
- USB

RAID

10. RAID : RAID 1, RAID 5, RAID 6 RAID
1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID > "Manage()" > "Expand Capacity()"
4. "Change()" > "Please remove this drive()" 가 , NAS
5. "You can replace this drive()" 가 , > "Expand Capacity()"
6. "Yes()"
7. RAID

- RAID
- RAID

가

- 1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
- 3. "Action()" > "Set Threshold()"
- 4. "Apply()"

- 0% 가 가 :
- 0% 가 , [67].
- 가 , [67].

- 1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
- 3. "Actions()" > "Set Snapshot Reserved()" > "Apply()"

:
 • [66]
 • NAS 가
 x51*, x53, x63, x70, x71, x79, x80.
 ○ * 4 GB RAM
 ○ * x51 1024 256 HS- 251

- 1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
- 3. "Create()"> "New Volume()" [64]

i S C S I L U N

iSCSI LUN

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Create()"> "New iSCSI LUN(iSCSI LUN)"
iSCSI

가

- [64]
- [65]
- [65]
- [65]
- [66]
- [66]
- [66]
- [66]
- [68]
- [68]
- SSD [70]

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
2. "Create()" > "New Volume()"
3. ("Thick or Thin Volumes()") "Next()" .
4. , RAID "Next()" .
5. "File system option()" .
inode "Next()" .
6. "Finish()" .
7. 가 "OK()" .
8. .

RAID 1, RAID 5, RAID 6 RAID 10
RAID 가

1. "Thick Multiple Volume()" "Thin Multiple Volume()" "Next()" .
2. , inode ,
3. "Next()" .
4. "Finish()" .
5. .

:
 • : RAID 가
 • : 가
 • : 가
 가
 • / 가

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Remove()" . "Apply()"

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Expand Volume()"
4. "Set to Max()" . ("Set to Max()")
"Apply()" .)
- 5.

"Storage Manager()" > "STORAGE()" > "Storage Space()"
"Actions()"

:
 • 가 "Format()"
 • (, , ,),
 [68]

- 2TB EXT4
- NAS 가
- x51*, x53, x63, x70, x71, x79, x80.
- * 4 GB RAM
- * x51 1024 256 HS- 251

가
 "Storage Space()"
 "Actions()" > "Set Threshold()"
 "Apply()"

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. "Actions()" > "Create New Shared Folder()"
- 4.
5. 4 "Configure access privileges for users()"
 "Edit()"
6. 4 "Advanced settings()" "Edit()"
 , Oplocks, "Create()"
7. 가

가
 LUN (, , ,) /LUN

- :
- (/LUN) Backup Station
 Backup Station 2021
 - NAS 가
 - x51*, x53, x63, x70, x71, x79, x80.
 - * 4 GB RAM
 - * x51 1024 256 HS- 251

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
2. LUN "Snapshot()" > "Take a Snapshot()"
- 3.
4. "OK()"

"Storage Space()" LUN
 "Snapshot()" > "Snapshot Manager()" (LUN LUN)

- "Restore()" / "Restore to ()" "Download()"
- "Revert()"
- "Delete()"
- "Clone()" LUN LUN iSCSI
- "Schedule()" , "Enable schedule()"

"Global Settings()"

- (@Recently- Snapshot)가 File Station 가 "@Snapshot" "Global Settings()"
- 가

○ 가 : 가 (LUN 256 , 1024)
가

○ : 가 (LUN 256 , 1024) 가
가

: "When reaching snapshot limitation()"
621

NAS 256- AES /
NAS

: AES NAS

QNAP NAS

가 NAS

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

NAS

- NAS JBOD RAID
145
- NAS

가

- 가
- 가
- 가

: 가 (:
, , ,)

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

- NAS "Storage Manager()" > "STORAGE()" > "Storage Space()" "Actions()" > "Encryption()" 3가 :
- : (가 가)
 - : ("Locking and unlocking disk volumes manually()") !
 - : NAS NAS가 . **NAS**

NAS "Storage Manager()" > "STORAGE()" > "Storage Space()" "Actions()" > "Encryption()" > "Lock this Volume()" "Yes()"

NAS . "Storage Manager()" >
 "STORAGE()" > "Storage Space()"
 "Manage()" > " Unlock this volume()"
 . "Apply()"

NAS . "Storage Manager
 ()" > "STORAGE()" > "Storage Space()"
 "Status()"
 가 . "Status()"

가 . NAS

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

: "Save Encryption Key()"

NAS . DataVol1 . DataVol2
 가 DataVol1 . NAS DataVol1
 가 . NAS
 NAS

NAS . NAS 가 , NAS
 NAS .
 가 .

SSD

SSD SSD가 가 가

가 .
 "Global Settings()"("?"
 SSD "setting()")

- SSD : 가 가
- : SSD :

- 가 RAID
- RAID 가 , RAID
- RAID
- RAID
- 가
- RAID
- /
- RAID

RAID

RAID
RAID :

	NAS RAID
RAID 0	<p>가</p> <p>가 . RAID 0</p>
RAID 1	<p>가</p> <p>가 . RAID 1</p>
RAID 5	<p>가</p> <p>3 가 . RAID 5</p> <p>(- 1) . RAID 5</p> <p>가</p>

	<p>가 4 3 RAID 5</p> <p>가 RAID 5 가 RAID 5</p> <p>가 "degraded mode()"</p> <p>가</p> <p>가 "rebuilding()"</p> <p>: 가</p> <p>"degraded()"</p>
RAID 6	<p>RAID 6 RAID 6 RAID 6</p> <p>4 가 RAID 6</p> <p>(-2) 가</p> <p>() 가</p> <p>가 RAID 6 가 2</p> <p>: 가</p> <p>"degraded()"</p> <p>가</p>
RAID 10	<p>RAID 10 RAID 1() RAID 0()</p> <p>RAID 10</p> <p>RAID 10 (</p> <p>/2) 가</p> <p>RAID 10</p> <p>RAID 10 2</p> <p>2 가</p> <p>: 가</p> <p>"degraded()"</p> <p>가</p>

JBOD	
------	--

(BBM)

BBM
 가 () , RAID
 RAID
 가 RAID RAID

: BBM RAID 5 RAID 6

RAID

, RAID RAID : RAID 1, RAID 5, RAID
 6 RAID 10. RAID :
 1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
 2.
 3. RAID "Manage()" > "Expand Capacity()"
 4. "Please remove this drive()" 가 , NAS
 5. "You can replace this drive()" 가 ,
 "Expand Capacity()"
 6. "Yes()"
 7. RAID
 가

RAID 6 RAID 가 RAID 5
 RAID 6 RAID 가 :
 1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
 2.
 3. RAID "Manage()" > "Add Hard Drive(가)"
 4. RAID 가 "Apply()"

5. 가 "Yes()"

6. 가 RAID 가

RAID

RAID RAID
RAID 1 , RAID 1 RAID 5
, RAID 5 RAID 6 RAID

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID "Manage()" > "Migrate()"
4. "Apply()"
5. 가 "Yes()"
6. RAID

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID "Manage()" > "Configure Spare Drive()"
4. "Apply()"
5. 가 "Yes()"
6. 가 가

/

/ 가

, ()

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID "Manage()" > "Enable Bitmap()"

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID "Manage()" > "Disable Bitmap()"(가) "OK()"

: RAID 1, RAID 5, RAID 6 RAID 10

RAID

RAID "Inactive()"
 (RAID 1, RAID 5, RAID 6 RAID 10 , RAID 0 JBOD
 .)
 가 NAS 가

NAS RAID
 RAID 3 가 RAID 5
 NAS 가 2
 RAID
 :

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

1. "Storage Manager()" > "STORAGE()" > "Storage Space()"
- 2.
3. RAID
4. "Manage()" > "Recover()"
5. RAID

4.2.2.3 가

SSD 가 NAS 가

- [76]
- SSD [76]
- SSD [77]
- SSD [77]
- SSD [77]

SSD 가 , NAS

:
https://www.qnap.com/i/in/qa/con_show.php?op=showone&cid=114

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

* , 1 TB SSD NAS 4GB RAM

SSD , SSD

SSD

1. "Create()"
2. SSD SSD
3. :
4. "Create()"
5. 가 "OK()"
6. SSD

: - SSD SSD

SSD

- 1. "Remove()"
- 2. 가 "Yes()"
- 3. SSD 가
- SSD 가 /

SSD

- 1. "Add SSD Drive(SSD 가)"
- 2. SSD "Expand()"
- 3. 가 "Yes()"
- 4. SSD

SSD

- 1. "Cache Setting()"
- 2. SSD / "Finish()"
- 3. I/O

• I/O 가

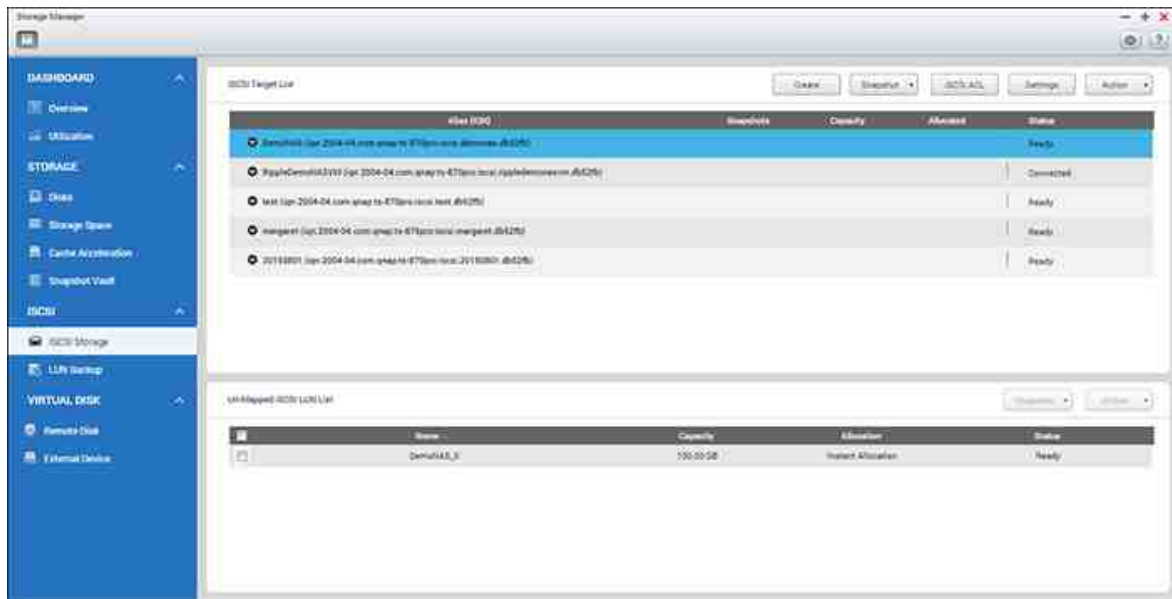
• SSD SSD

SSD

- 3.
4. /
5. "OK()"
6. "Storage Manager()" > "STORAGE()" > "Storage Space()"
가 Snapshot Vault
7. File Station

4.2.3 iSCSI

iSCSI , iSCSI ACL LUN .



- iSCSI 81
- LUN 93

4.2.3.1 iSCSI

NAS 가 iSCSI(Internet Small Computer System Interface)

가 iSCSI , iSCSI , iSNS
 / , iSCSI LUN
 . NAS가 iSCSI LUN . iSCSI LUN

- iSCSI [81]
- iSCSI [85]
- ACL [86]
- [86]

:
QNAP

i S C S I

NAS가 iSCSI

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

가
 . iSCSI LUN iSCSI
 LUN : LUN LUN. LUN NAS
 LUN LUN

LUN LUN :

	LUN()	LUN()
VAAI		
VAAI		
VAAI		
VAAI		

	(VAAI Windows 2012 8)	
Microsoft ODX		
LUN	()	
LUN		1

LUN LUN 가

LUN 가 :

- : NAS RAID
- : LUN LUN

256 iSCSI LUN NAS 100
LUN 156 LUN
NAS가 iSCSI NAS

- : iSCSI
- ARM NAS (iSCSI) RAID 8TB

iSCSI

1. iSCSI NAS iSCSI 가
2. "iSCSI Target with a mapped LUN(LUN iSCSI)"("iSCSI target only(iSCSI)" "iSCSI LUN only(iSCSI LUN)") "Next()" "
3. "Next()" "
- 4.
5. VMware Virtual Machine File System "Enable clustering access to the iSCSI target from multiple initiators(iSCSI)" "Data Digest()" "Header Digest()" (expand on "CRC/Checksum(CRC/)") iSCSI

- 6. CHAP
 - CHAP:
 - : 0-9, a-z, A-Z, , 256
 - : 0-9, a-z, A-Z, , : 12-16
 - CHAP:
 - : 0-9, a-z, A-Z, : (), . () - () , : 12-16
 - : 0-9, a-z, A-Z, : (), . () - () , : 12-16
- 7. LUN LUN , LUN LUN (NAS), LUN "Next()"
- 8. "Next()"
- 9. "Finish()"
- 10. LUN

iSCSI

- 1. "Create()"
- 2. "iSCSI Target only(iSCSI)" "Next()"
- 3. VMware Virtual Machine File System "Enable clustering access to the iSCSI target from multiple initiators(iSCSI)"
- 4. "CRC/Checksum(CRC/)" "Data Digest()" / "Header Digest()" "Next()"
- 5. "Use CHAP authentication(CHAP)" / "Mutual CHAP(CHAP)" "Next()" "Use CHAP authentication (CHAP)" iSCSI 가 , iSCSI "Mutual CHAP(CHAP)" "Mutual CHAP(CHAP)"
- 6. "Next()"
- 7. "Finish()"
- 8.

iSCSI LUN

iSCSI LUN :

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

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

LUN iSCSI LUN

iSCSI LUN :

iSCSI		iSCSI 가
		iSCSI
		iSCSI
		iSCSI
LUN	가	LUN 가
		LUN 가

iSCSI LUN ("Action()") :

	LUN : , CHAP : LUN ,
	iSCSI
	LUN
	LUN

	LUN	LUN
	iSCSI LUN	LUN
	LUN iSCSI LUN	iSCSI
	iSCSI	

: iSCSI

iSCSI LUN

iSCSI LUN :

1. iSCSI iSCSI LUN
2. "Action()" > "Disable()"
3. "OK()"
4. "Action()" > "Un-map()" LUN LUN
5. iSCSI LUN
6. "Action()" > "Map()" LUN
7. LUN "Apply()"
8. LUN

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

iSCSI LUN

NAS iSCSI LUN :

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

: LUN 144TB , NAS 4GB RAM 250TB LUN

iSCSI

(가) 가 iSCSI NAS

- : iSCSI LUN "Instant Allocation()"
- LUN : NAS ("System Status()" > "Resource

Monitor()" LUN NAS 4
 가 4 LUN iSCSI
 • 가 LUN : /
 가 LUN
 LUN 2 가 2 LUN
 VM 가

ACL

iSCSI (ACL) LUN
 가 "Default()"

:
 QNAP

, NAS "Add a Policy(가)" IQN
 LUN "Apply()"

	LUN
/	LUN
	가 LUN

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

: LUN NAS LUN

: IQN ?
 Microsoft iSCSI "General()" IQN

QNAP NAS iSCSI LUN QNAP
 NAS QNAP Snapshot Agent

가

LUN ()
 Snapshot Agent

- (/LUN) Backup Station
 Backup Station 2021
- LUN LUN , LUN
 LUN
- iSCSI LUN Windows VMware VSS- Snapshot Agent가
- NAS 가
 x51*, x53, x63, x70, x71, x79, x80.
 - * 4 GB RAM
 - * x51 1024 256 HS- 251

1. LUN "Snapshot()" > "Take a Snapshot()"
- 2.
- 3.
4. "OK()"

LUN
 LUN

67

Snapshot Agent
 QNAP Snapshot Agent VMware vCenter Microsoft Volume Shadow Copy Service(VSS)
 NAS VMware iSCSI LUN (iSCSI LUN
 Snapshot Agent 가 VMware
)
 vCenter Microsoft Server

Snapshot Agent
. SnapAgent
. Snapshot Agent

"Snapshot()" > "SnapAgent"
IP, , OS, LUN
www.qnap.com .

iSCSI NAS LUN iSCSI OS
iSCSI Initiator가

Windows iSCSI Initiator:
Microsoft iSCSI Software Initiator 가 iSCSI
Windows

iSCSI Initiator :
"Control Panel()" > "Administrative Tools()" iSCSI Initiator
"Discovery()" "Add Portal(가)" ("Discover Portal()")
. NAS IP iSCSI iSCSI
가 "Targets()" "Connect(
)" "Advanced()"
, "OK()"
가 "Connected()" .

Windows가
가 가 "Control Panel(
)" > "Administrative Tools()" > "Computer Management()" > "Disk
Management()"
가 "OK()" 가
가 PC iSCSI

Mac OS X에서 Xtend SAN iSCSI Initiator를 사용하여 iSCSI (QNAP NAS)에 접근하는 방법입니다. 이 문서에서는 Mac OS X 10.4.x - 10.6.x에서 iSCSI를 설정하는 방법을 설명합니다.

Xtend SAN iSCSI Initiator :

ATTO Mac OS X Xtend SAN iSCSI Initiator Mac OS X 10.4.x - 10.6.x에서 iSCSI를 설정하는 데 사용됩니다.

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

Xtend SAN iSCSI :

1. Xtend SAN iSCSI Initiator를 사용하여 "Applications ()"에서 iSCSI를 설정합니다.
 2. "Discover Targets()"에서 "Discover by DNS/IP ()" 또는 "Discover by iSNS(iSNS)"을 선택합니다. "Discover by DNS/IP"는 IP 주소를 사용하여 iSCSI 타겟을 발견하는 데 사용됩니다. "Discover by iSNS"는 iSNS 서비스를 사용하여 iSCSI 타겟을 발견하는 데 사용됩니다.
 3. iSCSI (: 3260), CHAP ()를 사용하여 "Finish()"를 클릭합니다.
 4. NAS에 iSCSI를 추가합니다. "Add()"를 클릭하여 NAS를 추가합니다.
- "Setup()"에서 iSCSI를 설정합니다. "Status()"에서 iSCSI의 상태를 확인합니다. "Login()"에서 iSCSI에 로그인합니다. "Initialize...()"에서 iSCSI를 초기화합니다. "Disk Utilities()"에서 iSCSI를 Mac에 마운트합니다.

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

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

: LUN Linux Open- iSCSI .

```

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

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

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

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

iSCSI .
# iscsiadm -m node

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

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

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

dmesg .
# dmesg | tail

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

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

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

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

```
I/O
```

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

```
"iscsiadm"
```

```
:
```

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

```
:
```

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

```
:
```

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

```
:
```

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

4.2.3.2 LUN

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

- LUN [93]
- iSCSI LUN [94]
- iSCSI LUN [95]
- LUN / / [95]

• 가 QNAP

• NAS 가

x51*, x53, x63, x70, x71, x79, x80.

- * 4 GB RAM
- * x51 1024 256 HS-251

LUN

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

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

가 ("Action()")

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

: LUN , 3

iSCSI LUN

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

가 ("Action()")

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

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

iSCSI LUN

- LUN NAS iSCSI LUN
- iSCSI LUN NAS iSCSI LUN
- iSCSI가
1. "Storage Manager()" > "LUN Backup(LUN)" . "Create a job()"
 2. "Create a LUN Snapshot(LUN)" "Next()"
 3. NAS iSCSI LUN "Next()" iSCSI LUN
 4. LUN NAS LUN iSCSI "Next()" LUN iSCSI "Next()"
 5. "Next()"
 6. NAS "Next()"
 7. "Finish()"
 - 8.
 9. "Storage Manager()" > "iSCSI Storage(iSCSI)" iSCSI LUN iSCSI LUN

- : Windows 7 Windows 2008 R2 LUN
- LUN NAS LUN NAS

LUN / /

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


:

IT 가

.

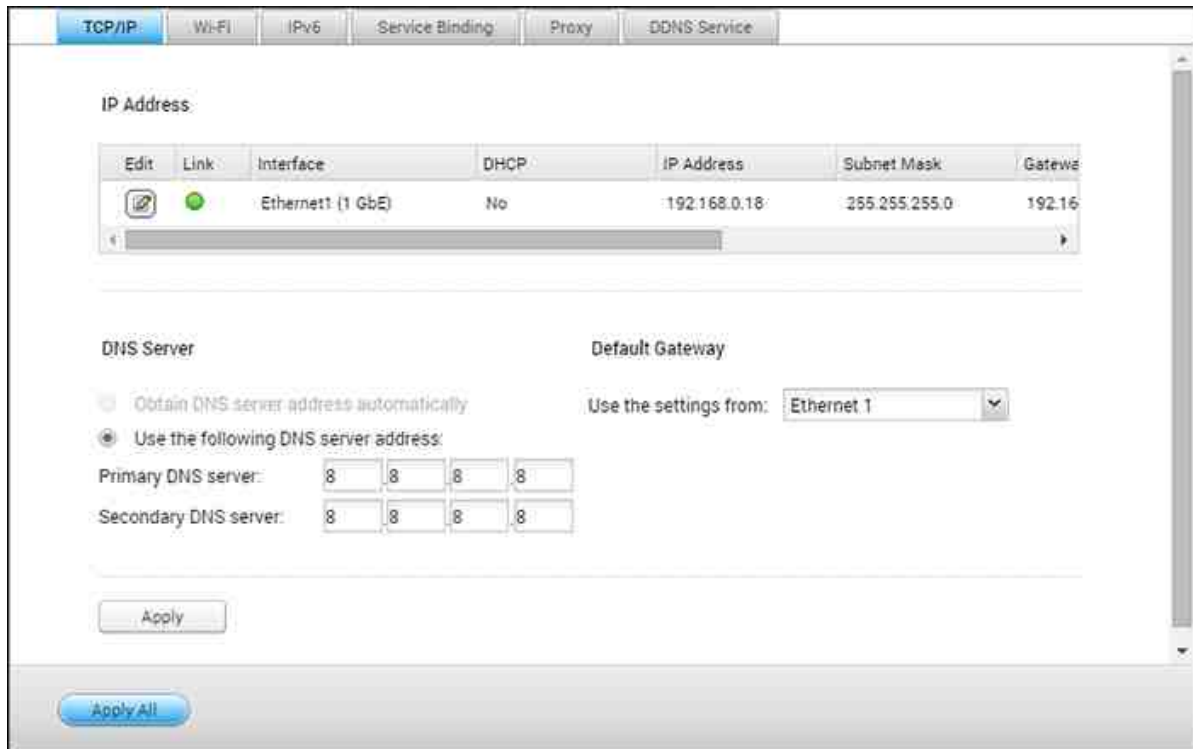
Disconnect ()	iSCSI	.
Format()	가	EXT3, EXT 4, FAT 32, NTFS HFS+
Delete()	가	iSCSI

가

External Device  ()

4.3

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



- TCP/IP ⁹⁹
- Wi-Fi ¹⁰³
- IPv6 ¹⁰⁵
- ¹⁰⁶
- ¹⁰⁷
- DDNS ¹⁰⁷

T C P / I P

(i) IP

NAS TCP/IP , DNS

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

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

TCP/IP :

- : NAS가 NAS가
- **DHCP IP** : 가 DHCP , NAS IP
- **IP** : IP IP ,
- **Jumbo Frame()**: "Jumbo Frames()" 1,500 가 CPU 가 (MTU) 가 (:) . NAS 가 1,500 MTU . NAS MTU 4,074, 7,418 9,000

- 가 MTU
- Turbo NAS QNAP

Virtual LAN (VLAN)

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

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

DHCP

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

• DHCP : DHCP가 IP를 LAN NAS LAN Ethernet 1에 할당한다.

- IP, IP, : NAS가 DHCP를 사용하여 IP를 할당한다. IP가 IP를 할당한다.
- WINS (): WINS (Windows Internet Naming Service) Windows (NetBIOS names) IP를 할당한다. Windows WINS IP를 할당한다.
- DNS (): DNS를 사용하여 IP를 할당한다.
- TFTP (): NAS가 PXE를 사용하여 IP를 할당한다. TFTP (TFTP) IP를 할당한다.

(ii) DNS
 DNS() (: google.com) IP (74.125.31.105) NAS DNS를 사용하여 IP를 할당한다.

- 1 DNS : 1 DNS IP를 할당한다.
- 2 DNS : 2 DNS IP를 할당한다.

• ISP : 1 2 DNS IP를 할당한다. NAS가 BT URL 1 DNS IP를 할당한다.

- DHCP IP가 , 1 2 DNS가 할당한다. "0.0.0.0" IP를 할당한다.

(iii)
 LAN (LAN NAS를 사용하여 IP를 할당한다.).

(iv)
 2 LAN가 NAS를 사용하여 IP를 할당한다.

NAS

()
()가
()가

NAS

2 LAN 가 NAS가 (i) (ii)

NAS

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

:

- 가 NAS
- LAN 가 NAS

NAS

:

Balance-rr (Round-Robin) (- rr(-))	Round-Robin(-) 가 Balance-rr(- rr)	
Active Backup ()	Active Backup() 가 MAC 가 () Active Backup()	

Balance XOR (XOR)	Balance XOR(XOR) 가 MAC 가 MAC 2 xmit_hash_policy Balance XOR(XOR)	
Broadcast()	Broadcast()	
IEEE 802.3ad (Dynamic Link Aggregation) ()	802.3ad Dynamic Link Aggregation () LACP 가 IEEE 802.3ad	802.3ad LACP
Balance- tlb (Adaptive Transmit Load Balancing)(- tlb())	Balance- tlb (- tlb) (가 가 Balance- tlb(- tlb) MAC 가	
Balance- alb (Adaptive Load Balancing)(- alb())	Balance- alb (- alb) Balance- tlb(- tlb) IPV4 (). ARP 가 Balance- alb(- alb)	

NAS Wi-Fi

NAS USB

. NAS가
가 가

. NAS Wi-Fi






- , USB
- USB Wi-Fi
- 가 USB Wi-Fi <http://www.qnap.com/compatibility> 가
"USB Wi-Fi"
- TS-269H

1: Wi-Fi

"Wi-Fi Network Connection(Wi-Fi

)"

Wi-Fi

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

"Rescan()"

가 Wi-Fi

Wi-Fi

"Connect()"

가

. "NEXT()"

NAS

	NAS가 Wi-Fi
	NAS Wi-Fi

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

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

ad hoc

1. (SSID) security type()
 - o No authentication (Open)(): 가
 - o WEP(): 4 WEP 1
 - o WPA- Personal (WPA-): AES TKIP
 - o WPA2- Personal (WPA2-):

- 2.
3. NAS Wi-Fi "FINISH()"
4. IP , "Edit()" DHCP IP

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

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

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

- CIFS/SMB
- AFP
- NFS
- FTP
- iSCSI
-
- QTS
- RTRR
- SSH
- Windows Qsync
- NetBak Replicator

"IPv6 " "Apply()" . NAS가
 . IPv6 . IPv6
 . "Edit()" .

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

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

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

:
 • ()가 NAS

가

가 NAS

DDNS

가 NAS, DDNS IP

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

: DDNS

- 가 :
- QNAP Turbo NAS
 - QNAP NAS DDNS

4.4 Thunderbolt

NAS Thunderbolt " " > " " > "Thunderbolt " 가



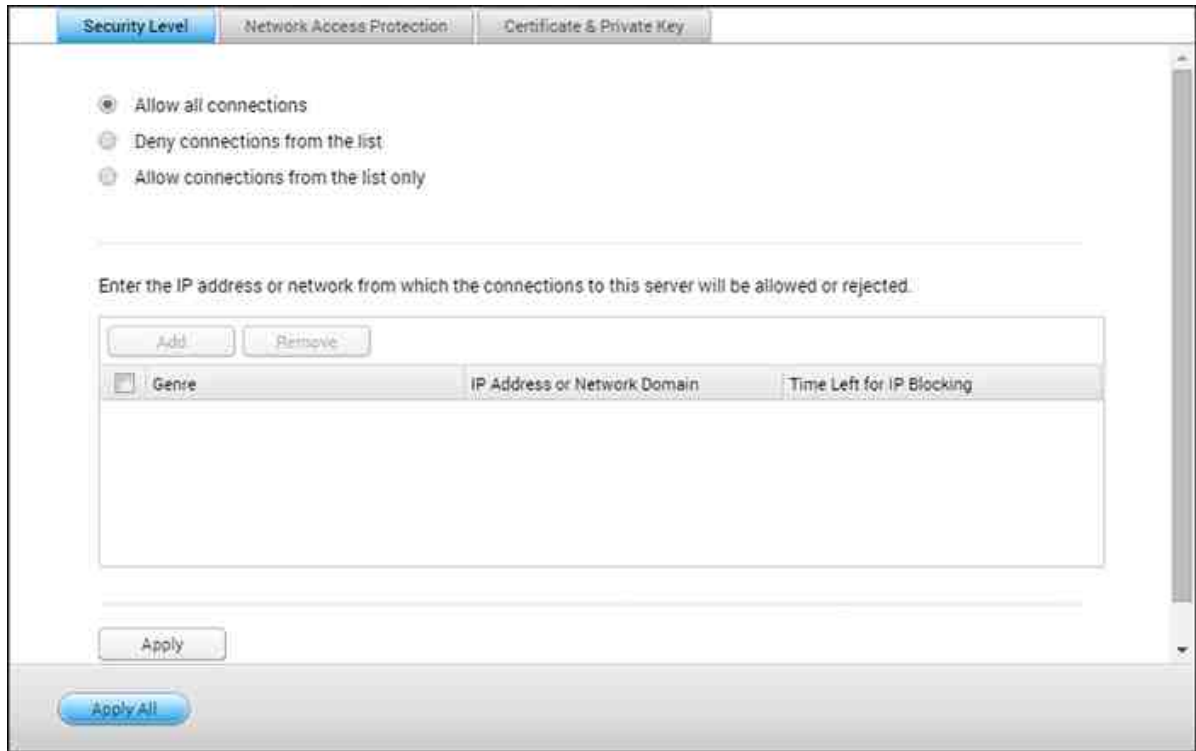
Thunderbolt Bridge Thunderbolt

- **Thunderbolt Bridge** : Thunderbolt Thunderbolt 6
Thunderbolt IP Bridge " "
- **Thunderbolt** : Thunderbolt 가
Thunderbolt NAS JBOD Thunderbolt
Thunderbolt 가 JBOD " "
- : Thunderbolt / 가

:
QNAP

4.5

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



IP

가

, "Apply()"

가

. IP가

, IP

&

(SSL)

가

, SSL

NAS

가

. NAS X.509

•
•
•

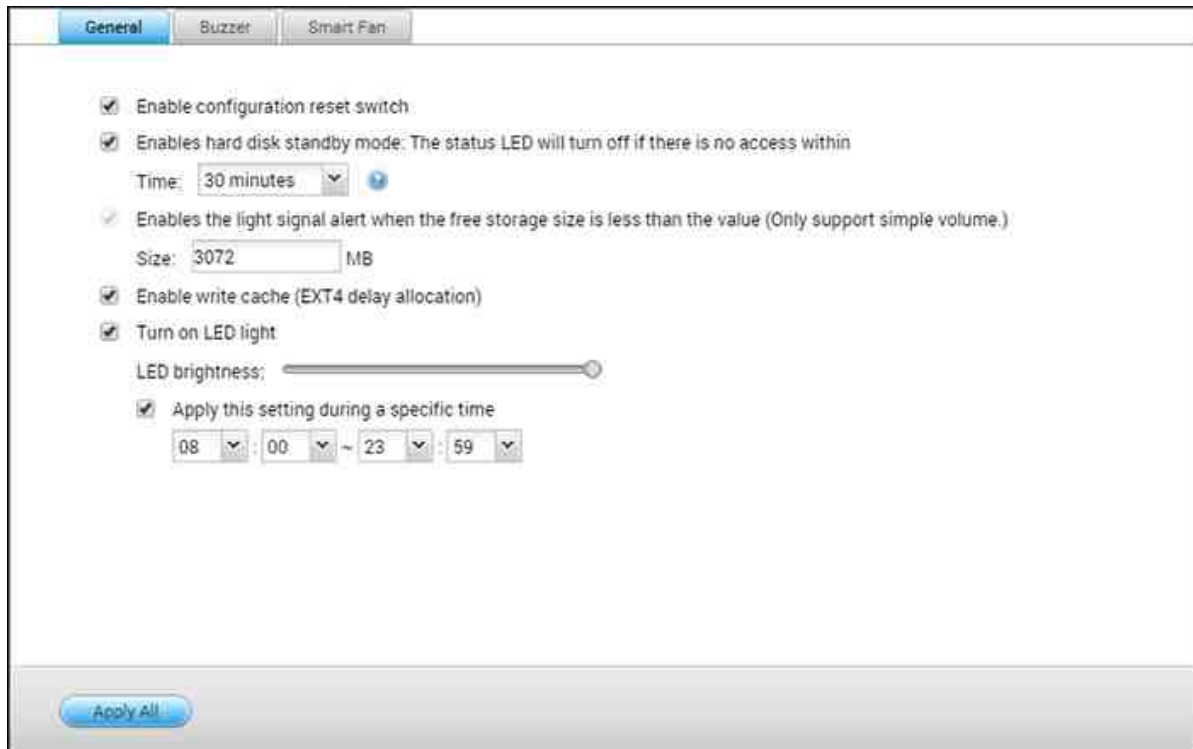
∴
∴

&

∴

4.6

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



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

○ : 가 . NAS
"Administration()" > "Restore to Factory Default()"

. , , NAS

• 가 :

• **SATA** 가 :
SATA 가 LED

• (EXT4): NAS EXT 4

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

• : NAS
(PSU) , PSU NAS
(1U 2U). "System Settings()" > "Hardware()"

. PSU 가 PSU가 NAS "System
Logs()" . NAS PSU ,

• **LED** : NAS LED (: TS-453mini) , LED
LED

가 : 가 () ()

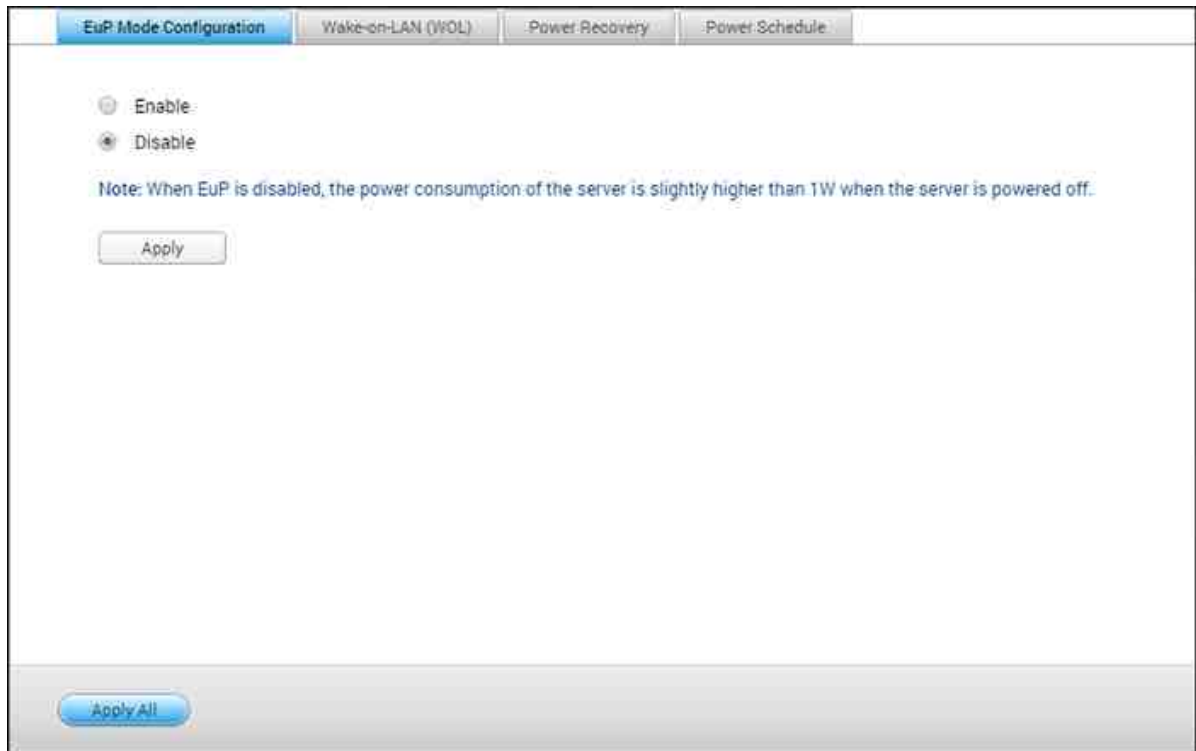
. Download Station MySQL 가

• (): , CPU , 가
가

• :

: (: CPU) Turbo
NAS가 . Turbo NAS .

4.7



EuP

EuP ()
가,

(EU)

EuP (1W)

• Wake on LAN:

• AC :

• / / :

EuP 가 1W . EuP

Wake on LAN, AC

<http://www.qnap.com>

Wake-on-LAN ()

(Wake on LAN) NAS
 . NAS가
 (Wake on LAN)
 NAS , NAS Qfinder Qmanager WOL
 . NAS NAS WOL
 ("Control Panel() > "System Settings ()" > "General Settings()" > "Power()" > "Wake-on-LAN (WOL)()" > "Tools()" > "Remote Wake Up (Wake on LAN)()")".
 • Qfinder NAS "Tools()" > "Remote Wake Up (Wake on LAN)()"
 • Qmanager NAS ">"
 "Wake on LAN (WOL)()" > "Wake on LAN (WOL)()"
<http://www.qnap.com>

AC가 NAS 가 ,

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

15

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

:
 •
 • NAS QNAP 가 ,
 가

4.8

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

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

4.9

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



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

)" NAS
 가 NAS
 "Check for Update()"
 NAS

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

가

2. NAS IMG

3.

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

가 NAS가

• QTS NAS QNAP

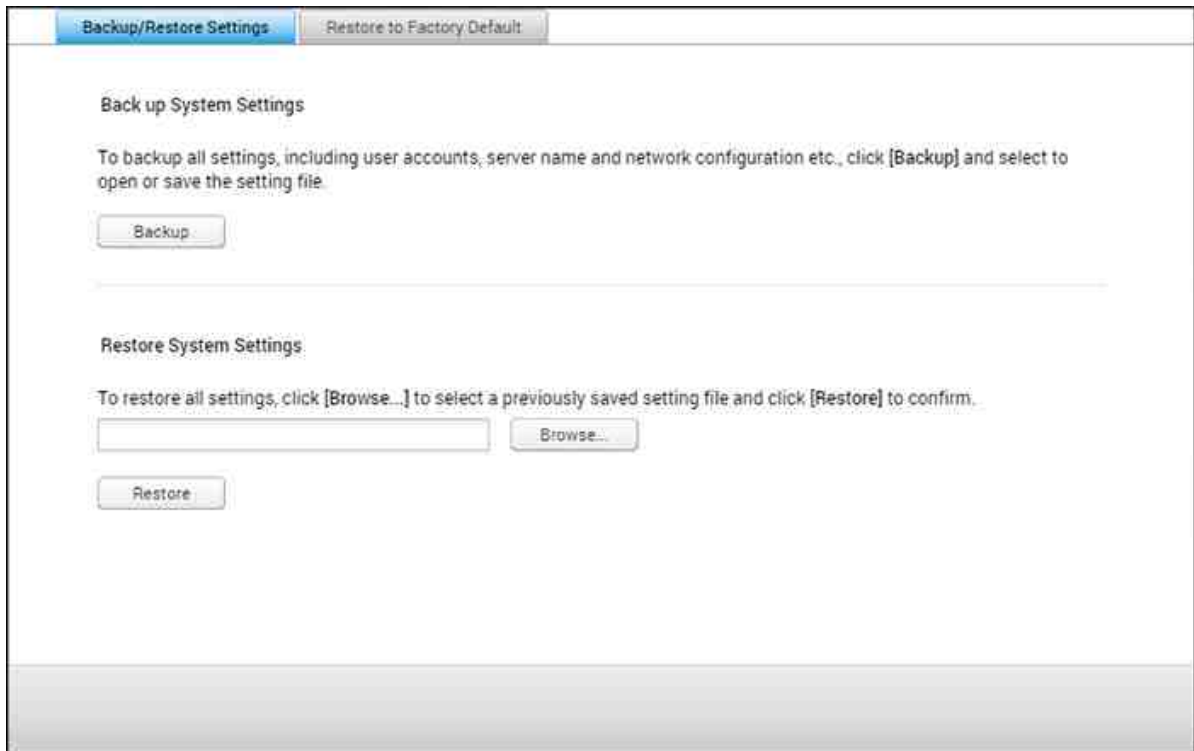
Q N A P Q f i n d e r

- QNAP Qfinder NAS :
1. NAS "Update Firmware()"
 2. NAS
 3. NAS "Start()"

NAS

4.10 /

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



/

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

• : () .

• : ,

- :
- :

- **NAS** : NAS .

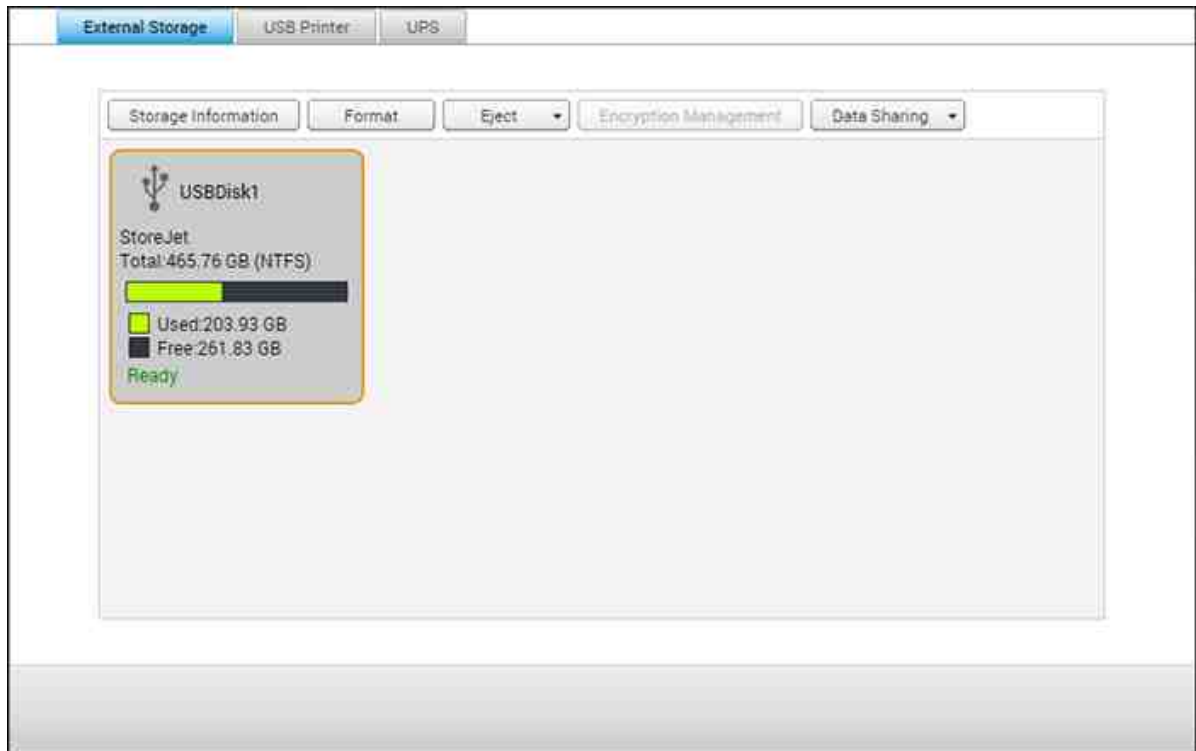
```




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

```

4.11

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



-  123
- USB  125
- UPS  132

4.11.1

NAS USB NAS eSATA USB eSATA * 가 가

- [123]
- [123]
- [123]
- [124]
- [124]

eSATA NAS 가 USB http://www.qnap.com USB

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

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

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

: 2TB EXT4, NTFS HFS+

4.11.2 USB

NAS Windows, Mac Linux (Ubuntu)
3 USB

NAS USB 가 NAS USB 가

USB "Printer Info()"

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

USB "Printer Info()"

"Clear()"

: 가 NAS

"Clean Up Spool Space()" 가

"Settings()"

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

가 1,000 가

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

: IPP Bonjour . Samba

4.11.2.1 Windows 7

Windows 7

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

4.11.2.2 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)"

5. 가 . "Continue()"
6. .

4.11.2.4 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

4.11.2.5 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.

4.11.3 UPS

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

- USB ^[132]
 - - USB ^[132]
 - - SNMP ^[132]
 - ^[132]
 - ^[133]
- NAS UPS ^[133]

USB

- USB

USB

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

- SNMP

SNMP

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

가 < 15%가 NAS가 UPS 가 (. UPS NAS) . UPS
 30 > 15%가 NAS가 "UPS" 가

가 NAS

2 :

"UPS"

- NAS가
- NAS

- NAS가
- NAS

3 :

"UPS"

- NAS
- NAS

Recovery()" NAS "System Settings()" > "Power

4.12

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

System information		Network Status	System Service	Hardware Information	Resource Monitor
Summary					
Server name	Tate121				
Model name	TS-121				
Serial number	Q127B10877				
Total memory	1011.0 MB				
Firmware version	4.2.0 Build 20150722				
System up time	2 day 2 Hour 51 Minute(s)				
Time zone	(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi				
Filename encoding	English				

, CPU, , 가

: CPU

NAS

NAS가

NAS

NAS CPU

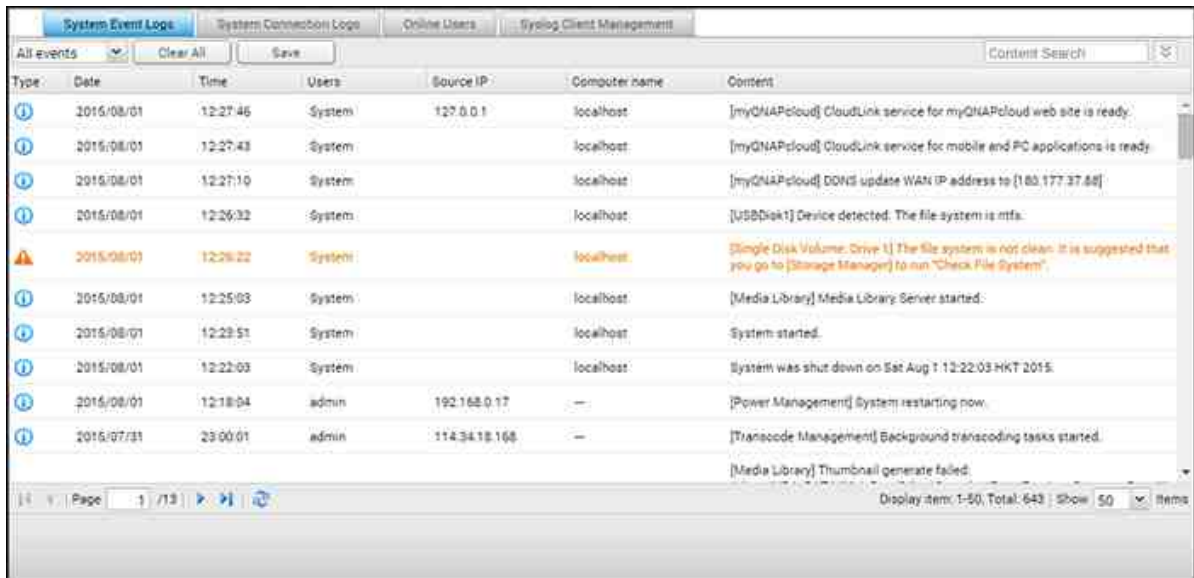
- CPU Usage(CPU): NAS CPU

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

: NAS

4.13

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



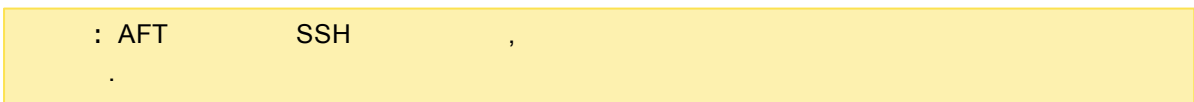
NAS , 10,000



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



가 NAS CSV
NAS가 "Options()"
"Stop logging()"



NAS

가

:	IP	IP
---	----	----

Syslog

Syslog IP
Syslog

CSV

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

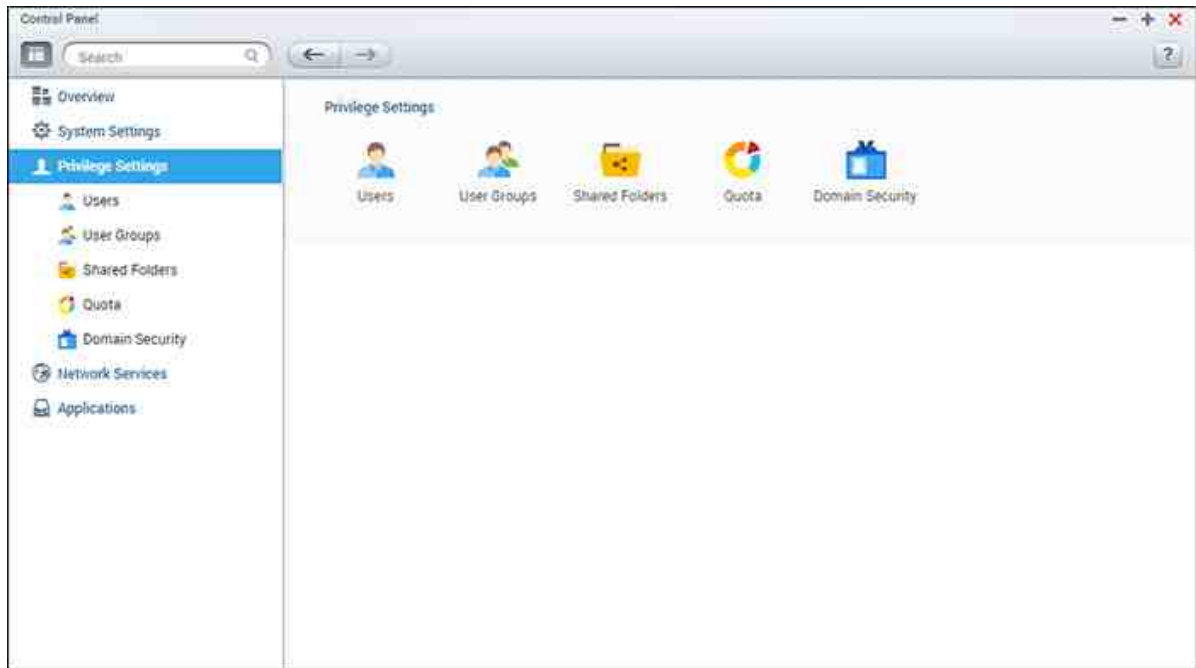
IP

"Search()"

IP

5.

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



- [140]
- [144]
- [145]
- [154]
- [155]

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

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"

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

5.2

. NAS

- : NAS
- :

NAS

NAS

NAS

<http://www.qnap.com>

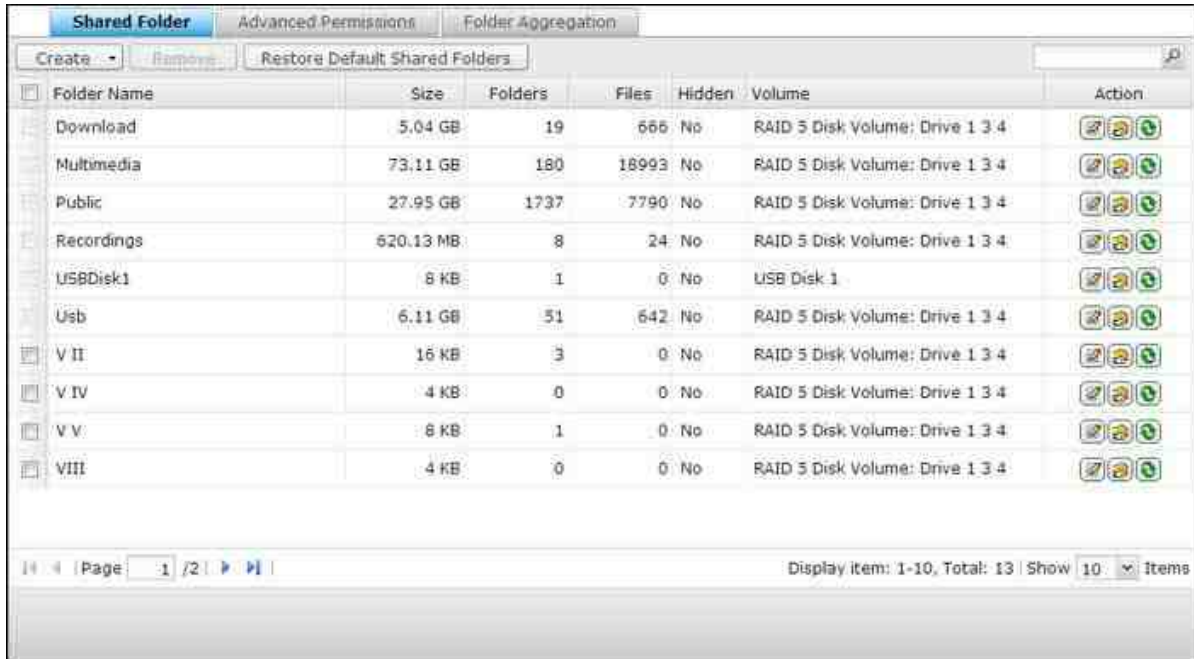
	NAS
128	TS-110, TS-210
256	TS-112, TS-119, TS-119P+, TS-212, TS-219P+, TS-410, TS-239 Pro II+, TS-259 Pro+
512	TS-412, TS-419P+, TS-410U, TS-419U, TS-412U, TS-419U+, SS-439 Pro, SS-839 Pro, TS-439 Pro II+, TS-459U-RP/SP, TS-459U-RP+/SP+, TS-459 Pro+, TS-459 Pro II, TS-559 Pro+, TS-559 Pro II, TS-659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



- 
- 
- ISO 
- 

NAS

NAS

NAS




NAS

<http://www.qnap.com>

	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-

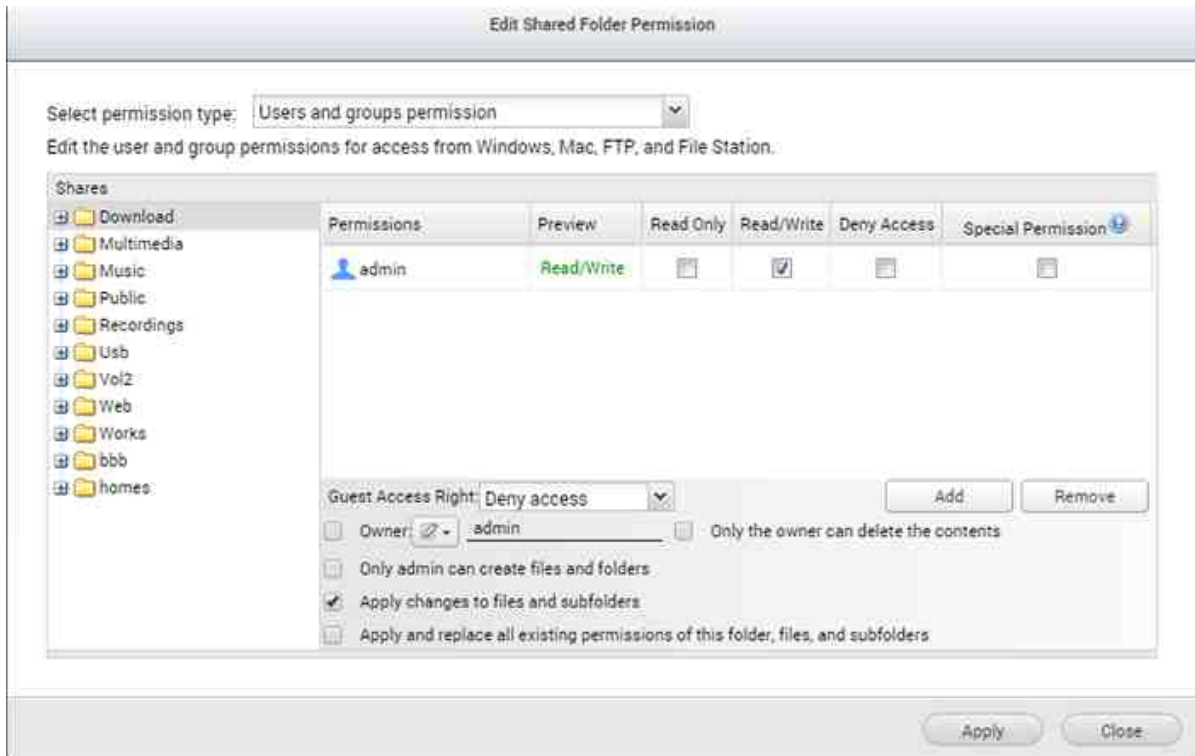
RP, TVS-471, TVS-671, TVS-871, TVS-871U-RP, TVS-1271U-RP, TVS-463, TVS-663, TVS-863, TVS-863+.

1. "Create()" > "Shared Folder()"
2.
 - : : " / \
 - [] : ; | = , + * ? < > ` ' `
 - :
 - :
 - : NAS가
3. :
4. : 256- AES
[150]
5. ()
 - :
 - :
 - 가 : Microsoft Networking
 - \ \ NAS_IP\ share_name
 - (Oplocks): Windows 가 (oplock)
 - . Oplocks , 가
 - SMB : SMB 3 가
 - SMB3 : Microsoft Networking SMB3
 - Microsoft Networking NAS
 - : "Restrict the access of Recycle Bin to administrators only for now()"
 - "Control Panel()" > "Network Services()" > "Network Recycle Bin()"
 - : Qsync Central Station [180]
6. "create()"
- delete the data(). (ISO) "Remove()" "Also NAS 가

		, oplocks, (), FTP ,
		
		

NAS "Privilege Settings()" > "Shared Folders()" > "Folder Permissions()" > "Add()" > "Remove()" > "Apply()"

- NAS
- "Privilege Settings()" > "Shared Folders()" > "Advanced Permissions ()" > "Enable Advanced Folder Permissions()" > "Apply()"
 - "Privilege Settings()" > "Shared Folders()" > "Shared Folders()" > "Folder Permissions()" > "Add()" > "Apply()"
 - "Add()"
 - :"
 - :"
 - "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 Admin, HR, Dept / 가 Admin01, Admin02, HR1 HR2
 - : 가 "Only the owner can delete the contents()" "Only admin can create files and folders(admin)"
 - : "Only the owner can delete the contents()" "Only admin can create files and folders(admin)"

- :
 "Read only()" "Read/Write(/)" 가
 가 가 Microsoft Networking "admin"
 "Read/Write(/)" 가 , 가
 Windows
 가 "admin" . NAS "admin"
 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

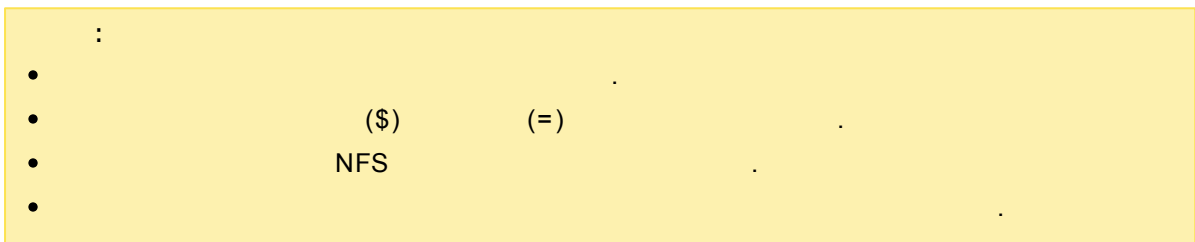
- (*) : 0 (*) *.domain.local : a.domain.local, cde.domain.local test.domain.local

- (?) : test1.domain.local, test2.domain.local test?.domain.local testa.domain.local

(.)
*.example.com , "one.example.com" "one.two.example.com"

NAS 256- AES

NAS



1. :
 - "Folder Encryption()" "Encryption()"
 - "Control Panel()" > "Privilege Settings()" > "Shared Folders()" "Action()" "Edit Properties()" , "Encrypt this folder()" ,
2. "Control Panel()" > "Privilege Settings()" > "Shared Folders()" "Action()" "Encryption Management()"
3. "Lock()" "OK()"

File Station
File Station

가

"Control Panel()" > "Privilege Settings()" > "Shared Folders()" "Action()" "Encryption"

Management()"

가 "Control Panel()" > "Privilege Settings()" > "Shared Folders()" "Action()" "Encryption Management()" :

- "Download()"
 - "Save()" "Mount automatically on start up()"
 - "Save encryption key()"
 - "Lock()" (,)
 - "Forget the saved key()"
 - "Unlock Share Folder()" 가

• :
 • 가
 • NAS
 • 68

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 -)

1. NAS "Share Folders()" > "Create()"
 - "Create an ISO Share(ISO)"
 - 2. NAS ISO "Next()"
 - 3. NAS
 - 4. NAS
 - "Deny Access()" "Read only()"
 - "Next()"
 - NAS ISO :

5. "Next()"
6. "Finish()"
7. "Action()" SMB,
AFP, NFS WebDAV

NAS File Station ISO File Station ²⁰⁹

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

Microsoft NAS NAS NAS
가 10

- 1.
2. "Create a Portal Folder()"
3. "User must login before accessing the portal folder()"
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 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 NAS
AFP, File Station FTP (,
/) Windows ACL

5.4

가

-
-

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

5.5

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

- NAS : NAS
- **Active Directory** (): NAS Active Directory
NAS AD NAS
AD / NAS :
 - Samba (Microsoft)
 - AFP
 - FTP
 -
- **LDAP** : NAS LDAP
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
 Directory) . NAS AD (Active
 NAS 가 . AD NAS
 . Windows Server 2008 R2 NAS
 V3.2.0 NAS AD

NAS Active Directory()

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

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

Quick Configuration Wizard() NAS Active Directory(AD)

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

- LDAP
- LDAP
- LDAP

QNAP NAS LDAP

QNAP NAS LDAP

1. NAS
2. "Privilege Settings()" > "Domain Security()"
"No domain security()" 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

5.6

Turbo NAS Windows
NAS

. IT 가 Turbo

Windows

:

3

Turbo NAS

- NAS : NAS ,
- 가 : 가 , NAS가
- : NAS

NAS

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

가 , Microsoft

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

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

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

5. 가 , NAS
- 6.
7. "Finish()"

8. 가
9. 가

가

가

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

4. "Next()" 가 가 "Finish()"

5. 가

- 가 ()
-

CSV (Excel)

1. Excel

2.

- A:
- B:
- C:
- D:

3.

CSV

4. CSV

가

UTF-8





1. "Control Panel()" > "Privilege Settings()" > "Domain Controller()" > "Users()"

2.

3. "Delete()"

4. "Yes()"

"Action()"

		
		가 , ,
		가
		,

:

- : /home /
user1profile //nas.mydomain.local/home UNC 가
- : 가 PC
{your_domain}\ scripts \ \ NAS\ netlogon (sysvol)
- : 가
/user1profile //nas.mydomain.local/home /home UNC
가

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

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





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

(:) 가 , NAS가

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

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

"Action()"

		
		가

D N S

, DNS 가
 () DNS
 (가 NAS)
 _msdcs). DNS 가
 , 가

DNS

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

, DNS

- 1.

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

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

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

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

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

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

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

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

/

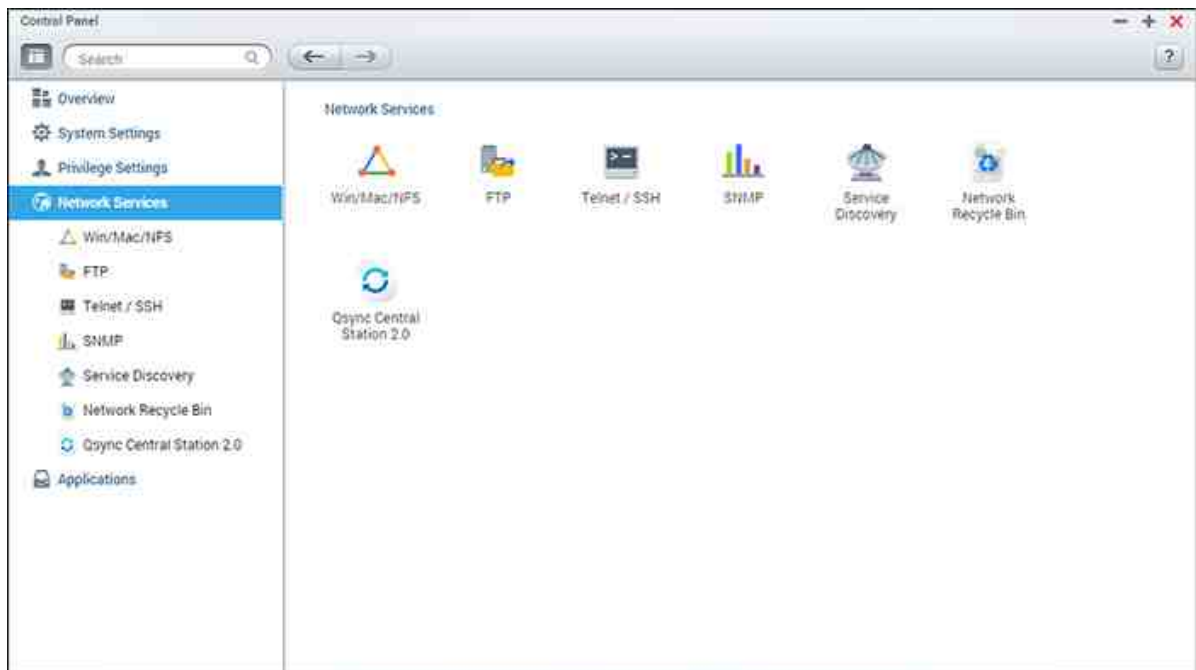
/

가 가 가 AD ,

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

6.

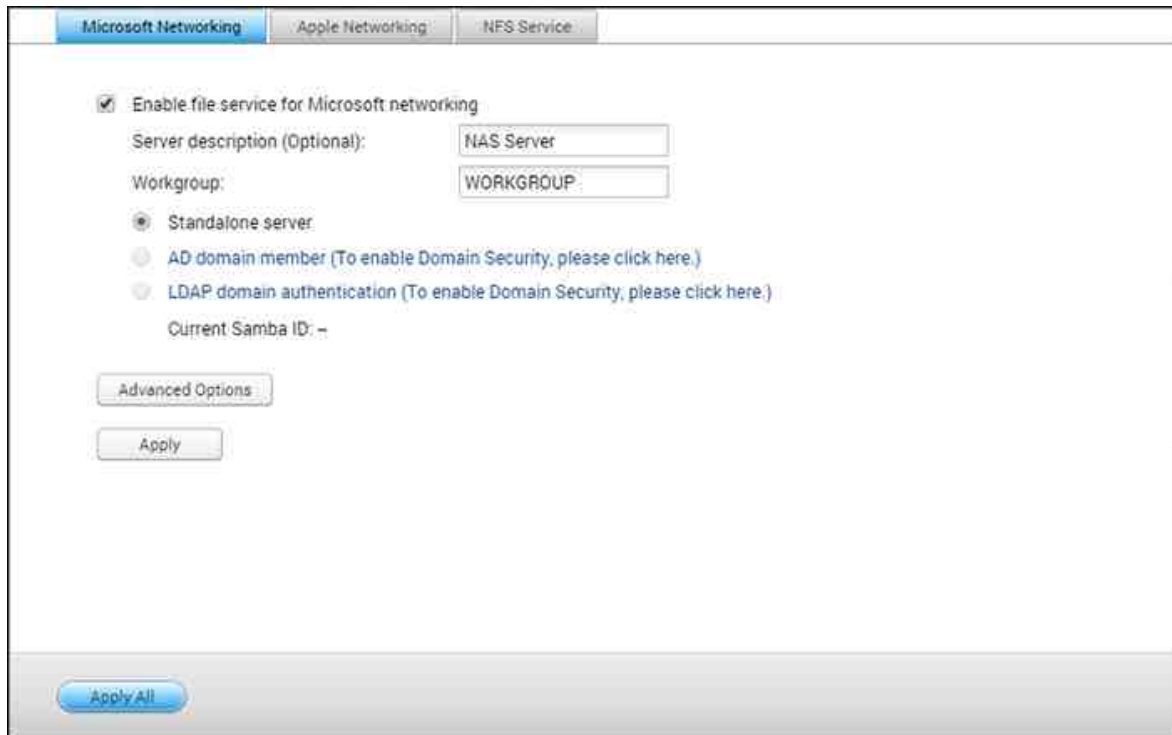
"Control Panel()" > "Network Services()" 가 NAS



- Win/Mac/NFS [169]
- FTP [173]
- Telnet/SSH [175]
- SNMP [176]
- [177]
- [178]
- Qsync Central Station [180]

6.1 Win/Mac/NFS

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



- Microsoft 169
- Apple 171
- NFS 171

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()"
LDAP Microsoft NAS

• **WINS** : WINS , IP . NAS가
WINS IP WINS
가 , WINS IP

• : Windows PC
가
"Domain Master()" NAS

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

• : IP DNS WINS
. NAS WINS WINS 가
DNS WINS
"Try WINS then DNS(WINS
DNS)"가 DNS가

• : **FTP, AFP File Manager** + \
: Active Directory

- Windows : \
○ FTP: +
○ File Station: +
○ AFP: +

(domain\ username) AFP, FTP

File Manager NAS
• **Automatically register in DNS(DNS)**: NAS Active
Directory , NAS가 DNS
DNS NAS DNS . NAS IP NAS가
DNS IP

- **Enable trusted domains ():**
 Active Directory "Privilege Settings()" >
 "Share Folders()" NAS . (
 Active Directory . NAS .)

Apple

Mac 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
 . "No limit()" "Read only()" NFS
 IP .
 • No limit(): 가 ,
 .
 • Read only(): 가 .
 .
 • Deny access(): .

NFS NAS

Linux

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

, NAS IP 가 192.168.0.1 /mnt/pub "public(
)" , .

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

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

```
ID ,
```


	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
 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:

Allow SSH connection
Port number:

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
 . NAS , 가

NAS

(SNMP)

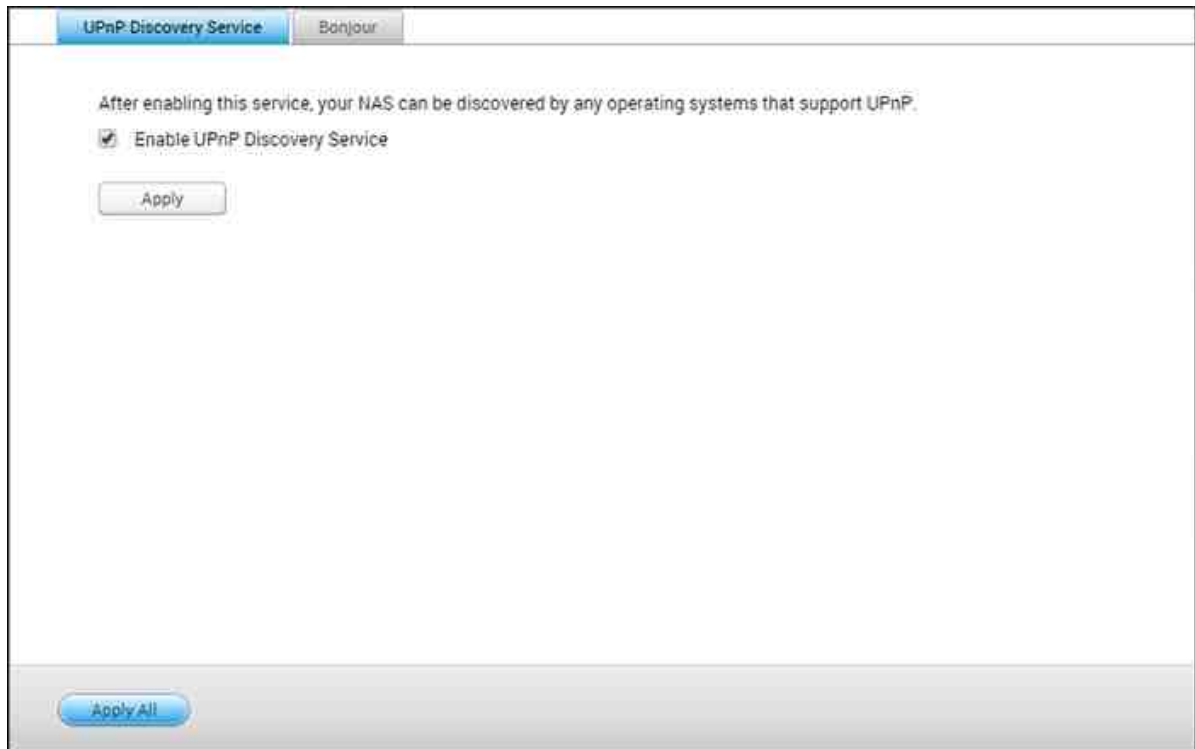
NAS (SNMP)

SNMP

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

6.5

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



UPnP

UPnP 가 , UPnP 가 UPnP
 NAS

Bonjour

Bonjour , Mac IP DNS
 NAS (FTP)

: NAS가
 Bonjour

:"@Recycle" " . USB/
" eSATA 가 .

6.7 Qsync Central Station

Qsync Central Station 2.0 NAS
 Qsync 가 NAS



- [180]
- Qsync Client [181]
- [181]
- [182]
- [183]
- [184]
- [185]
- Qsync [187]
- [188]

- 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()").
- o NAS

2. Qsync Client

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

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

- : 가
- 가
- NAS /home

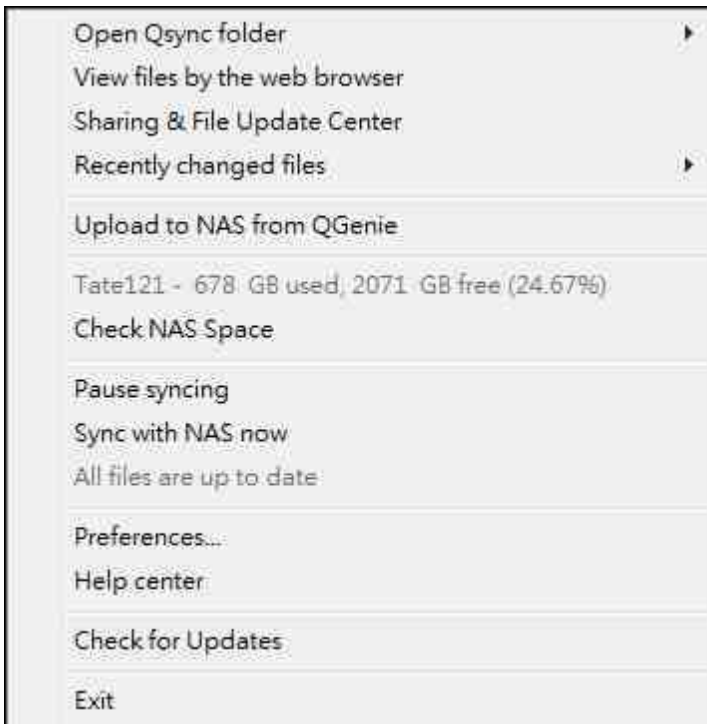
NAS
 () NAS "myQNAPcloud" NAS
 가 NAS 가
 myQNAPcloud . (: andy@myQNAPcloud.com).

- : 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. : 가

 - b. :

- 4. :
 - a. :
 - i. : 가 . "Logout()"
 - ii. : Qsync
 - b. :
 - i. : 가,
 - ii. : USB 가 "DCIM" 가
USB
 - iii. : QGenie 가
 - iv. : NAS Qsync
NAS
 - c. :
 - i. : 가 Qsync (NAS)
 - 1)
 - 2) NAS
 - 3) NAS
 - 4) NAS
 - ii. : Qsync 가
 - 1)
 - 2)
 - 3)
 - iii. : Qsync
 - d. :
 - i. : (NAS) PC . NAS SMTP
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()"
- "Delete All()"
- "Refresh()"

Qsync /
 "More Action(가)" > "Show Deleted Files()"
 Qsync / "Previous Versions()"
 , "More Action(가)" > "Previous Versions()"
 "Show Right Panel()" > "version()"

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

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

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

"Version Control()" NAS Qsync ,

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

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

"Disk Used for Version Control()"
 "OK()"

- 가
- "Apply()" "Apply All()"
- 64

Qsync

1. NAS Qsync Central Station 2.0 ()
 가 File Station Qsync ()
2. : 가 Qsync Client 188
3. : Qsync
4. : 가
 - a. PC
 - b. Qfile "Qfile- Android" "Qfile- iPhone"
 - c. File Station Qsync "Qsync- File Station"
5. :
6. : 가 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. .(, , .)

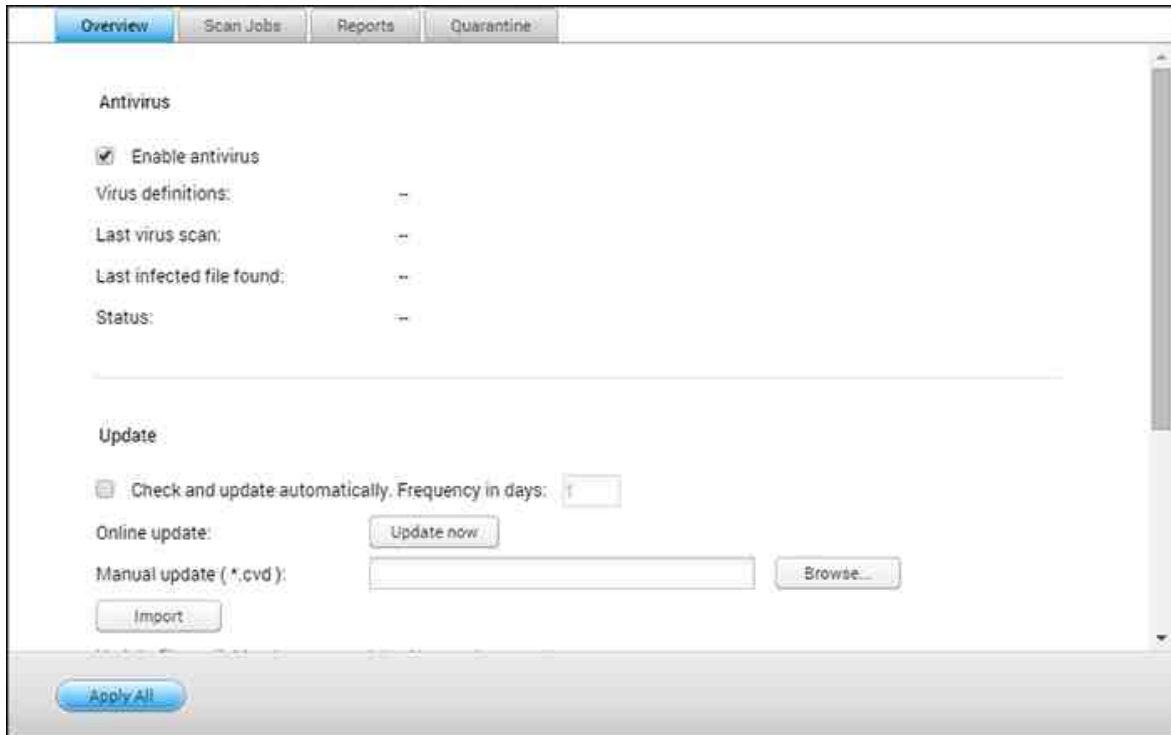
1. NAS Qsync Central Station "Management Settings()" NAS
2. "Enable your management password()" NAS
3. "Lock()" NAS
4. "Lock()" NAS

7.

NAS

- [190](#)
- [193](#)
- File Station [209](#)
- iSCSI [81](#)
- LDAP [222](#)
- SQL [224](#)
- NTP [226](#)
- RADIUS [227](#)
- Syslog [228](#)
- TFTP [230](#)
- 가 [231](#)
- VPN [234](#)
- VPN [237](#)
- [241](#)

7.1






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

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



5

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

7.2

Backup Station NAS



- _____¹⁹⁴
- _____¹⁹⁶
- _____²⁰²
- _____²⁰⁴
- _____²⁰⁵

	:		NAS	가
	.	x51*, x53, x63, x70, x71, x79, x80.		
•	*		4 GB RAM	
•	* x51	1024	256	. HS- 251

7.2.1

Rsync

Rsync NAS Rsync NAS
 . Rsync 873
 . 0

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

: NAS 64

RTRR

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

10 NAS 가 IP "Allow all connections(
)" IP "Allow connections from the list only
 ()" "Add(가)"

IP IP IP "Read Only(
)" "Read/Write(/)" "Read/Write(/)" NAS가
 가 NAS "Finish ()" "APPLY()" NAS가

NAS
 NAS NAS
 (, incoming List())
 NAS, NAS,)
)" incoming List(NAS

Time Machine

OS X

NAS

Mac

NAS :

1.

2.

3. NAS

4.

4095GB

0()

5. "Apply()"

가

Mac :

1. Mac

"Select Backup Disk()"

2. NAS TMBBackup

"Use for Backup()"

3. QNAP NAS

"Connect(

)"

○ : TimeMachine

○ : NAS

4.

"ON()"

가

, 120

Mac

Mac OS

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

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

7.2.2

- NAS NAS [196]
- RTRR [197]
- [201]







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)"
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 가 , 3 , 60 . NAS가 60 , 600
 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 가
 - (NAS FTP)
 - (NAS FTP)
 -
- 가
 -

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

5.
 6. 5 가 "Add(가)"
 " "
 7.
 , , . :
 ○ Replicate Now():
 ○ Periodically(): 5
 ○ Hourly(): 1
 , 1:01, 2:01, 3:01...
 ○ Daily(): , 2 2 02:02
 ○ Weekly():
 ○ Monthly():
 ○ 1 : 1
 1 .

:

- 가
- ,
- QTS 4.1 , RTRR FTP FTP 가 FTP (/)
- 가
- " " "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

"Notification()"

. SMTP

NAS ("System Settings()" >

"Policy()"

, "Filter()"

. RTRR

"Action()"

"View()"

. "Download Logs()"

. Microsoft Excel

"Download Detailed Logs()"

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

7.2.3

IT /LUN






NAS SSH ("Control Panel()" > "Network Services
 ()" > "Telnet/SSH") ("Storage
 Manager()" > "Storage Space()"> "Snapshot()" >
 "Snapshot Replica()" LUN "Storage Manager()" > "iSCSI
 Storage(iSCSI)"> "Snapshot()" > "Snapshot Replica()")

:	NAS	가
. x51*, x53, x63, x70, x71, x79, x80.		
• * 4 GB RAM		
• * x51 1024 256 HS- 251		

1. "Create a Replication Job()"
- 2.
3. "Settings()"
 IP ,
 NAS "Local site()"
 가 "Test()"
 "OK()"
4. "Source Volume/LUN(/LUN)"
5. Select the destination pool to store the snapshots in the "Destination Pools()"
6. : 1024 ,
7. "Backup frequency()"
8. "Options()" "OK()"
 ○ : "Network Services
 () > "Telnet/SSH" "Allow SSH connection(SSH)"
 SSH
 ○ : (KB/s)
 ○ :
 WAN

9. "OK()" . "Execute backup immediately()"

가 NAS

		
		
		
		
	/	

)" . "Clear all logs()"

- 1.
2. "Delete()"
3. "OK()"

"Options()"

)" "Action()" "edit()" 가 "Change Password()"

7.2.4

Amazon S3

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

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

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

7.2.5

- 
- USB 

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. 512 "Next()" 'ADD(가) "

:
 •
 • / ,
 • 32 16

6.
 - Replicate Now():
 - Periodically():

- Hourly(): 01, 1:01, 2:01, 3:01... 01
- Daily(): 2 2 02:02
- Weekly():
- Monthly():
- : NAS가

7. , "Configure policy and filter()"
 8. "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()"
SMTP "System Settings()" >
"Notification()"
3. "Policy()" "Filter()"

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

USB

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

가 ()

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

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
1
YYYYMMDD- 1, 2 YYYYMMDD- 2...
YYYYMMDD

USB

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

: , NAS

:

가 USB

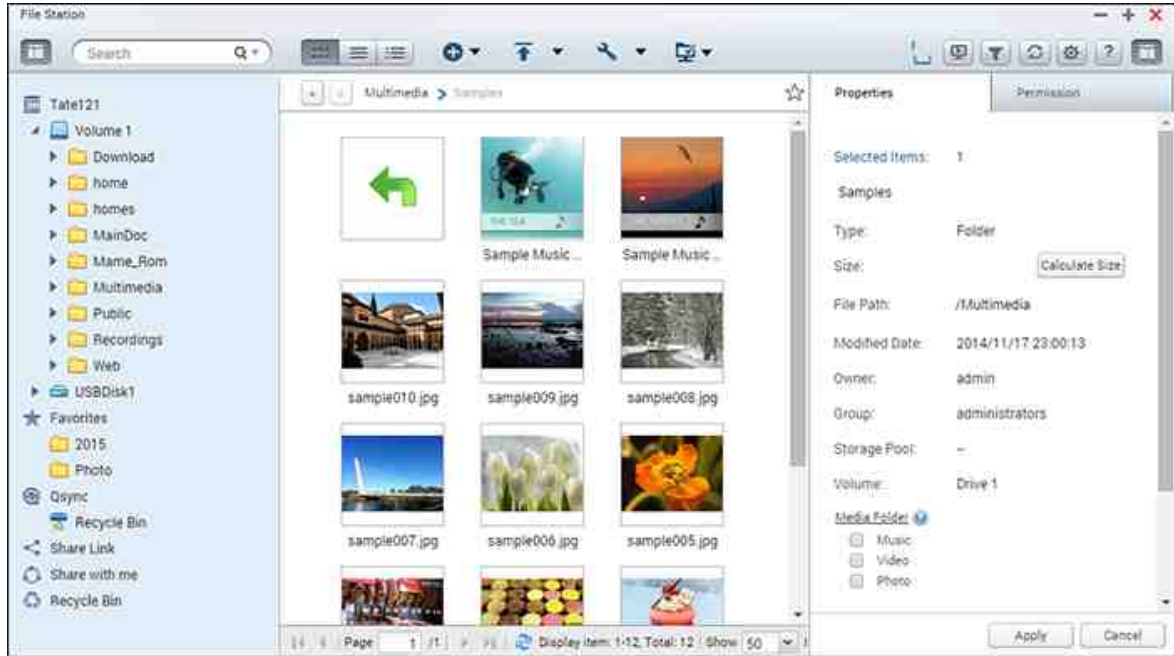
7.3 File Station

File Station

. File Station

NAS

NAS






- File Station 209
- File Station 209
- File Station 212
- 220

File Station

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

File Station



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

12	Refresh()	
13	Settings()	<ul style="list-style-type: none"> • PC •
14	Help()	
15	Right Panel()	

: Google Chrome PC File Station & 1 GB File Station

:
 • 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
 NAS 가 NAS
 • DLNA, Apple TV Chromecast 가
 가
 •
 •
 00:00
 •

Left Panel()

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

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
Delete()	
Cut/ Paste(/)	
Add to Transcode(Beta) (가())	. "Add to Transcode(Beta)(가())"
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 219
View in Office Online (Office Online)	Office Online 가 NAS Office Office Online myQNAPcloud
View in Google Docs (Google Docs)	Office Docs 가 NAS Office Office Online 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
Open with VLC(VLC)	(VLC)
Download()	
Rename()	
Move()	NAS
Delete()	
Cut/ Paste(/)	

Add to Transcode (Beta)(가())	Transcode(Beta)(가())" . "Add to
Cancel/Delete Transcoding(/)	/
Transcode Information()	
Extract()	
Compress()(Zip)	
Mount ISO(ISO)	ISO ISO ISO가 "Unmount()"
Properties()	

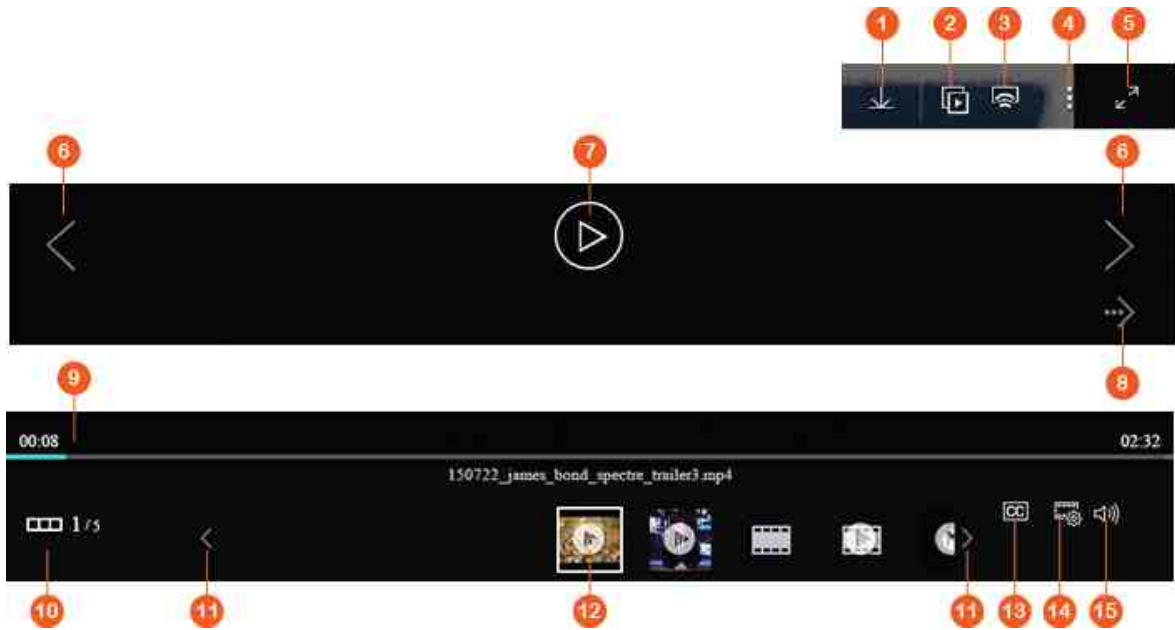
- IE 8 Java plug-in File Station NAS File Station
2GB
- Google Chrome File Station
- Chrome File Station &
- ARM NAS ISO
(
) ISO
- Mac OSX , WebDAV # 가
- File Station Microsoft Office Mac
OSX WebDAV # 가
- "View in Office Online(Office Online)" "View in Google Docs(Google Docs)"
, myQNAPcloud
: .doc, .docx, .xls, .xlsx, .ppt, .pptx.

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

File Station

Media Viewer(NAS Media Viewer)

(,)가



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(/)	/
12	Preview Bar()	.
13	Subtitle()	.
14	Resolution()	.
15	Volume()	.

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

/

File Station NAS , /

가 가 . 1)

2) .

- "Advanced Search()"
(, , , /)
"Search()"

- "Smart File Filter()"
(, , , /) "OK(
)"
가 .

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

/
File Station NAS /

"Properties()"

"Privilege Settings()" > "Shared Folder()" > "Advanced Permissions(
)" "Advanced Folder Permissions(
)"

- Owner(): ()
- Group(): ()
- Others(): ()

"Apply changes to folder(s), subfolder(s) and file(s)(, ,
)"
"OK()"

"Privilege Settings()" > "Shared Folder()" > "Advanced Permissions(
)" "Enable Advanced Folder Permissions(
)"

"Add(가)"

"–"

"Set()"

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

- Only the owner can delete the contents():
가

- Only admin can create files and folders():
- Apply changes to files and subfolders():
"Only the owner can delete the contents(가)"
 - ()
"Only the owner can delete the contents(가)"
 - ()

File Station NAS / "Share()"
4가

- 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)" "Preview()"
 - "Share Now()"
 - 4가 "Allow file upload to this folder(가 가 가)"
 - 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) URL SSL(https://)
 6. "Create()"

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

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
 - "System Settings()" > "Notification()" > "SMTP Server(SMTP)"
 - 1000
 - . IE 9+, Firefox 3.6+, Safari 5+ Chrome.
 - ()
 - App Center Connect to Cloud
 - Drive
 - NAS가
 - 가 가
 - 가
 - CIFS/SMB 가
 - PC 가

7.4 LDAP

NAS LDAP

NAS

LDAP

LDAP

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

4. LDAP 2 NAS 가 : NAS

LDAP 가 LDAP 가 NAS

NAS LDAP 가 , NAS "Privilege Settings()"

) > "Domain Security()" . "LDAP authentication(LDAP)"

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

NAS DNS IP , LDAP

LDAP . "Apply()"

LDAP

NAS LDAP , "Back up Database()"

, NAS . LDAP

, *.exp "Import(가)" . "Apply()"

- LDAP , NAS
- , LDAP NAS

7.5 SQL

SQL

SQL server - MariaDB 5.5.44

You can enable SQL server as the website database.

Enable SQL server
 Enable this option to allow remote connection of SQL server.

Enable TCP/IP networking
 Port number:

Note: You can install the php/MyAdmin package to manage your SQL server. To install the php/MyAdmin, please click [here](#).

Database Maintenance

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

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

TCP/IP

NAS MySQL

MySQL NAS

3306 NAS

Qweb/ Web phpMyAdmin 가 http://NAS
 IP/phpMyAdmin/ phpMyAdmin 가 MySQL

○ : MySQL 가 "admin"

○ : MySQL 가

:

- TS- x39/ 509/ 809 CD (http://www.qnap.com).
- phpMyAdmin MySQL Server
http://NAS IP/ phpMyAdmin 가

7.6

NTP PC, Turbo NAS.
()



NTP

NTP "Control Panel()" > "Applications()" > "NTP Service(NTP)"
"Enable NTP Server(NTP)"

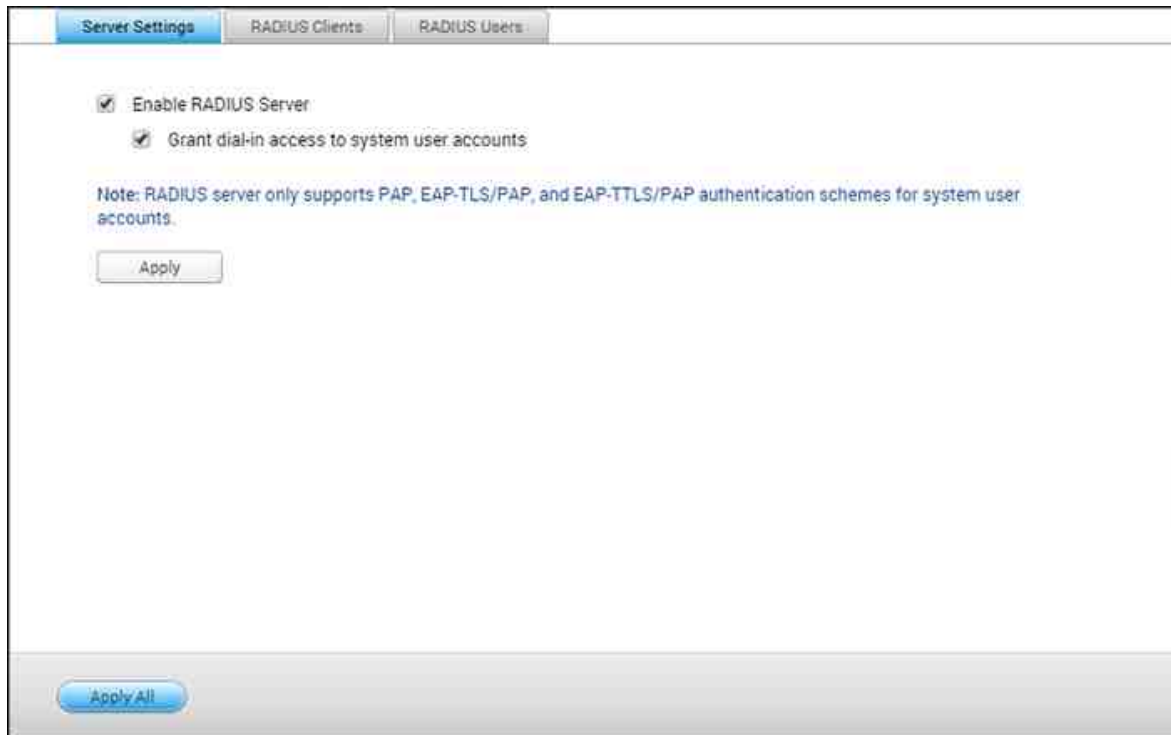
- 가 : NTP 가 IP 가 "255.255.255.255"
- 가 : NTP 가
- 가 : NTP 가 NTP IP

: , NTP

7.7 RADIUS

NAS
Authentication Dial In User Service)

RADIUS (Remote



1. "RADIUS Server (RADIUS)" > "Server Settings ()" NAS RADIUS
"Apply()"
2. "RADIUS Server (RADIUS)" > "RADIUS Clients (RADIUS)" NAS
Wi-Fi VPN RADIUS 가 RADIUS
10 "Create a New Client()"
3. "Apply()"
4. 가
5. "RADIUS Server(RADIUS)" > "RADIUS Users(RADIUS)" RADIUS
RADIUS
NAS가 RADIUS NAS
Users 140() " "
6. (a-z A-Z) (0-9)
8- 32 (a-z, A-Z, 0-9 가) "Apply()"
7. NAS NAS NAS 가
RADIUS
"Apply()"

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

7.8 Syslog

NAS Syslog

, Syslog

Syslog

The screenshot shows a configuration window with three tabs: 'Server Settings', 'Filter Settings', and 'Syslog Viewer'. The 'Server Settings' tab is active and contains the following options:

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

Log Settings

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

Email Notification

- : NAS Syslog syslog (TCP / UDP) 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 ()"

7.9 TFTP

NAS

TFTP (Trivial File Transfer Protocol)

.TFTP

FTP

. TFTP

. TFTP

FTP
FTP

The screenshot shows a configuration window for a TFTP server. It includes the following fields and options:

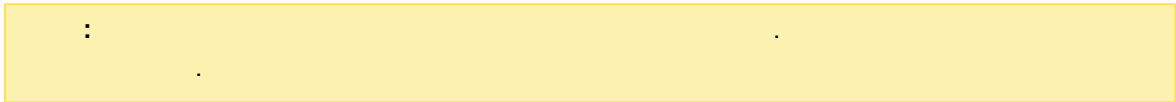
- Enable TFTP Server
- UDP port:
- You need to specify a root directory for the TFTP server.
- Root directory:
- Enable TFTP logging
- The log file(s) will be saved in the selected folder. If the size of a log file exceeds 1MB, the file will be archived automatically.
- Save log files in:
- Access right: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

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

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

7.10 가

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



가

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

iSCSI VAAI NAS VAAI

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

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

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

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

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

ODX ()

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

10 G b e

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

SSD

SSD SSD Turbo NAS
SSD SSD
Turbo NAS SSD ,

vSphere

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

QNAP SMI-S

QNAP SMI- S

가 (SCVMM 2012)
Turbo NAS SCVMM 2012 , 가
. QNAP SMI- S

7.11 VPN

NAS PPTP OpenVPN VPN VPN
 . NAS . VPN VPN



- [234](#)
- PPTP [234](#) VPN
- OpenVPN [236](#) VPN

VPN Turbo NAS가

-
- QTS 4.1.2
- VPN 가

PPTP VPN

- (PPTP) VPN
- (Windows, Mac OS X, Linux)
1. "Control Panel()" > "VPN Client(VPN)"
 2. "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(가 VPN)" Turbo NAS

"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

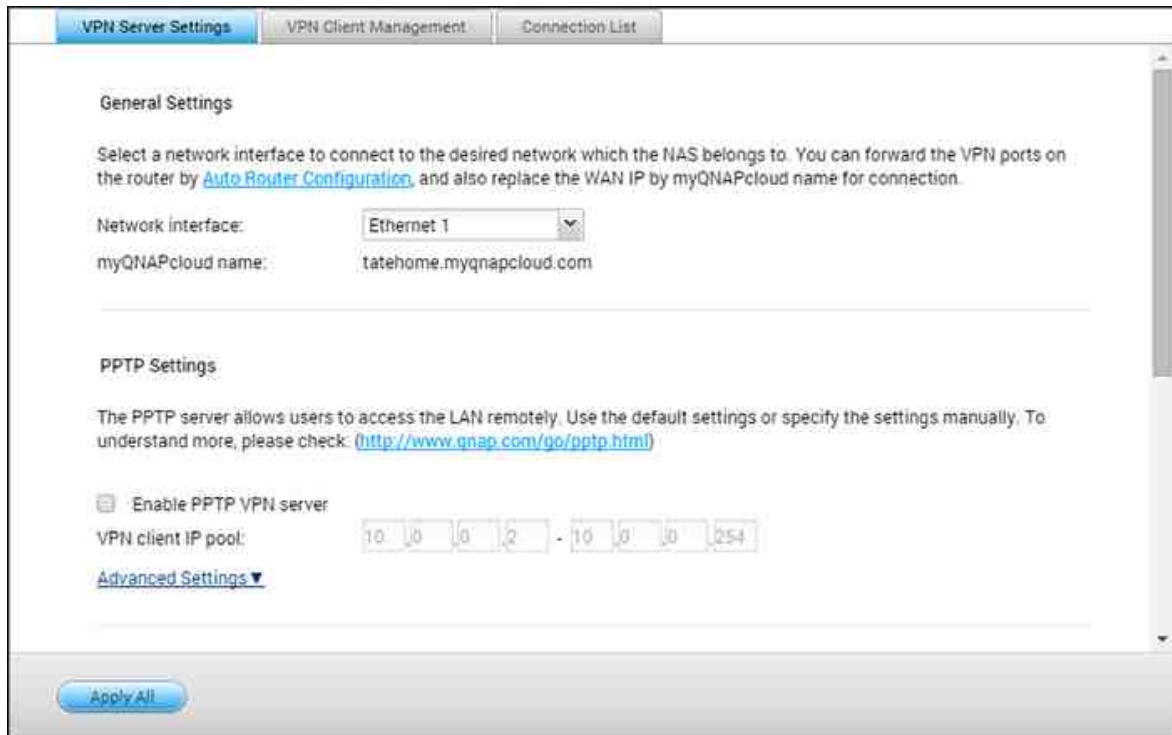
NAS VPN OpenVPN SSL/TLS
VPN Windows, Mac OS X, Linux, ;
Android iOS

- 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.
 - o Enable compressed VPN link(VPN): VPN
 - o Use the default gateway on remote network(): VPN
 - o Allow other network devices to connect to the VPN through the NAS(가 NAS VPN): NAS LAN VPN
 - o Reconnect when the VPN connection is lost(VPN): VPN
 5. "Connect()"
 - o "Use the default gateway on remote network()" Turbo NAS 가 VPN
 - o "Allow other network devices to connect to the VPN through the NAS(가 NAS VPN)" ,

7.12 VPN

NAS (VPN) 가

NAS VPN 가



- VPN 237
- VPN 238
- VPN 240
- 240

VPN

1. Select a network interface to connect (NAS): "admin" "Application Servers" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" ” "General Settings(")", NAS가
2. Enable PPTP or OpenVPN service(PPTP OpenVPN): NAS VPN
 - PPTP: (PPTP) VPN 가 Windows, Mac, Linux, Android iPhone
 - OpenVPN: OpenVPN SSL VPN . OpenVPN , PC OpenVPN Client "Download Configuration File(") NAS VPN OpenVPN

- "Network()"
- "Add(가) (+)" "VPN"
- NAS VPN
- "Server Address()" myQNAPcloud NAS WAN IP
"Account Name()" , NAS 가
- "Authentication Settings()" , 가
- "OK()" , "Connect()" .

iOS 5 PPTP

- "Settings()" > "General()" > "Network()" , "VPN"
- "Add VPN Configuration(VPN 가)" .
- "PPTP"
- "Settings()" > "General()" > "Network()" > "VPN" 가 "VPN"

Windows OpenVPN

- OpenVPN <http://openvpn.net/>
- Windows OpenVPN C:\ Program Files\ OpenVPN
- OpenVPN
- NAS OpenVPN ("Applications()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN ")
- openvpn.ovpn "OPENVPN_SERVER_IP" openvpn IP
- "ca.crt" "openvpn.ovpn" OpenVPN (C:\ \ Program Files\ OpenVPN\ config).

: OpenVPN 가 Windows 7 , OpenVPN 가

Linux OpenVPN

- OpenVPN <http://openvpn.net/index.php>
- Linux OpenVPN
- NAS OpenVPN ("Applications()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN ")
- openvpn.ovpn "OPENVPN_SERVER_IP" openvpn IP
- "ca.crt" "openvpn.ovpn" OpenVPN
- OpenVPN

Mac OpenVPN

- OpenVPN . <http://code.google.com/p/tunnelblick/>
-
- NAS OpenVPN ("Applications()" > "VPN Service(VPN)" > "VPN Server Settings(VPN)" > "OpenVPN Settings(OpenVPN ")

- > "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 Client Management(VPN)

VPN

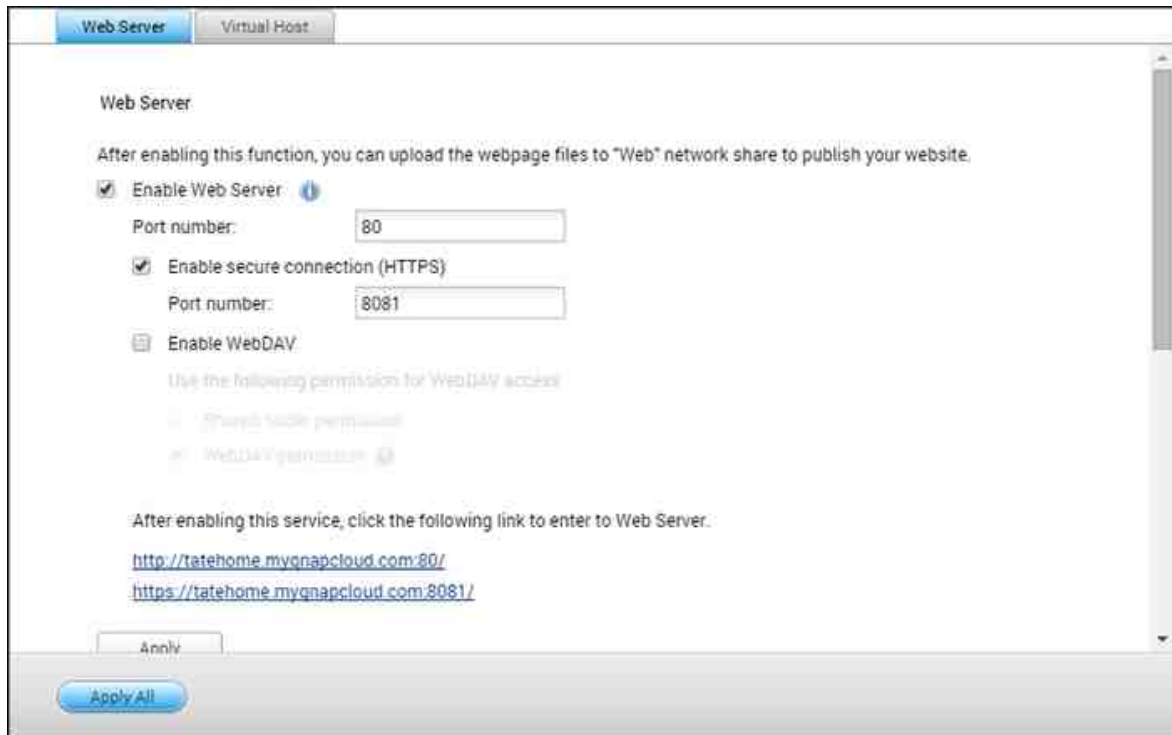
Add VPN Users(VPN 가)
 "Add VPN Users(VPN 가)"

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

VPN

7.13

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



NAS 가

Joomla!, PHP MySQL

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

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

WebDAV

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

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

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

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

Mac OS X

Mac OS X WebDAV NAS

: Mac OS X Snow Leopard (10.6.1)

1. "Finder()" > "Connect to Server()" URL
 : http://NAS_IP_or_HOST_NAME/SHARE_FOLDER_NAME
2. WebDAV
3. HTTP/WebDAV
4. " "

Mac OS X 10.6

10.4

Ubuntu

Ubuntu

WebDAV

NAS

: Ubuntu 9.10

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

MySQL

phpMyAdmin

NAS

MySQL

URL

: MySQL "root" "admin" phpMyAdmin

SQLite

SQLiteManager

SQLiteManager-*.tar.gz?

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

7.13.1 가

가 ()

(32) NAS

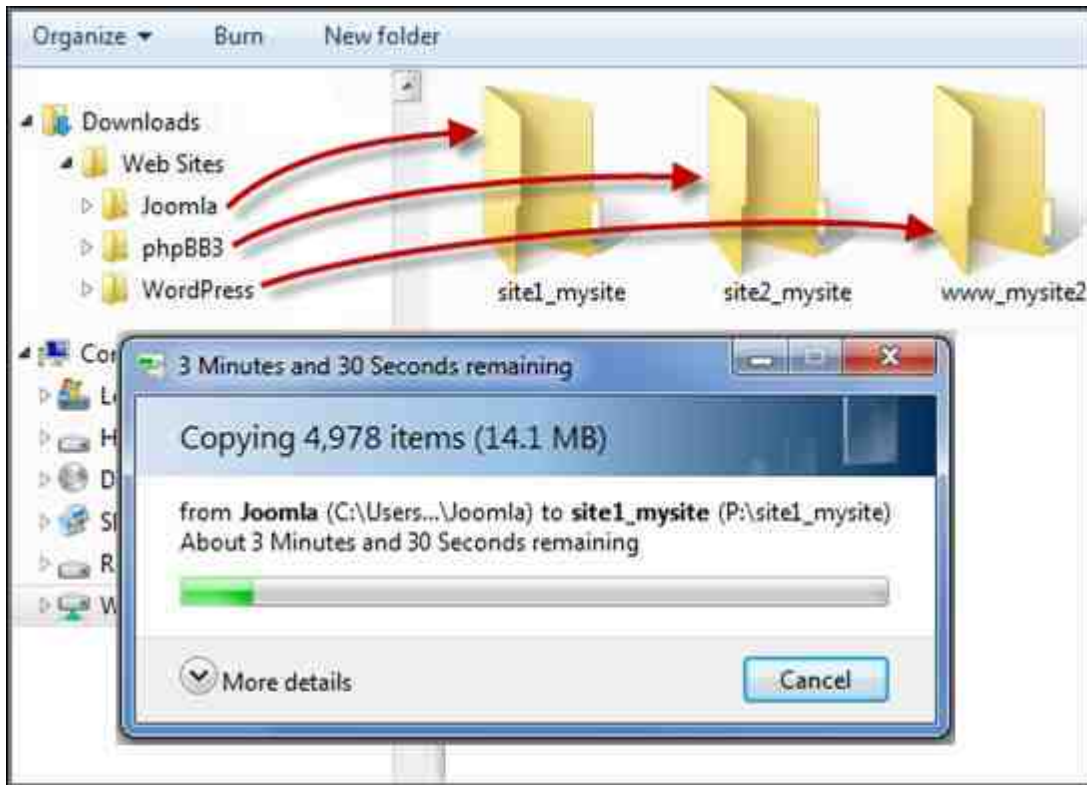
	WAN/ LAN IP		
site1.mysite.com	WAN IP: 111.222.333.444	/Qweb/site1_mysite	Joomla!
site2.mysite.com	LAN IP: 10.8.12.45	/Qweb/site2_mysite	WordPress
www.mysite2.com	(NAS) : 80 (NAS)	/Qweb/ www_mysite2	phpBB3

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

가

가

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



https://NAS_host_name 가 http://NAS_host_name URL
<http://site1.mysite.com>
<http://site2.mysite.com>
<http://www.mysite2.com>
 Joomla!, phpBB3 WordPress

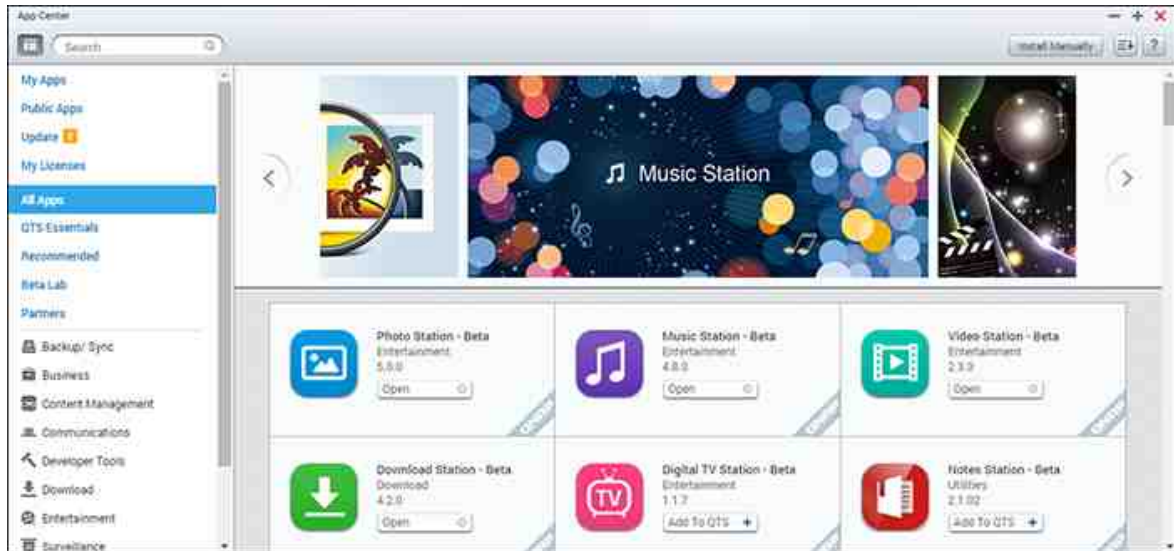
8.

QNAP

- App Center [247](#)
- DLNA [250](#)
- Download Station [252](#)
- HybridDesk Station [259](#)
- iTunes [271](#)
- [272](#)
- Music Station [274](#)
- myQNAPcloud [282](#)
- Photo Station [289](#)
- [304](#)
- [306](#)
- Video Station [308](#)

8.1 App Center

App Center NAS App Center 가 QNAP



App Center

App Center NAS App Center 가

App Center



1		NAS
2		NAS
3		

4		QPKG
5		,

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

App Center

, "Add to QTS+(QTS+ 가)" "Add to QTS+(QTS+ 가)" "Open()" "My Apps()" .

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

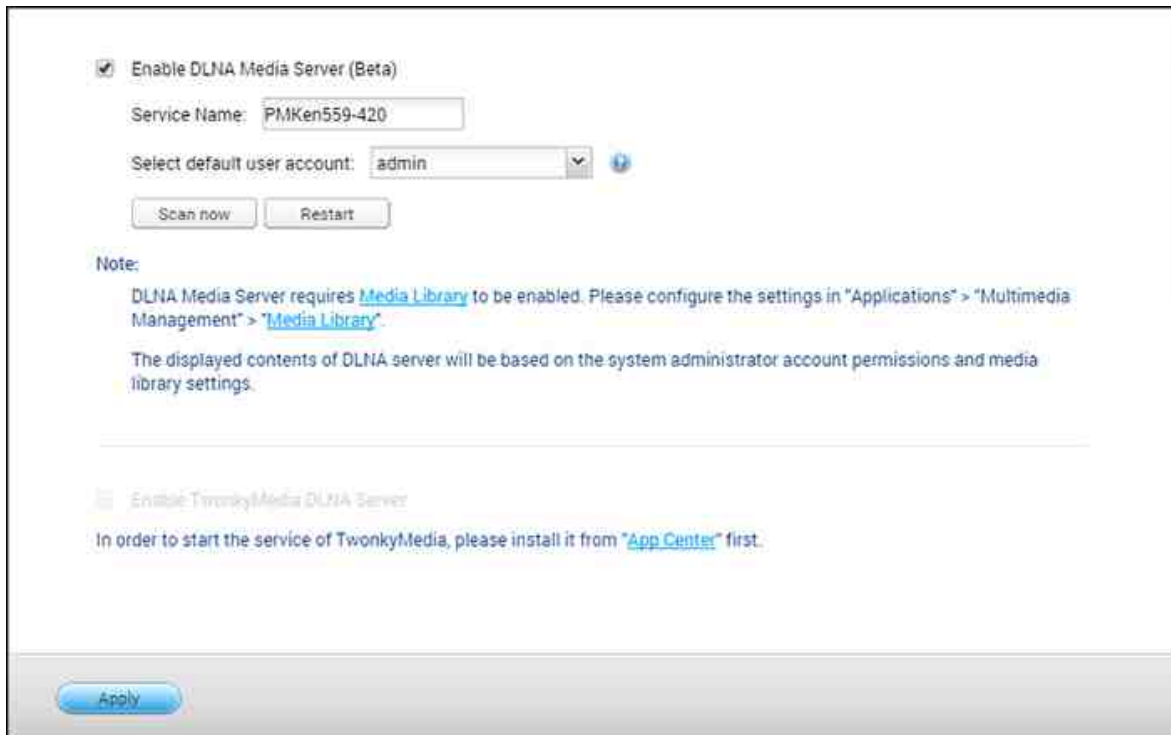
"Update()" "OK()"
 "Update All()"
 "Refresh()" 가 "Open()"
 "Remove()" NAS
 "OK()"

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

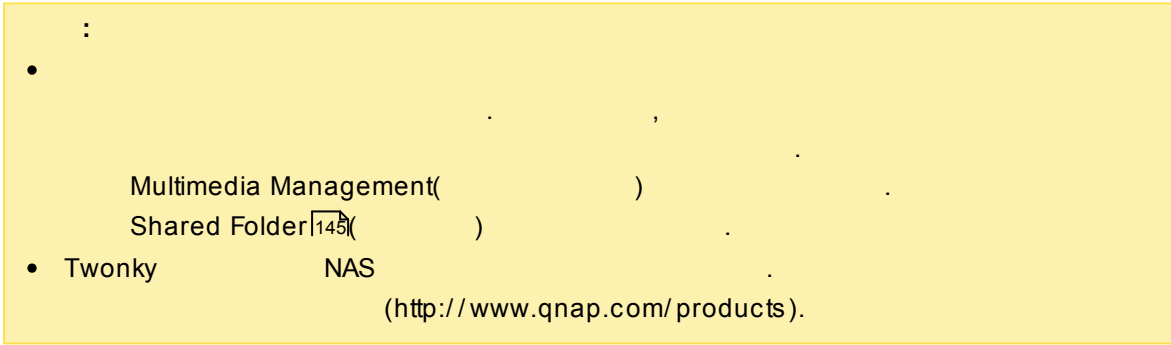
NAS가 QNAP App
 QNAP (http://www.qnap.com/go/qpkg.html)
 (http://forum.qnap.com/) (*.qpkg)
 "Install Manually()"

8.2 DLNA

QNAP Turbo NAS Twonky DLNA : QNAP



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



```

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

```

```

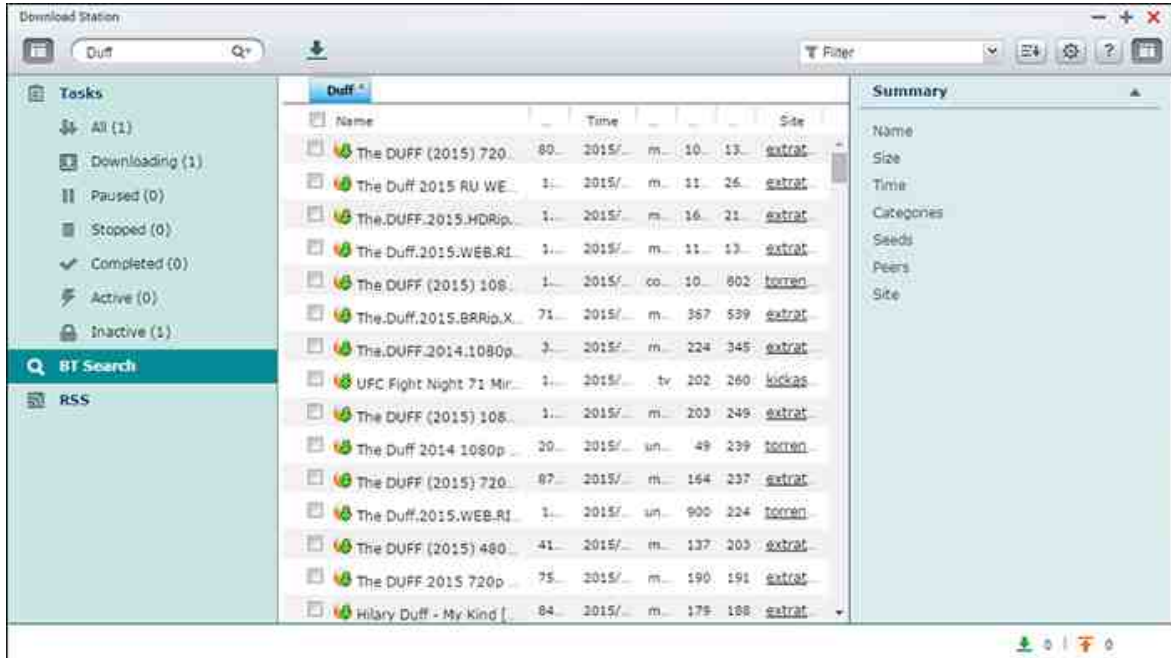
:
,
"Rescan content directories(
)" "Restart server(      )"


```

8.3 Download Station

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

NAS . BT BT



- Download Station  252
- Download Station  253
- Download Station  254
- Download Station  256

: Download Station

, PT, PT

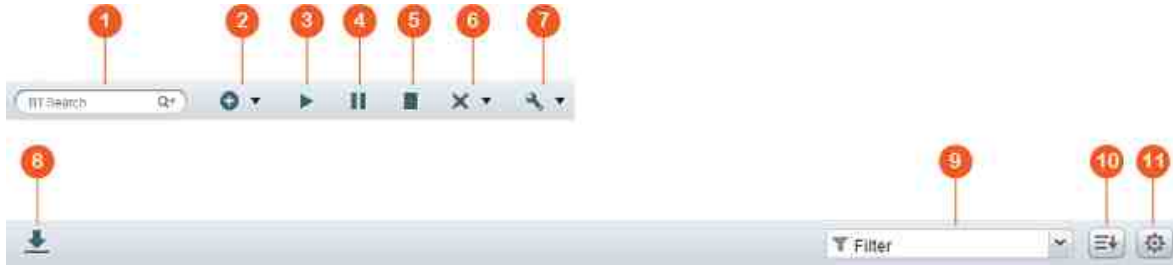
. Download Station(libtorrent) PT

, App Center

Download Station

NAS Download Station
 (QTS 4.1 App Center)
 / 가 Download Station 가
 Download Station . http://NAS_Name_or_IP/cgi-bin/Qdownload/
 qdownloadindex.cgi

Download Station



1	Search Bar()	> "BT Search(BT)" "Settings()" > "BT"
2	Add(가)	URL BT 가 PC
3	Start()	BT
4	Pause()	BT
5	Stop()	BT
6	Remove ()	BT BT
7	Action()	,
8	Download ()	BT
9	Filter()	BT
10	Sort()	..

- Enable UPnP port mapping(UPnP): UPnP
- Enable DHT network(DHT): 가 NAS가 DHT UDP
- Protocol encryption():
 - Bandwidth Limit(): BT
 - Global maximum concurrent downloads(): BT
 - Global maximum upload rate()(KB/s): BT
 - Global maximum download rate()(KB/s): BT
 - Maximum upload rate per torrent()(KB/s):
 - Global maximum number of connections():
 - Maximum number of connected peers per torrent():
- Seeding Preferences():
- Proxy(): BT IP
- BT Search(BT): Download Station BT BT

RSS Update(RSS): RSS NAS가 RSS 가

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

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
 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()" . NAS가

: 30

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

"Settings()" > "Global()" > "Download Schedule()"
 "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

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

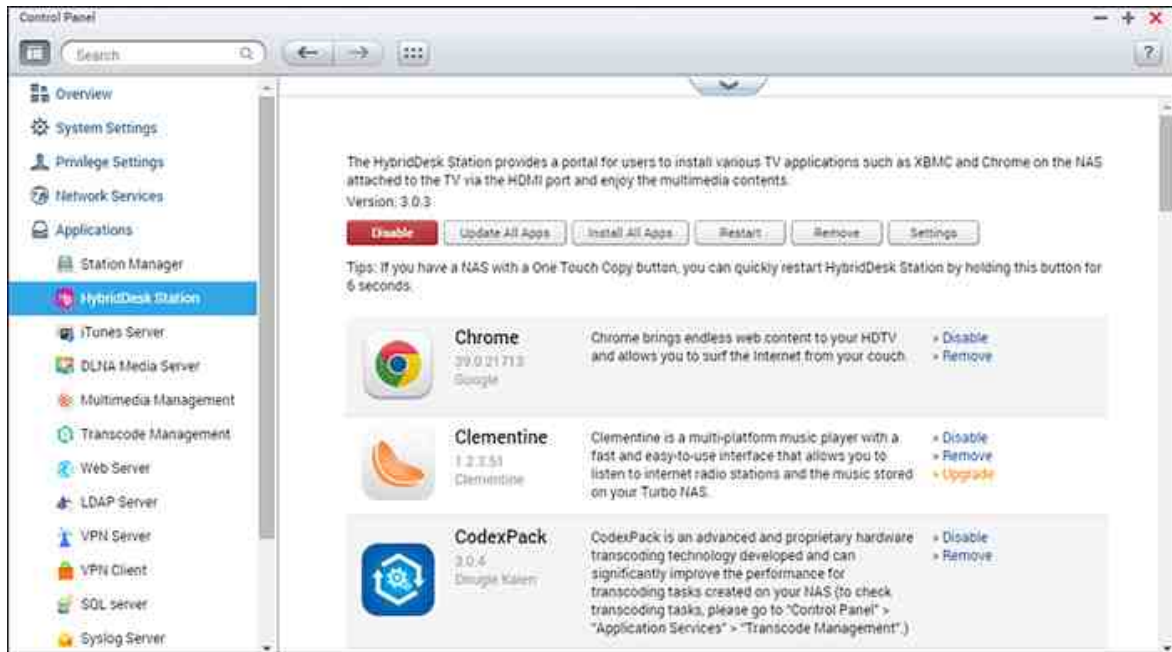
BT 가 가 :

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

8.4 HybridDesk Station

HybridDesk Station

가



- HybridDesk Station 259
- HybridDesk Station 261
- NAS 가 262
- HybridDesk Station 262
- 263

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

: Chrome	Qremote	NAS	USB
----------	---------	-----	-----

2. HybridDesk Station

- o "Applications()" > "HybridDesk Station" "Get Started HybridDesk Station"

3.

- o HybridDesk Station: TV Station HybridDesk
- o XBMC: TV
- o Chrome: Chrome NAS HDTV 가
- o YouTube TV YouTube
- o My NAS: NAS 가 NAS
- o 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

- TV
- Qfile :
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. "USBDisk"
 - 4.

 ;

NAS

가

(Samba, AFP, FTP, NFS)

"Multimedia(USB

)" "Qmultimedia"
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


```

:
• "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

HybridDesk Station

QTS HybridDesk Station HybridDesk Station "Settings()"

HybridDesk Station

- HybridDesk Station :
 - App():
 - Display():
 - Preferences():
- QTS HybridDesk Station:
 - Output resolution(): HybridDesk Station
HybridDesk Station
 - Overscan(): HybridDesk Station 가

• QNAP	MCE	TS- x70	MCE	TS- x69
• HDMI			TS- x69	





	R M - I R 0 0 1			R M - I R 0 0 2		M C E		X B M C	H D S t a t i o n
		1			1		1		
 		2			1 2		1 3		
Numbe r	0,1,2,3 ,4,5,6, 7,8,9	3				0,1,2,3 ,4,5,6, 7,8,9	1 8	0,1,2 ,3,4, 5,6,7 ,8,9	
 	Vol+, Vol-	4		Vol+, Vol-	9	Vol+, Vol-	1 2	Vol+, Vol-	
 	/	5				 	 		

 		6				 	 	 	
 	TV	8				 	 	 	
 		7				 	 		
가	Red - ()	9				Red - ()	3		
 	()	10				()	4		
 	()	11				()	22		
 	()	12				()	23		
		13				 	 		
 		14				 	 		

 		16				 	 		
 		15				 	 	 	
 	CH-	17					32		
 	CH+	18					33		
 		20				 	 		
 		19			10		10		
		21			7	 	 		
 		22				 	 		
 	가	28		가	11		7		

 		2 9			8		 n b s p ;		 p;
 		2 5			3		7		
 		2 3			2		7		
 		2 6			5		7		
 		2 7			6		7		
 		2 4			4		7		
		3 0					1 6		 p;
 		3 1					3 1		 p;
 		3 2					1 5		 p;
 		3 3				 	 n b s p ;		 p;
 		3 4					3 0		 p;
 		3 5					3 3		 p;
		3 6				 	 n b s p ;		 p;

 	/	3 7				 	 n b s p ;		 p;
 		3 8					2		 p;
 		3 9				 	 n b s p ;		 p;
 		4 0				 	 n b s p ;		 p;
 		4 1				 	 n b s p ;		 p;
	 	 n b s p ;	 ;			()	1 9		 p;
 		 n b s p ;	 ;				3 4		 p;

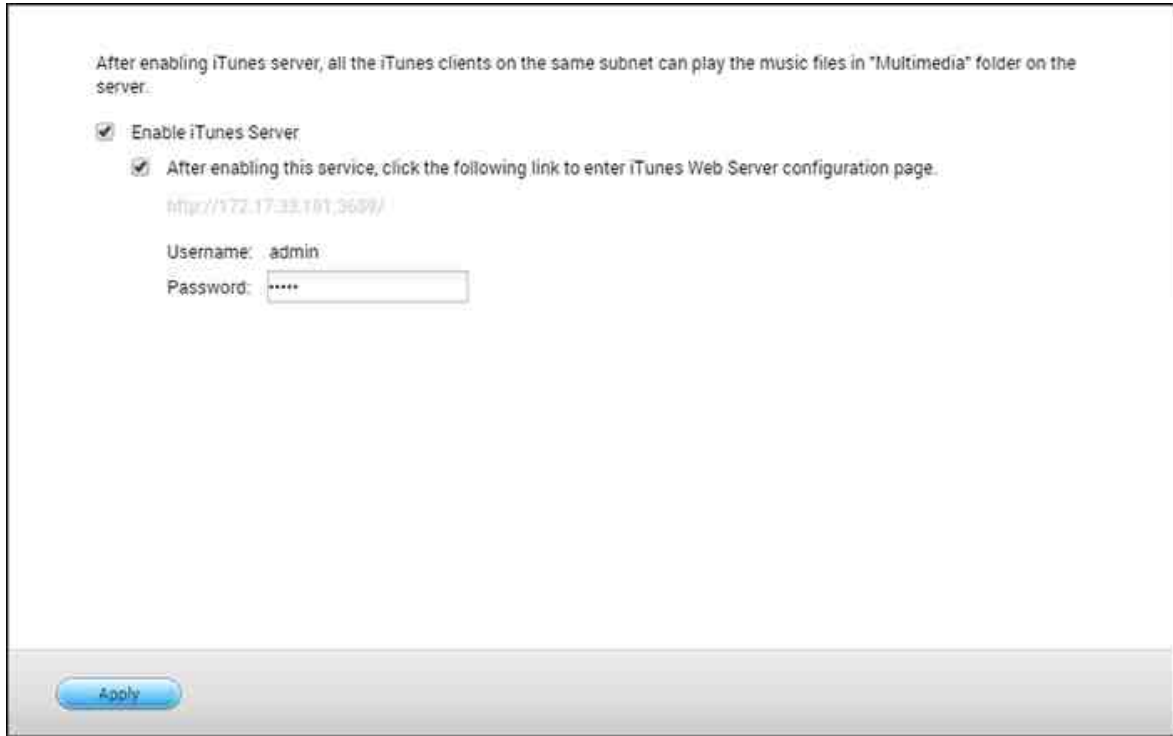
 	 	 	 			16:9 / 4:3	2 7	 	
--------	--------	--------	--------	--	--	---------------	--------	--------	--------

가 :

- HD Station Surveillance Station() .

8.5 iTunes

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

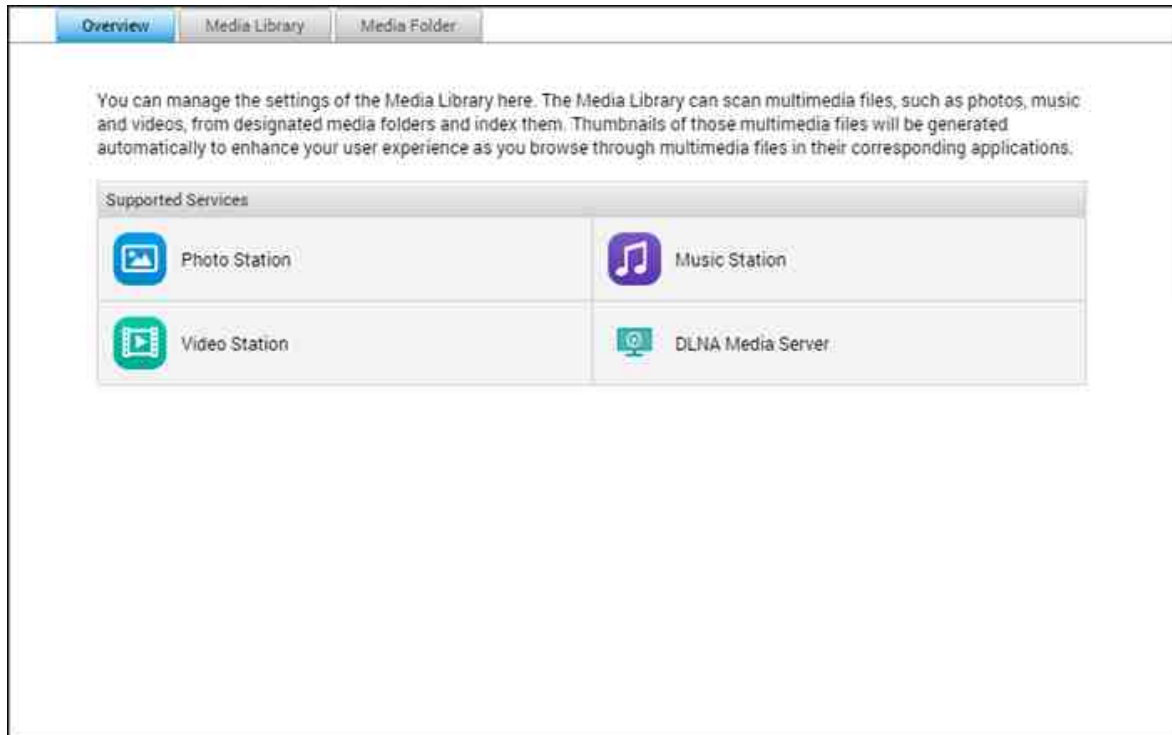


: iTunes 가 : x70U, x79
 Pro x79U. iTunes [45] "System Administration(
)"

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

가 :
 • QNAP iTunes

8.6



- : 가
- : 가
- : 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 , "45" "
- Photo Station Music Station
DLNA Media Server가
- : 가 400

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

NAS 가 , "Add(가)" ,

, "Add(가)" . ,

"Apply()"

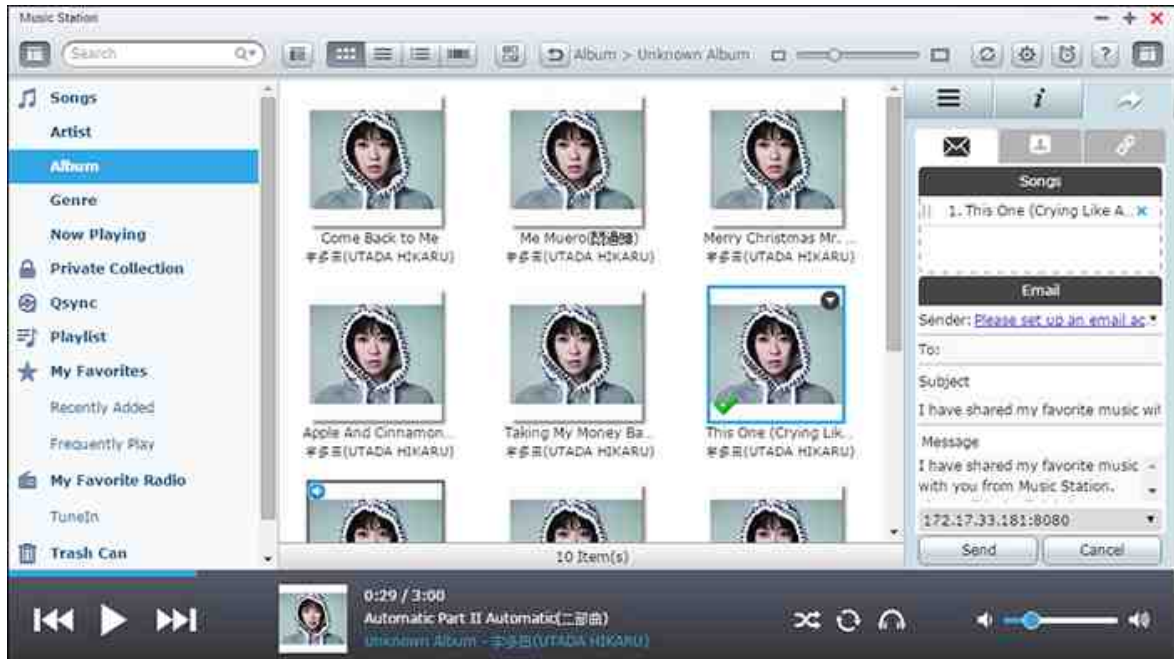
, "Delete()" "Apply()"

8.7 Music Station

Music Station(4.0)

가 NAS
, 가

. NAS



- Music Station 274
- Music Station 275
- Music Station 278
- 280

Music Station

NAS

Music Station

App Center

Music Station

(QTS 4.1

1.

가 가

NAS

1) Qfinder

PC

Mac

NAS

3

NAS
"Private Collection(
가

24

("Songs()"

()"

, "Private Collection(

2)

()

"Songs()"
PC
가 NAS

가 "Multimedia

"/home"

.) "Recently Added(가)" . 3) NAS

- Music Station admin NAS admin
- Music Station

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

Music Station



1	Left Panel()	
2	Search Bar()	
3	Browsing Mode ()	(: / /)
4	Multi- Select()	
5	Resizing Bar()	
6	Refresh()	
7	Settings()	, NAS ,
8	Music Alarm()	

9	Help()	, .
10	Right Panel()	.

Player()



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

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

" > "Network Service()" > "Service Discovery()" > "Bonjour" Bonjour .

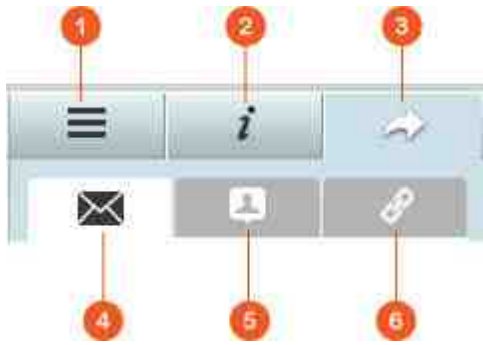
Left Panel()

- Songs, Artist, Album, and Genre(, , ,):
 - PC () 가 "/Multimedia"
- Now Playing(): "Now Playing()"
- Private Collection(): "/home"
- Qsync: Qsync
- Playlist(): 200
 - "Playlist()" "+" 가
 - "Now Playing()" 가
- My Favorites(): 1
 - "Rating()" 가
- Recently Added(가): 가
- Frequently Played(): 가
- My Favorite Radio(): URL Tuneln Radio
 - 가 URL 1024 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 ()	.
3	Sharing()	" " (3가 : , ,).
4	Email()	"Send()" .. "Control Panel()" > "System Settings()" > "Notification()" > "SMTP Server(SMTP)"
5	Social Sharing ()	.
6	Link()	. "Link Code()" , LAN IP WAN IP .(myQNAPcloud.com myQNAPcloud myQNAPcloud URL .) "Save()"

Music Station

가
Music Station .

"OK()" "Playlist()" .

"Now Playing()" 가
 (, , "Playlist Settings()" "Share with the
 public()").
 NAS (NAS 가)
 /)
 () "Email()" .
 "Publish()" .
 "Link Code()" , 가
 "Sharing()" "Songs()" .
 , "Email()", "Social Sharing()" "Link()" .
 "Playlist()" 가 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()"

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

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

8.8 myQNAPcloud

myQNAPcloud가 NAS UPnP NAS UPnP NAS IP가 . myQNAPcloud



myQNAPcloud NAS가 UPnP가 myQNAPcloud가

NAS myQNAPcloud

- myQNAPcloud ²⁸²
- ²⁸³
- DDNS ²⁸³
- ²⁸³
- CloudLink ²⁸⁴
- ²⁸⁴
- SSL ²⁸⁵

- myQNAPcloud Portal ²⁸⁶ (NAS)

myQNAPcloud Wizard

myQNAPcloud

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

DDNS

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

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

SSL

myQNAPcloud SSL NAS
가

myQNAPcloud NAS HTTPS(: https://nossl.myqnapcloud.com)
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()"
3가 가

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

30

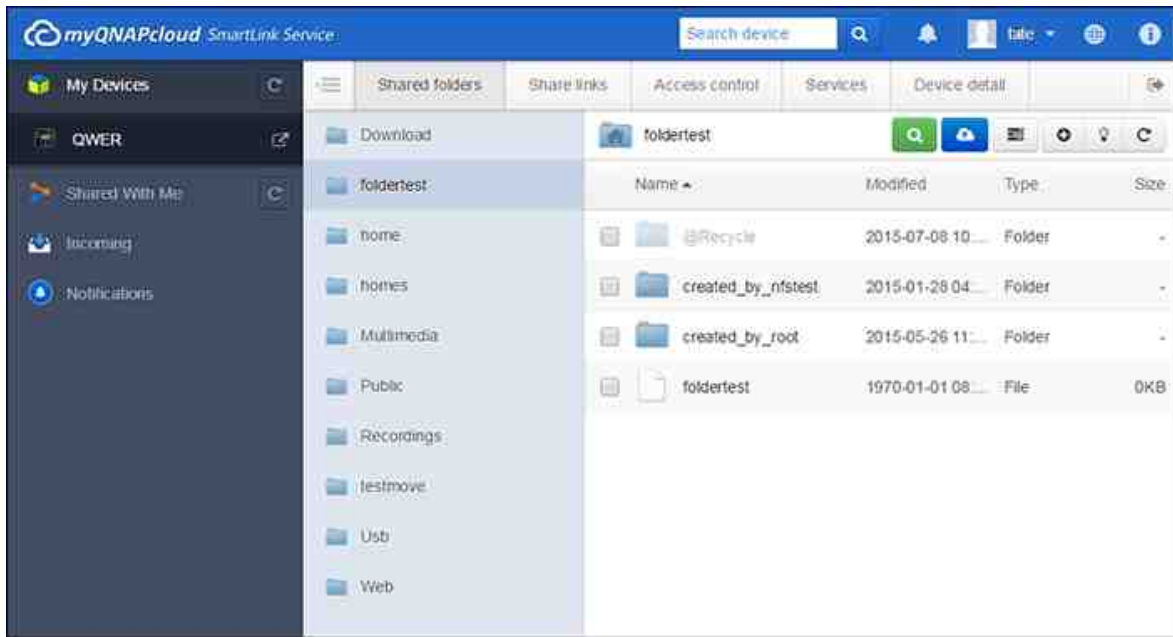
myQNAPcloud "SSL
Certificate(SSL)" > "Certificate License()"

- 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

NAS

"My Devices("

)"

NAS

- File Station
-
- (284)
-
- (283)
-

- myQNAPcloud

가

• myQNAPcloud
App Center CloudLink QPKG

myQNAPcloud NAS

- "Shared with me()"
NAS 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()" (, /IP,)
) > "Next()" >
> "Share()" .
- myQNAPcloud "Incoming()"
가

: App Center CloudLink QPKG

myQNAPcloud myQNAPcloud

- 가 가
- 가
- 가

myQNAPcloud

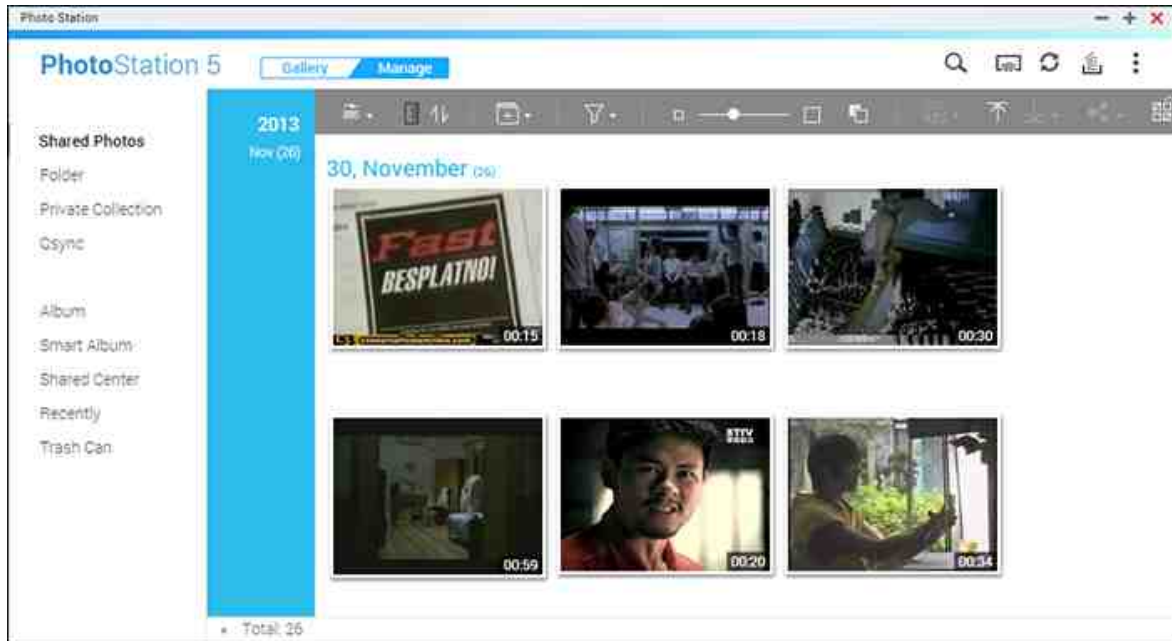
1. myQNAPcloud
2. "Notifications()"()

8.9 Photo Station

Photo Station(5.0) NAS

Photo Station 가
/ 가

NAS



- Photo Station 289
- Photo Station 290
- Photo Station 295
- 302

Photo Station

NAS Photo Station App Center Music Station
(QTS 4.1)

1. NAS 가 . NAS
3가 가 . 1) Qfinder PC Mac

NAS [24] . 2)
"Shared Photos()" "Private Collection()"
"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 .

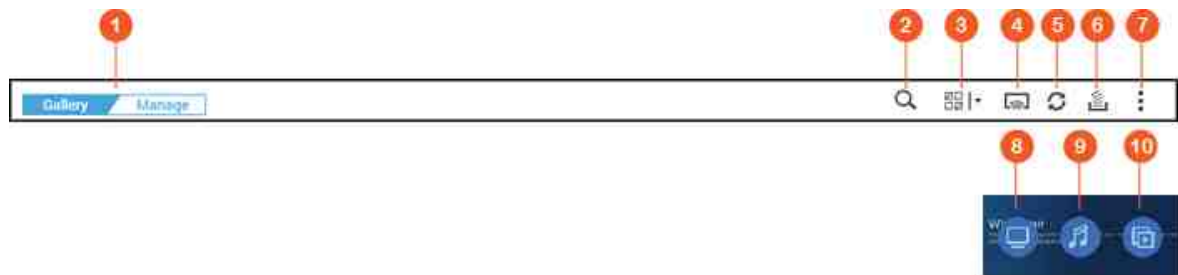
- : 2GB .
- 2GB .

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

: Photo Station admin NAS admin

Photo Station

Photo Station



6	Settings()	<p>Photo Station Photo Station 가 가</p> <ul style="list-style-type: none"> • Content Filter(): Photo Station 가 "() 2721. • Social Network Binding(): 가 Photo Station • Backup/Restore(/): 가 • Miscellaneous(): <ul style="list-style-type: none"> ○ 가 Photo Station ○ Automatically create matching album(): "Album()" 가 ○ Always start in Manage mode(): Photo Station
7		(/ /)
8	Timeline()	
9	Sort()	
10	Add Album(가)	
11	Photo/Video Filter(/)	
12	Zoom in/ Zoom out(/)	

1 3	Background Color()	
1 4	Slideshow()	
1 5	Import(가)	가
1 6	Download()	가 ()
1 7	Share()	가
1 8	Multi-Select ()	

:
 • Network Media Player HDMI Chromecast
 Media Streaming Add- On App Center
 • "Control Panel()" > "Network Service()" > "Service Discovery()" > "Bonjour"
 Bonjour
 • NAS MP4
 306

- Shared Photos(): 가 ("/home" "Qsync").
- Folder(): NAS ("/home" "Qsync").
- Private Collection(): "/home" 가
- Qsync: Qsync 가
- Album(): 가 NAS
 "Album()"()
 / 가
 295

- Smart Album(): 가
"Smart Album()"(가)
/ 가 [295]
- Shared Center(): "Shared Center
()"() /
- Faces(): 가
가 [301]
- Recently(): 가 (2) (2)
)
- Trash Can(): (가 가)

:

- "/home" NAS
"/home" [272]
- [140]
- 가 Photo Station [272]

Photo Station

- 2가 가
1. "Create New Album()"
 2. "Album()"
 3. "Album()" > "Add Album(가)"
NAS (.
QTS .)

3가 가

/ NAS (NAS 가) (QTS (

 -)

"Shared Center()"

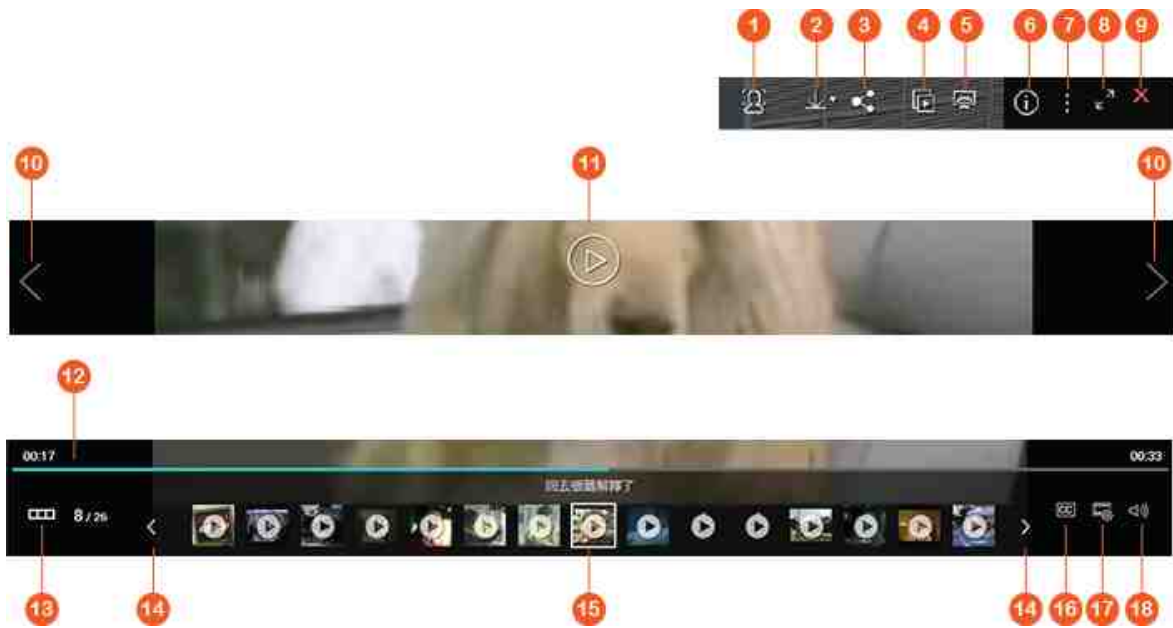
- Photo Station NAS (

 "Control Panel()" > "General Settings()" >

 "Login Screen()"
-
- 가

가

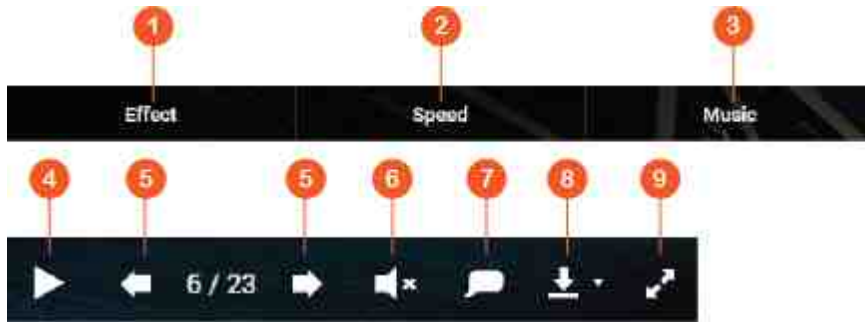
Rotation(())	90 ()
View(())	() 298
Information()(i)	()
View()	() 298
Rotation(())	90 ()
View/Play(/)	
Open in new browser tab()	
Open with VLC(VLC)	. VLC .()



1	Face Detection()	가 가 301
2	Download()	, , , 4가 가 가 ("Original()", ("small()", "medium()", "large()")
3	Share()	
4	Slideshow()	/ 301
5	Network Media Player ()	
6	Information()	, , /
7	Miscellaneous Settings ()	/ QTS

8	Full Screen()	
9	Return to Photo Station (Photo Station 가)	/ Photo Station
10	Last Item/Next Item(/)	/
11	Play/Pause(/)	/
12	Seek Bar()	
13	Hide/Show Preview Bar(/)	
14	Rewind/Forward(/)	/
15	Preview Bar()	
16	CC()	
17	Resolution()()	<ul style="list-style-type: none"> • (NAS) • VLC
18	Volume()()	

"Slideshow()"



1	Effect()	가
2	Speed()	
3	Music()	Music Station ("Playlist()",). Music Station [274]
4	Play/Pause(/)	/
5	Last/Next Slide(/)	/
6	Background Music ()	
7	Title()	
8	Download()	
9	Full Screen()	

"Set Coordinates()"
 .("View Map()"
 "Save()"
 > "Information()"
 GPS 가
 GPS
 가
 1. > "Manage Mode()" > "Settings()" > "Face Detection()" Photo
 Station
 2.

3.

가

가

"Faces()"

PDF

Photo Station

PDF

PDF

PDF

가

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

Photo Station

272

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()" >

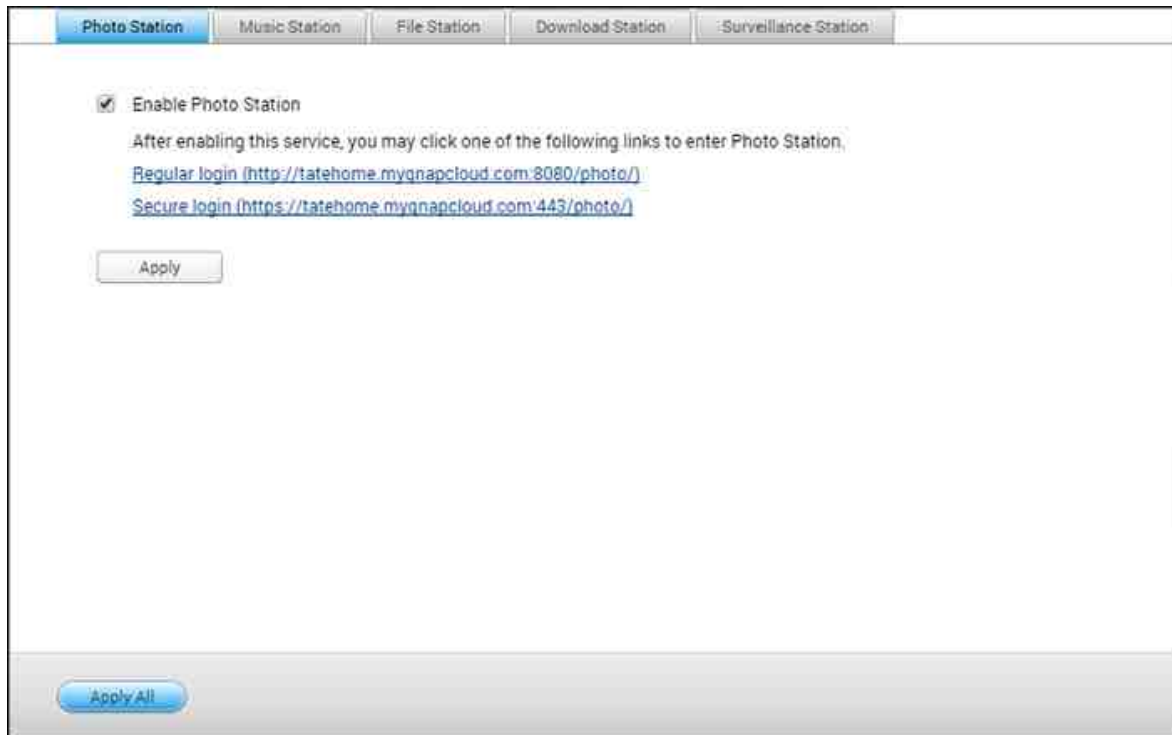
Library("Control Panel()" > "Multimedia Management()" > "Media

: Media Library
Station DLNA Media Server
가

Photo Station, Music Station, Video
가

8.10

QNAP



"Enable Photo Station()"

of Sharing Management on the login screen(

"Show the photos
)"

가

289

"Enable Music Station()"

274

"Enable File Station()"

209

"Enable Download Station()"

252

Surveillance Station

"Enable Surveillance Station (Surveillance Station)"

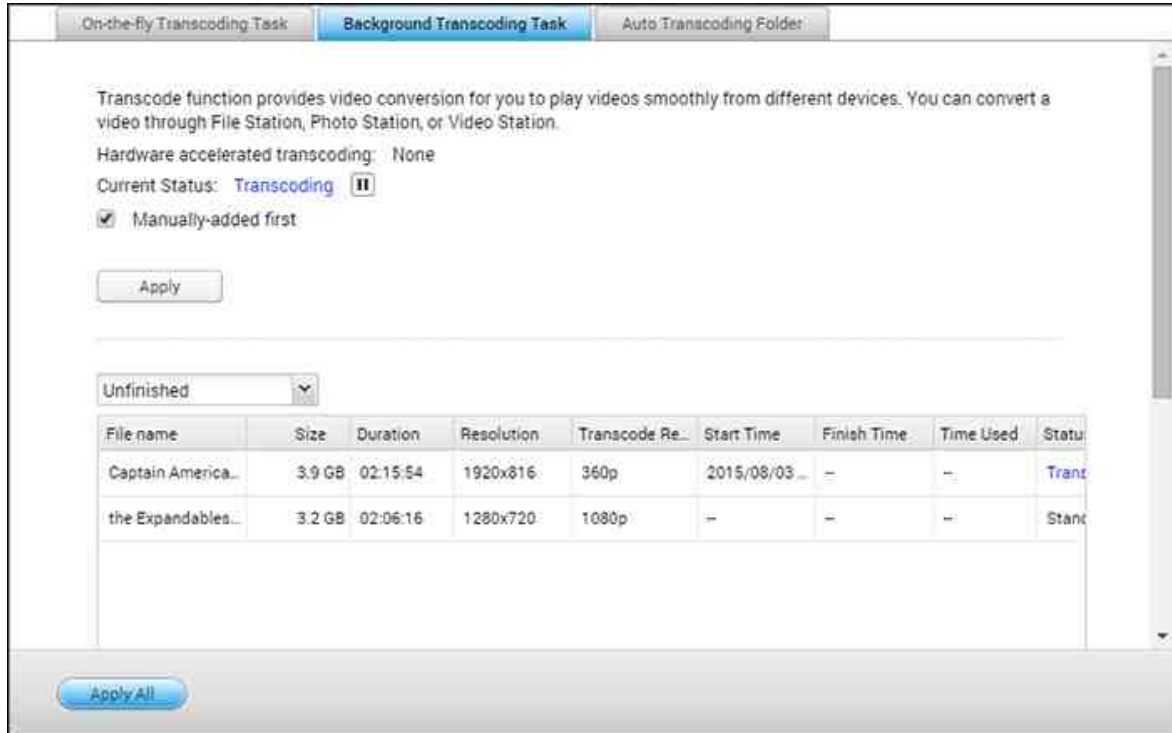
Surveillance Station 가 QNAP
(<http://license.qnap.com>)

- 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)
Mac(Mac QNAP) <http://www.qnap.com/download>

"License Management()"

8.11




가 (*.MP4) TV
가
가



CPU . Turbo NAS 가
, CodexPack CPU
가

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

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

가 , "Add(가)" 가
 가 , ()

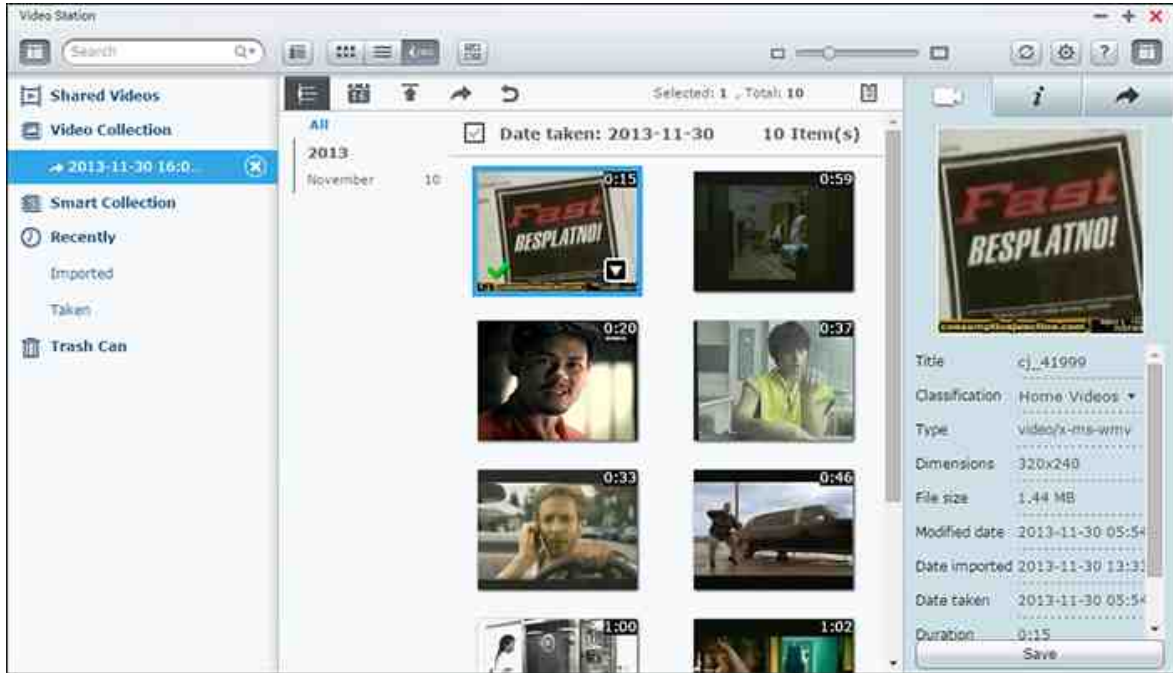
8.12 Video Station

Video Station(2.3) NAS

가

Video Station

, TV



- Video Station 308
- Video Station 309
- Video Station 313
- 317

Video Station

Video Station App Center(QTS 4.1)

- NAS : NAS 3가
 - Qfinder PC Mac
 - "Private Collection(24)" ; 2) "Shared Videos()"
 - "Import(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 : API, MP4

Video Station

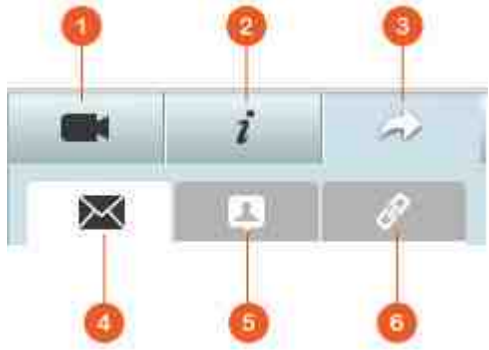


1	Left Panel()	
2	Search Bar()	, , ,
3	Browsing Mode()	(: / /)
4	Multi- select()	
5	Resizing Bar()	
6	Select DLNA/AirPlay Player (Network Media Player)(DLNA/AirPlay Player())	
7	Refresh()	

8	Settings()	<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	Tag Filter()	

- "/home" NAS
- "/home"
 - 가 Video Station

Right Panel()



1	Video Property ()	..
2	Tag and Description()	.
3	Sharing()	(가 : ,)..)
4	Email()	Account() "Send()" > "Options()" > "E-mail"
5	Social Sharing ()	.
6	Link()	"Select Videos()" "Select Link Format()" , LAN IP WAN IP (myQNAPcloud.com myQNAPcloud

		myQNAPcloud (URL , HTML , vB Forum Alt Forum). "Create()" 가 URL
--	--	--

:
 "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
 /)
 ()

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

"Sharing()" "Email(), "Social Sharing(); "Select Videos("Link()" Video Station "Sharing History()"

: QTS
 > "Options()" > "E- mail Account()"

Facebook

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

Play()	
Open with VLC(VLC)	VLC (VLC)
Download()	..
Copy to Collection()	
Set as Cover()	
Add to Transcode(가)	. 240P, 360P, 480P SD, 720P HD, 1080P Full HD.
Rotate()	90
Add to Sharing List(가)	가

Streaming to()	
Remove/Delete(/)	..
Movie Information()	(, ,)
Add Tag(가)	..
Rating()	..
Color Label()	..

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

Ctrl / "Multi-select()"



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

- HD
- HD
- -
 -
 -
 -
 -
 -
- Network Media Player
 - Media Streaming Add- On
 - HDMI Chromecast
 - 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
[272]
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

9.

QNAP 가 NAS

QNAP

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

- Qfile^[319]
- Qmanager^[319]
- Qnotes^[320]
- Qremote^[320]
- Qmusic^[320]
- Qvideo^[321]
- Qphoto^[321]
- Qget^[321]
- Vmobile^[322]
- Vcam^[322]

Q file

Qfile NAS QNAP NAS
가
PC NAS , , ,



Q manager

Qmanager

NAS

CPU

"App Center"

NAS



Qnotes

Qnotes

가

Qnotes

가

가



Qremote

Qremote HD Station QNAP Station

Qremote

HD



Qmusic

Qmusic

NAS

가



Q video

Qvideo

NAS

, 가



Q photo

Qphoto



Q get

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



V m o b i l e

Vmobile QNAP

Surveillance Station Vmobile NAS IP
 NAS



V c a m

Vcam IP 가 NAS



10.

QNAP NAS

- Qfinder^[323]
- myQNAPcloud Connect^[323]
- Qsync 2.0^[323]
- NetBak^[323]
- Qget^[324]
- vSphere Client plug-in^[324]
- Qsnap^[324]

Qfinder

Qfinder Windows, Mac Linux , LAN NAS
가 QFinder NAS

myQNAPcloud Connect

myQNAPcloud Connect NAS
myQNAPcloud Connect Windows
& Turbo NAS Windows Explorer

Qsync 2.0

Qsync 가
NAS NAS

NetBak

NetBak Replicator 가 Windows PC , , ,
QNAP NAS PC
NAS
NetBak Replicator FTP WebDAV

Qget

QGet

. Windows Mac
NAS Download Station BT, HTTP, FTP

QGet

LAN

WAN

BT

가,

,

HTTP

FTP URL

가

. QGet
&

vSphere Client plug-in

NAS

NAS

VMware

vSphere Client

vSphere Client Plug-in

가

ESXi

가

NAS

Qsnap

Qsnap

PC

11. NAS 가

NAS 가

NAS 가 (QPKG)

- Backup Versioning - Beta [\[325\]](#)
- Gmail Backup - Beta [\[326\]](#)

가

- Container Station - Beta [\[326\]](#)
- Virtualization Station - Beta [\[326\]](#)

- Notes Station - Beta [\[326\]](#)
- Qsirch - Beta [\[326\]](#)

- Media Streaming Add-On [\[327\]](#)
- Photo Station Extension - Beta [\[327\]](#)

- L2TP/IPsec VPN Service [\[327\]](#)
- MyQNAPcloud SSL Certificate [\[327\]](#)
- Surveillance Station [\[327\]](#)

- CloudLink [\[328\]](#)

- Signage Station [\[328\]](#)

- Diagnostic Tool - Beta [\[328\]](#)
- Q'center [\[328\]](#)

:
• 가 NAS . QNAP
App Center . NAS 가
• QNAP (http://www.qnap.com/go/qpkg.html).

Backup Versioning - Beta

Backup Versioning RTRR RTRR
"version control()"
가

Gmail Backup - Beta

Gmail Gmail
Gmail

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

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

Media Streaming Add-On - Beta

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

. DLNA

DLNA

Photo Station Extension - Beta

Photo Station Extension Photo Station * pdf 가

가 . 가 pdf

L2TP/IPsec VPN Service

L2TP(2) (PPTP) 2 (L2F)

. 2 PPTP , L2TP

. IPsec , L2TP

가 L2TP/IPsec

VPN . L2TP/IPsec Windows, Mac, Linux

MyQNAPcloud SSL Certificate

myQNAPcloud SSL Certificate myQNAPcloud (https://www.

myqnapcloud.com) SSL QTS

myQNAPcloud 가 . SSL myQNAPcloud

DDNS QNAP NAS

Surveillance Station

Surveillance Station Surveillance Station App Center NAS

가 IP NAS

Surveillance Station

CloudLink

CloudLink myQNAPcloud가 , myQNAPcloud (www.myqnapcloud.com)

가 App Center CloudLink myQNAPcloud ID(QID) CloudLink myQNAPcloud PC Qsync QNAP CloudLink QNAP Qfile, Qmanager, CloudLink

Signage Station

Signage Station iArtist Lite NAS , Signage Station NAS

Diagnostic Tool - Beta

NAS 가 RAM

Q'center

Q'center QNAP NAS NAS Q'center

12. LCD

LCD

NAS

<http://www.qnap.com>

NAS

LCD

NAS가

NAS

IP

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

LCD

IP 가

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

*"Select"()

"Enter"()

5

가

NAS

LCD

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

"Select()"

RAID 6

가

"Enter"

가

"Select"()

" "

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

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

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

가 IP 가 . NAS가

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

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

가

L C D

LCD NAS IP 가 "Enter"

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

TCP/IP

TCP/ IP

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

- DHCP
- IP*
-

7. 가

* IP IP , , , LAN 1 LAN 2
DNS

- 1.
2. 가

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

NAS

RAID

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

"Select()"

RAID 5

LCD

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

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

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

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

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

LCD "Yes()" LCD

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

8 (0 9) 가 "OK()"

"Enter"

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

NAS 가 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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- a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
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- c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.
- e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

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'Installation Information' for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

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Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

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