Synology NAS Server

User's Guide

Applied Model:

DS108j, DS107, DS107+, DS207, DS207+, CS407e,

CS407, RS407, RS408, RS408-RP

Document ID:

Synology _UserGuide_NASeries_20080306_enu

Based on Version:

DSM 2.0-0585



COPYRIGHT NOTICE

All title, copyright and other intellectual property rights in and to any Synology Products, the "Products" or "Product" (including but not limited to product design and appearance, firmware, and any relevant media, images, photographs, animations, video, audio, music, text, and applets incorporated into the Products), the accompanying manuals and other documents, and on-line or electronic documents, if any, are owned by Synology Inc. Unless otherwise expressly licensed by Synology Inc. in writing, any provision of the Products does not represent any license of any of the above rights.

Copyright © 2004-2008 Synology Inc.; All rights reserved.

TRADEMARK NOTICE

Synology and other names of Synology Products are proprietary marks or registered trademarks of Synology Inc. Microsoft, Windows series, and Internet Explorer are trademarks of Microsoft Corporation. Apple, Mac, Mac OS series are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. Other products and company names mentioned herein are trademarks of their respective holders.

LIMITED WARRANTY AND LIABILITY

Synology provides a limited warranty for its Products only to the initial person or entity that originally purchased the Products from Synology or its authorized distributor or retailer. Synology warrants that every hardware portion of the Products will be free from physical defects in material and workmanship for two years from the date of purchase, or the Product will be repaired or replaced as determined solely by Synology. If the Product proves defective during this warranty period, you can contact the local dealer in order to obtain assistance. You must provide proof of purchase and a bar code number from the Product's packaging when asking for assistance. Synology Products are barebones devices so Synology makes no warranty of the hard disk installed, or warranty on compatibility of all hard disks.

SYNOLOGY SHALL HAVE NO LIABILITY TO YOU UNDER THIS LIMITED WARRANTY IF THE PRODUCT IS INSTALLED AND USED IN A MANNER NOT SPECIFIED OR DESCRIBED IN THE PRODUCT SPECIFICATIONS OR DESCRIPTION, THE PRODUCT HAS BEEN MODIFIED OR ALTERED IN ANY WAY BY ANY PARTY OTHER THAN SYNOLOGY, OR THE FAILURE OF THE PRODUCT TO CONFORM TO ITS SPECIFICATIONS CAN BE ATTRIBUTED TO CAUSES THAT NOT THE RESPONSIBILITY OF SYNOLOGY.

SYNOLOGY MAKES NO WARRANTY OR REPRESENTATION, EXPRESSED, IMPLIED, OR STATUTORY, WITH RESPECT TO ITS PRODUCTS OR THE CONTENTS OR USE OF THIS DOCUMENTATION AND ALL ACCOMPANYING SOFTWARE, AND PARTICULARLY DISCLAIMS ITS QUALITY OR PERFORMANCE FOR ANY PARTICULAR PURPOSE.

SYNOLOGY MAKES NO GUARANTEE THAT ALL DATA STORED ON SYNOLOGY PRODUCTS IS ALWAYS SECURE WITHOUT ANY RISKS OF DATA LOSS. SYNOLOGY REMINDS YOU TO BACK UP THE DATA PERIODICALLY. UNDER NO CIRCUMSTANCES SHALL SYNOLOGY BE LIABLE IN ANY WAY TO THE USER FOR DAMAGES, INCLUDING ANY SAVINGS, LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE SYNOLOGY PRODUCTS OR RESULTING LOSS OF DATA FROM SUCH USE.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). SYNOLOGY'S RESPONSIBILITY FOR

MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR OR REPLACEMENT AS SET FOR IN THIS WARRANTY STATEMENT. FOR CUSTOMERS, EXCEPT FOR THE EXPRESS WARRANTIES CONTAINED IN THIS WARRANTY STATEMENT, SNOLOGY DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN IMPLIED WARRANTIES OR CONDITIONS, OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY COVERAGE TERMINATES IF YOU SELL OR OTHERWISE TRANSFER THIS PRODUCT TO ANOTHER PARTY.

SYNOLOGY DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS LIMITED WARRANTY OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES, FOR PRODUCTS NOT BEING AVAILABLE FOR USE, OR FOR LOST DATA OR LOST SOFTWARE. SYNOLOGY'S LIABILITY SHALL NOT EXCEED THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF A CLAIM. THIS IS THE MAXIMUM AMOUNT FOR WHICH SYNOLOGY IS RESPONSIBLE.

SYNOLOGY INC. PRODUCTS ARE NOT INTENDED FOR USE IN MEDICAL, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS.

DISPUTE RESOLUTION

For the purposes of this provision, the term "Dispute" means any dispute, controversy, or claim arising out of or relating to (i) this Agreement, its interpretation, or the breach, termination, applicability or validity thereof, (ii) the related order for, purchase, delivery, receipt or use of any product or service from Synology, or iii) any other dispute arising out of or relating to the relationship between You and Synology; the term "Synology" means Synology, Inc, its parents, subsidiaries, affiliates, directors, officers, employees, beneficiaries, agents, assigns, component suppliers (both hardware and software), and/or any third party who provides products or services purchased from or distributed by Synology; and the term "You" means you, or those in privity with you, such as family members or beneficiaries. For US customers, you and Synology agree that any Dispute between You and Synology will be resolved exclusively and finally by arbitration under the current commercial rules of the American Arbitration Association, except as otherwise provided below. The arbitration will be conducted before a single arbitrator, and will be limited solely to the dispute between You and Synology. The arbitration, or any portion of it, will not be consolidated with any other arbitration and will not be conducted on a class-wide or class action basis. The arbitration shall be held in King County, Washington by submission of documents, by telephone, online or in person as determined by the arbitrator at the request of the parties. The prevailing party in any U.S. or non-U.S. arbitration or other legal action shall receive all costs and reasonable attorneys' fees, including any arbitration fee paid by the prevailing party. Any decision rendered in such arbitration proceedings will be final and binding on the parties, and judgment may be entered thereon in any court of competent jurisdiction. You understand that, in the absence of this provision, You would have had a right to litigate Disputes through a court, including the right to litigate claims on a class-wide or class-action basis, and that You have expressly and knowingly waived those rights and agreed to resolve any disputes through binding arbitration in accordance with the provisions of this paragraph. For non-US customers, any Dispute shall be finally resolved by arbitration

conducted by three neutral arbitrators in accordance with the procedures of the R.O.C. Arbitration Law and related enforcement rules. The arbitration shall take place in Taipei, Taiwan, R.O.C., and the arbitration proceedings shall be conducted in English or, if both parties so agree, in Mandarin Chinese. The arbitration award shall be final and binding on the parties and may be enforced in any court having jurisdiction.

REVISIONS

Synology reserves all rights to revise or update its Products, other products, software, or related documentation without further notice.

Synology Inc. reserves the right to revise this publication and to make changes in the content hereof without the obligation to notify any person of such revision or changes.

Index

About this User's Guide	6
Getting to know your Synology Server	
Introduction	
Storing and Sharing Files via Internet	
PC Data and Server Data Backup	
Transferring Data via FTP	
Managing Files through Web Browsers	
Sharing Photos, Videos and Blogs with Photo Statio	
Enjoying Entertainment Data Stored on Server	
Enjoying Music instantly with USB Speakers Programming your Own Web Site	
Video Recording with IP Cameras	
USB Printer Server	
Specification	
Specification	
1-bay Models	
2-bay Models	
4-bay Models	
Limitations	
Appearance	
1-bay & 2-bay Disk Station	13
4-bay Cube Station	14
4-bay 1U Rack Station	16
LED Indication Descriptions Table	
1-bay & 2-bay Models	
4-bay Models	19
Managing Synology Server	20
Entering Web Management UI	
Using Setup Utility	
Accessing Web Management UI Manually	
Managing Synology Server	
Connecting from Two Different Network*	
Managing Volume*	23
Managing Volume*	
Repairing Volume by Hot Swapping*	
Joining Windows Domain*	
Resetting Administrator Password	
Reinstalling Synology Server	
Accessing Synology Server Data	26
Shared Folders	
System Built-in	
Administrator-Created	
Setting Access Control	
Setting Encoding	
Accessing Shared Folders	
From the same network	
From different network	
0	
Server Backup and PC Backup Solutions	
Local Backup	
Network Backup	
Backing up Personal Data Before starting	

	Minimum System Requirement	35
	Installing Synology Data Replicator 3	
	Using Synology Data Replicator 3	
	Backing up Synology Server Settings	
	Synology Server to PC Client	37
	Synology Server to another Synology Server	
Sh	aring USB Printer	. 38
	dua Fantanaa	00
ΕX	tra Features	
	Audio Station	
	iTunes Service	
	Multimedia Service	
	Download Station	
	Enabling Download Station	
	Installing Download Redirector	
	Web Station	
	Enabling Web Station and MySQL	
	Web Station's detail description	
	Photo Station 3	
	Enabling Photo Station 3	44
	Photo Station 3's detail description	
	Surveillance Station	
	Enabling Surveillance Station	45
	Surveillance Station's detailed description	
	USBCopy*	
	Setting USBCopy Target Location	
	Mail Notification	
	Firmware Update	. 48
E۷	panding Storage Capacity	10
_^	External HDD	
	External USB HDD	
	External SATA HDD*	
	Replacing Larger Internal HDD	
	Replacing Larger Internal HDD	50 50
	Basic and RAID 0* Volume	. 50 50
	RAID 1 and RAID 5 Volume*	
	Adding a HDD to a RAID 5 Volume*	
	Adding a Fibb to a NAID 3 volume	. 50
Tre	oubleshooting	. 51
	-	
Αŗ	pendix	. 52
•	Recommended Peripherals	
	Recommended NTP Server	

About this User's Guide

This user's guide covers all the functions of Synology NAS Server. Some of the functions may only be available on specific models. Please refer to product specification for further details.

Getting to know your Synology Server

Introduction

Congratulations on your purchase of Synology NAS Server ("Synology Server"). Synology Server is specially designed for the following purposes:

Storing and Sharing Files via Internet

Windows users and Mac users can easily share files within Intranet or through Internet. Unicode language support makes sharing different language files from Synology Server smoothly.

PC Data and Server Data Backup

Synology Server provides various backup solutions to back up PC data to Synology Server, back up Synology Server data to an external hard disk, or another Synology Server, or a rsync-compatible server.

Transferring Data via FTP

Synology Server provides FTP service with bandwidth restriction and anonymous login. To transfer data safely, "FTP over SSL" or "FTP over TLS" is also available on advanced models.

Managing Files through Web Browsers

File Station makes it possible for users to manage their files on the Synology Server easily through a web interface. Simply point the web browser to Synology File Station, and you have one more access to your files.

Sharing Photos, Videos and Blogs with Photo Station 3

Photo Station 3 gives you the freedom to share photos and videos over the Internet without complicated upload steps. Album control ensures the content is shared with the right persons. Visitors can even leave comments for your photos. Furthermore, a brand new blogging system is integrated for you to easily share your living and thoughts over the Internet.

Enjoying Entertainment Data Stored on Server

"Download Station" allows you to download files from Internet through BitTorrent, FTP, and HTTP to Synology Server. Moreover, if you have UPnP DMA connected in the LAN, you can enable "Multimedia Service" and share the multimedia files on Synology server. If you just want to share and play mp3 files stored on Synology Server, you can enable "iTunes Service", and enjoy the music through any iTunes clients on LAN.

The build-in "Copy" button on the device allows instant copy of photos from the camera to Synology Server.

Enjoying Music instantly with USB Speakers

"Audio Station" allows users to collate music stored in Synology Server into playlist, play music stored on the Synology Server or from the connected iPod, or even stream internet Radio Stations. With USB speakers connected to the Synology Server, you're able to bathe in music at anytime you want.

Programming your Own Web Site

Personal or corporate website can be easily setup using "Web Station" function. By integrating with PHP and MySQL, user can also set up blog or even online shop.

Video Recording with IP Cameras

"Surveillance Station" allows you to manage, view, and record videos from multiple* IP cameras on the Internet, By accessing the Surveillance Station's web-based management interface, you can watch the real-time image the camera is monitoring, and record videos continuously as well as in the motion-detection mode.

USB Printer Server

You can share USB 2.0 Printer through Local Area Network.

^{*} Supported on specific models only. Please refer to the product

Specification

1-bay Models 2-bay Models 4-bay Models

1-bay Models

Item	DS107	DS107+	DS108j	
Internal HDD	3.5 SATA (II) x 1	3.5 SATA (II) x 1	3.5 SATA (II) x 1	
Max. Capacity	1 TB	1 TB	1 TB	
Hot Swappable HDD	No	No	No	
External HDD Interface	USB x 3 eSATA x 1	USB x 3 eSATA x 1	USB x 3	
LAN Port	Gigabit X 1	Gigabit X 1	Gigabit X 1	
USBCopy	Yes	Yes	Yes	
System Fan	X 1 (50mmX50mm)	X 1 (50mmX50mm)	X 1 (50mmX50mm)	
Size (HxWxD) (mm)	160 X 63 X 218	160 X 63 X 218	160 X 63 X 218	
Weight	0.81Kg	0.81Kg	0.81Kg	
Supported Clients		ws 2000 Onward S X 10.3 Onward		
Max. User Accounts	128	128	128	
Max. Group Accounts	64	64	64	
Max. Shared Folder	100	100	100	
Max. Concurrent Connections	32	32	32	
Max. Supported IP Cameras	2	2	1	
File System	EXT3 • FAT (External Disk Only)NTFS (External Disk Read Only)		• ,	
Volume Type	Basic			
Agency Certifications		CC Class B · CE Cla II Class B · VCCI C		
HDD Hibernation	Yes	Yes	Yes	
Event Notification	Yes	Yes	Yes	
NTP	Yes	Yes	Yes	
FTP over SSL/TLS	Yes	Yes	Yes	
HTTPS Connection	Yes	Yes	Yes	
Windows ADS Domain	Yes	Yes	No	
Encrypted Network Backup	Yes	Yes	Yes	
Scheduled Power On/Off	No	No	Yes	
Language Localization	 English · German · French · Italian · Spanish Danish · Norwegian · Swedish · Dutch · Russian Japanese · Korean · Traditional Chinese Simplified Chinese 			
Power Consumption And Environment Requirements	 Line voltage: 90V to 230V AC Frequency: 50Hz to 60Hz Operating Temperature: 50 to 95° F (10 to 35° C) Storage Temperature: -40 to 185° F (-10 to 70° C) Relative Humidity: 5% to 95% RH Maximum Operating Altitude: 10,000 feet 			

Note: For the most recent product specification, please visit www.synology.com

2-bay Models

Item	DS207	DS207+		
Internal HDD	3.5 SATA (II) x 2	3.5 SATA (II) x 2		
Max. Capacity	2 TB	2 TB		
Hot Swappable HDD	No	No		
Firthermal LIDD Intentage	USB x 3	USB x 3		
External HDD Interface	USB X 3	eSATA x 1		
LAN Port	Gigabit X 1	Gigabit X 1		
USBCopy	Yes	Yes		
System Fan	X 1 (60mmX60mm)	X 1 (60mmX60mm)		
Size (HxWxD) (mm)	160 X 88 X 218	160 X 88 X 218		
Weight	0.98Kg	0.98Kg		
Supported Clients	Windows 200	00 Onward		
Supported Clients	Mac OS X 10	0.3 Onward		
Max. User Accounts	128	128		
Max. Group Accounts	64	64		
Max. Shared Folder	100	100		
Max. Concurrent Connections	32	32		
Max. Supported IP Cameras	2	5		
File System	 EXT3 • FAT (External Disk Only) 			
	NTFS (External Disk Read Only)			
Volume Type	• Basic • RAID 0 • RAID 1			
Agency Certifications	• FCC Class B • CE Class B	• FCC Class B		
HDD Hibernation	• BSMI Class B • VCCI Class B	• CE Class B		
Event Notification	Yes Yes	Yes Yes		
NTP	Yes	Yes		
FTP over SSL/TLS	Yes	Yes		
HTTPS Connection	Yes	Yes		
Windows ADS Domain	Yes	Yes		
Encrypted Network Backup	Yes	Yes		
Scheduled Power On/Off	No	No		
Language Localization	 English · German · French · Italian · Spanish Danish · Norwegian · Swedish · Dutch · Russian Japanese · Korean · Traditional Chinese Simplified Chinese 			
Power Consumption And Environment Requirements	 Line voltage: 90V to 230V AC Frequency: 50Hz to 60Hz Operating Temperature: 50 to 95° F (10 to 35° C) Storage Temperature: -40 to 185° F (-10 to 70° C) Relative Humidity: 5% to 95% RH Maximum Operating Altitude: 10,000 feet 			

Note: For the most recent product specification, please visit www.synology.com

4-bay Models

Item	CS407e/CS407	RS407	RS408	RS408-RP
Internal HDD	3.5 SATA (II) x 4	3.5 SATA (II) x 4	3.5 SATA (II) x 4	3.5 SATA (II) x 4
Max. Capacity	4 TB	4 TB	4 TB	4 TB
Hot Swappable HDD	No	Yes	Yes	Yes
External HDD Interface	USB x 2	USB x 2	USB x 2	USB x 2
LAN Port	Gigabit X 1	Gigabit X 1	Gigabit X2	Gigabit X2
USBCopy	No	No	No	No
Custom For	X 1	X 3	X 3	X 4
System Fan	(80mmX80mm)	(40mmX40mm)	(40mmX40mm)	(40mmX40mm)
Power Fan	No	No	X 1 (40mmX40mm)	X 2 (40mmX40mm)
Size (HxWxD) (mm)	168 X 184 X 230	44 X 430.5 X 457.5	44 X 430.5 X 457.5	44 X 430.5 X 570.5
Weight	2.23Kg	7.2Kg	7.1Kg	9.68Kg
Supported Clients		ws 2000 Onward S X 10.3 Onward	_	
Max. User Accounts	2,048	2,048	2,048	2,048
Max. Group Accounts	256	256	256	256
Max. Shared Folder	200	200	200	200
Max. Concurrent Connections	128	128	128	128
Max. Supported IP Cameras	2	5	10	10
File System	 EXT3 • FAT (External Disk Only) NTFS (External Disk Read Only) 			
Volume Type	• Basic • RAID 0 • RAID 1 • RAID 5			
Agency Certifications	 FCC Class B CE Class B BSMI Class B VCCI Class B VCCI Class B FCC Class A FCC Class A FCC Class A BSMI Class A VCCI Class A 			
HDD Hibernation	Yes	Yes	Yes	Yes
Event Notification	Yes	Yes	Yes	Yes
NTP	Yes	Yes	Yes	Yes
FTP over SSL/TLS	Yes	Yes	Yes	Yes
HTTPS Connection	Yes	Yes	Yes	Yes
Windows ADS Domain	Yes	Yes	Yes	Yes
Encrypted Network Backup	Yes	Yes	Yes	Yes
Scheduled Power On/Off	No	No	Yes	Yes
Language Localization	 English · German · French · Italian · Spanish · Danish · Norwegian Swedish · Dutch · Russian · Japanese · Korean · Traditional Chinese Simplified Chinese 			
Power Consumption And Environment Requirements	 Line voltage: 90V to 230V AC Frequency: 50Hz to 60Hz Operating Temperature: 50 to 95° F (10 to 35° C) Storage Temperature: -40 to 185° F (-10 to 70° C) Relative Humidity: 5% to 95% RH Maximum Operating Altitude: 10,000 feet 			

Note: For the most recent product specification, please visit www.synology.com

Limitations

- 1. Supports up to 1 USB printer.
- 2. USBCopy function only supports USB disks with FAT32 file system.
- 3. Some digital cameras are defined as a Still Image Device, such as Canon. For such devices, Synology Server only supports USB Copy function (No USB share function).
- 4. For Mac users, Synology Server supports only USB printers with PostScript.

Appearance

1-bay & 2-bay Disk Station

4-bay Cube Station

4-bay 1U Rack Station

1-bay & 2-bay Disk Station

Front View

Rear View

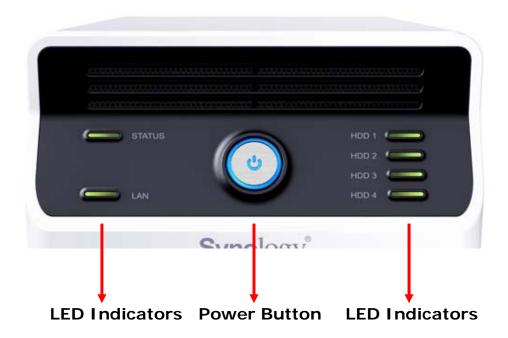


Article Name	Location	Description	
Power Button	Front Panel	The Power Button is used to turn the Synolog Server On or Off.	
		To turn Off Synology Server, press the Power Button and hold it until you hear a "beep" sound and the Power LED starts blinking.	
COPY Button	Front Panel	The COPY Button lights up when you connect a USB Device (for example: digital camera, USB flash disk). Pressing the button will copy the data from the connected USB device to the Synology Server's internal HDD.	

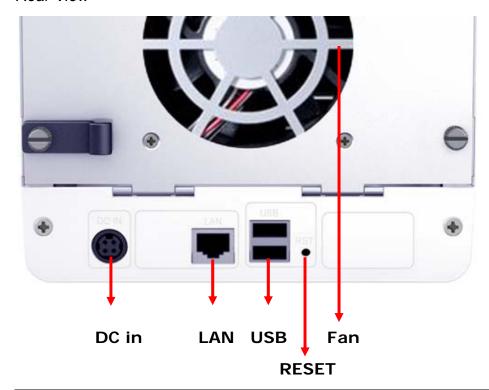
USB Port	Front & Back Panel	The Synology Server offers 3 USB ports for adding additional external hard drives, USB printers, or other USB devices. One at the front, and other two at the back.	
Smart Fan Ventilation	Back Panel	The fan is to exhaust waste heat out of Synology Server. It will start automatically when the server starts. If the fan is malfunctioning, system will "beep" every 1 second.	
eSATA Port	Front Panel	The eSATA port is for connecting with an external SATA HDD.	
RESET Button	Back Panel	To restore IP, DNS, passwords for the "admin" account to default value, and reset the "guest" account to the "enabled" status. (Please refer to "Resetting Administrator Password" chapter.)	
		To reinstall the Synology Server. (Please refer to "Reinstalling Synology Server" chapter.)	
LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology Server.	
DC IN 12V Port	Back Panel	The DC IN 12V Port is where you connect the AC Power Adapter.	

4-bay Cube Station

Front View



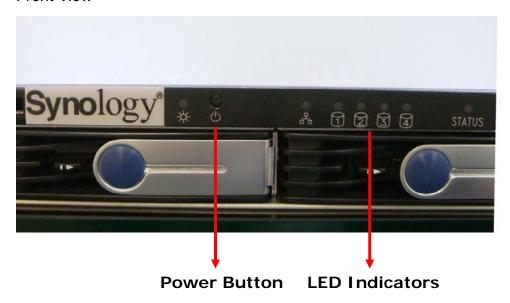
Rear View



Article Name	Location	Description	
Power Button	Front Panel	The Power Button is used to turn Synology Server On or Off.	
		To turn Off Synology Server, press the Power Button until you hear a "beep" and the Power LED begins blinking. The shutdown process will complete in 30 seconds.	
LED indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system.	
USB Port	Back Panel	Synology Server offers 2 USB ports for adding additional external hard drives, USB printers, or other USB devices.	
Fan Ventilation	Back Panel	The fan is to exhaust waste heat out of Synology Server. It will start automatically when the server starts. If the fan is malfunctioning, system will "beep" every 1 second.	
RESET Button	Back Panel	3. To restore IP, DNS, passwords for the "admin" account to default value, and reset the "guest" account to the "enabled" status. (Please refer to "Resetting Administrator Password" chapter.)	
		4. To reinstall the Synology Server. (Please refer to "Reinstalling Synology Server" chapter.)	
LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology Server.	
DC IN Port	Back Panel	The DC IN Port is where you connect the AC Power Adapter.	

4-bay 1U Rack Station

Front View



Rear View



Article Name	Location	Description	
Power Button	Back Panel	The Power Button is used to turn Synology Server On or Off.	
		To turn Off Synology Server, press the Power Button until you hear a "beep" and the Power LED begins blinking. The shutdown process will complete in 30 seconds.	
LED indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system.	
USB Port	Back Panel	Synology Server offers 2 USB ports for adding additional external hard drives or other USB devices.	
Fan	Back Panel	There are 3 fans on the back panel. The fans are used to exhaust waste heat out of Synology Server. The fans will start automatically when Synology Server starts. If the fan is malfunctioning, system will "beep" every 1 second.	

Console port	Back Panel	The console port is where you connect Synology Server directly to a computer.		
RESET Button	Back Panel	To restore IP, DNS, passwords for the "admin" account to default value, and reset the "guest" account to the "enabled" status. (Please refer to "Resetting Administrator Password" chapter.)		
		To reinstall the Synology Server. (Please refer to "Reinstalling Synology Server" chapter.)		
LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to RS407.		
Power Port	Back Panel	The power port is where you connect the AC power cord.		

LED Indication Descriptions Table

1-bay & 2-bay Models 4-bay Models

1-bay & 2-bay Models

LED Indication	Color	Status	Description
	Green	Solid	Volume normal
STATUS	Orange	Solid	Available volume space < 1GB System firmware not installed
SIAIOS	Orange	Blinking	Volume degraded or crashed No volume
	Green/Orange	Blinking	Checking memory
		Solid	Network is up
LAN	Green	Blinking	Network is active
		Off	Network is down
	Green Orange	Solid	Disk ready
DISK / eSATA		Blinking	Disk is being accessed
DISK / ESATA		Off	No internal disk
		Blinking	Cannot Read/Write
		Solid	USB disk detected
USBCopy	Green	Blinking	Copying data
		Off	No USB disk attached
		Solid	System ready
Power	Blue	Blinking	Booting up Shutting down
		Off	Power off

4-bay Models

LED Indication	Color	Status	Description
	Green	Solid	Volume normal
STATUS	Orange	Solid	Available volume space < 1GB System firmware not installed
		Blinking	Volume degraded or crashed No volume
	Green/Orange	Blinking	Checking memory
		Solid	Network is up
LAN	Green	Blinking	Network is active
		Off	Network is down
	Green	Solid	Disk ready
DISK 1~4		Blinking	Disk is being accessed
DISK 1~4		Off	No internal disk
	Orange	Blinking	Cannot Read/Write
		Solid	System ready
Power	Blue	Blinking	Booting up Shutting down
		Off	Power off
RPS-STATUS*	Green	Solid	Two redundant power supply are working
		Blinking	1 RPS not working

^{*} RS408-RP only

Managing Synology Server

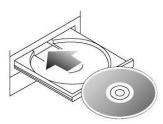
Entering Web Management UI

System administrator can manage the Synology Server by entering the web management UI. There are two options for you to enter the management UI:

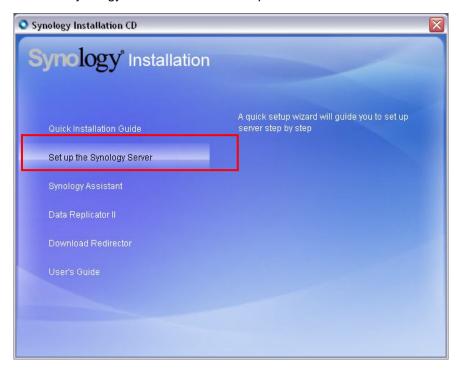
Using Setup Utility

[Windows User]

Insert the Installation CD into CD/DVD-Rom Drive.



2. Choose "Synology Assistant" at the Autoup Menu.

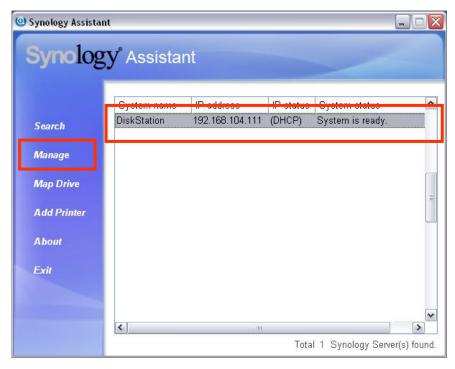


3. Follow the steps to complete installation.

4. After installation, double click on the desktop icon to execute the program.



5. Choose the server you want to manage and click "Manage" to enter the Web Management UI.



6. Click on "Management". Choose "login as system administrator (admin)", input password and click "Enter".



[Mac OSX User]

- 1. Insert the Installation CD into CD/DVD-Rom Drive.
- 2. Double-Click CD-Rom Drive thumbnail.

- 3. Double-Click "MacOSX" thumbnail.
- 4. Double-Click "Synology Assistant-SYNOLOGY.dmg" thumbnail.
- 5. Double-Click "Synology Assistant" thumbnail to run setup wizard.
- 6. Choose a Synology Server and click "Manage" to enter the Web Management UI.
- 7. Choose "login as system administrator (admin)", input password and click "Enter".

Please note:

To ensure flawless management process, please use the following browsers:

Browser	Version
Internet Explorer	6.0 and onward
Firefox	2.0
Safari (Mac only)	3.0 and onward

Accessing Web Management UI Manually

- 1. Open a web browser window.
- 2. At the address line input "http://Synology_Server_Name:5000/", where "Synology_Server_Name" should be replaced with the name you set up for Synology Server during the setup process. If you choose "One-step Setup" during the setup process, the "Synology_Server_Name" will be "DiskStation", "CubeStation", or "RackStation".



- 3. Press "Enter" key on the keyboard.
- 4. Choose "login as system administrator (admin)".
- 5. Input password for admin.
- 6. Click "Enter" to access Web Management UI.

Managing Synology Server

You can start managing Synology Server in Web Management UI. Synology Server Web Management UI provides distinctive and straight forward design for easy management. You will find an online "Help" button at the upper right corner of every page of the Web Management UI. Click on the "Help" button for further information whenever you encounter any problem.

Connecting from Two Different Network*

Synology Server supports dual LAN that allows you to connect to the network with two LAN cables at the same time, or to set the Synology Server using two IP addresses under different subnets. Please go to the "System > Network" page of the Web Management UI for setup.

Managing Volume*

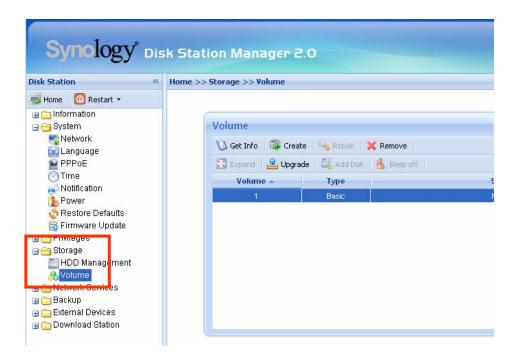
You can combine hard disks on Synology Server to create different types of volumes, and find the data protection level of your need. The Synology Server provides you various volume types as follows:

Volume Type	Amount of composed hard disk	Functionality
Basic	1	A Basic (non-RAID) volume must be created with one hard disk as an independent unit. When creating a Basic volume, you can select only one hard disk at a time.
RAID 0	2~4	Combining multiple disks to build a volume, RAID 0 offers Striping, a process of dividing data into blocks and spreading the data blocks across several hard disks, but without safety measures.
RAID 1	2	One of the composed disks is used for backup purposes; the content of disk A is mirrored to disk B to assure data integrity. Therefore the actual available storage capacity equals to only the capacity of one hard disk.
RAID 5	3~4	This configuration includes a backup option. It uses parity mode to store redundant data on space equal to the size of one disk for later data recovery. Therefore the actual available storage capacity equals to the capacity of n-1 hard disks.

Managing Volume*

You can create, remove, and repair volume. For the detailed description, please refer to Help on "Storage > Volume" page.

^{*} Supported on specific models only. Please refer to the product



Repairing Volume by Hot Swapping*

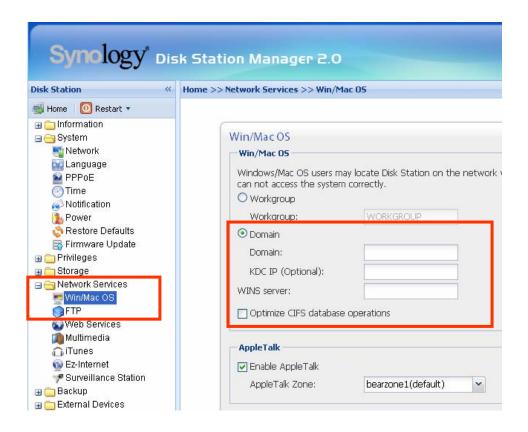
Synology Server provides hot swapping function. When you need to replace crashed disks in Synology Server, you don't need to turn off the server. You can refer to the disk status on the management UI, or the front panel LED indicators to identify crashed disks, and directly pull out the hard disk tray to replace the crashed disk with a new one. Then follow the steps on management UI to repair the degraded volume right after replacing the hard disk.

Joining Windows Domain*

You can add Synology Server to Windows domain and let the domain users access the Synology Server. Synology Server supports Active Directory Service (ADS) domain. After adding the Synology Server to a Windows domain, you can go to the "Privileges > Shared Folder" page to assign the domain users' privileges of shared folders on the server. When domain users access the Synology Server, they only need to enter their domain account and password, for authentication.

For the detailed description, please refer to Help on "Network Services > Win/Mac OS" page.

^{*} Supported on specific models only. Please refer to the product



Resetting Administrator Password

Pressing the "RESET" button and hold it for about 4 seconds before you heard a beep sound will restore IP, DNS, passwords for the "admin" account to default value, and reset the "guest" account to the "enabled" status. The default password of the "admin" account is blank.

Reinstalling Synology Server

If for any reason you have to reinstall the Synology Server, you can press the RESET button on the back panel twice, and the Synology Server will be reinstalled. The data saved on the Synology Server will not be erased during the reinstallation. However, for security's reason, we strongly recommend that you back up the data on the server.

To reinstall the server:

- 1. Press the "RESET" button and hold it for about 4 seconds. Release the button when the Synology Server emits a beep sound.
- 2. Within the next 10 seconds, press the "RESET" button and hold it for about 4 seconds again. Release the button when the Synology Server emits a beep sound.
- 3. Run Synology Assistant, and set up the Synology Server again.

Note: The version of Synology Assistant should be identical to the version of the firmware patch file you install.

Accessing Synology Server Data

File sharing service is one of the Synology Server's major functions. Administrator can setup access rights for users either with Windows or Mac to access shared folders.

Shared Folders

System Built-in

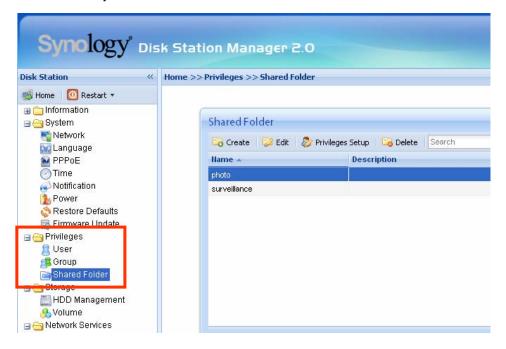
Below are system built-in shared folders.

Name	Description
public	The "public" shared folder will be created automatically after the first-time setup on Synology 1-bay models.
web	The shared folder "web" is for storing web pages. When Web Station is enabled, the "web" shared folder will be created automatically. You can upload web pages to the "web" shared folder to build your website. For detailed information, please refer to "Extra Features > Web Station" section.
photo	The shared folder "photo" is for storing image and video files you want to share on Photo Station 3. It will be created automatically when Photo Station or UPnP Support is enabled. Image files in "photo" shared folder can be browsed when Photo Station or UPnP Service is enabled. For detailed information, please refer to descriptions of Photo Station 3 and Multimedia Service.
music	You can store music files in the "music" shared folder. When iTunes Service is enabled, you can browse the music files on iTunes. For more details on the iTunes Service, refer to the "Extra Features > iTunes Service" section. In addition, when UPnP Support is enabled, you can be browsed through UPnP DMA. For detailed information, please refer to descriptions of Multimedia Service.
video	Video files in the "video" shared folder can be browsed through UPnP DMA when Multimedia Service is enabled. For detailed information, please refer to descriptions of Multimedia Service.
surveillance	The shared folder "surveillance" is for storing the video files recorded by Surveillance Station. It will be created automatically when Surveillance Station is enabled. This shared folder is read-only and can only be accessed with the "admin" account. For more details, please refer to the "Extra Features > Surveillance Station" section.

Name	Description
usbbackup	After you connect external USB HDD to Synology Server's USB port and format it for the backup purpose, system will automatically create a shared folder called "usbbackup". Refer to "Server Backup and PC Backup Solutions> Local Backup" section for details.
satabackup	After you connect external SATA HDD to Synology Server's eSATA port and format it for the backup purpose, system will automatically create a shared folder called "satabackup". Refer to "Server Backup and PC Backup Solutions> Local Backup" section for details.
NetBackup	The shared folder "NetBackup" is for saving backed up files using Network Backup. Please refer to the "Backup > Network Backup" page of the Web Management UI.
usbshare	After you connect external USB HDD to Synology Server's USB port, system will automatically create a shared folder with the prefix "usbshare". Refer to "Expanding Storage Capacity> External HDD" section for details.
satashare	After you connect external SATA HDD to Synology Server's eSATA port, system will automatically create a shared folder with the prefix "satashare". Refer to "Expanding Storage Capacity> External HDD" section for details.

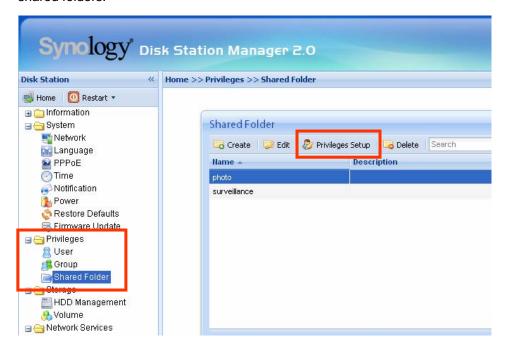
Administrator-Created

Apart from the above system built-in shared folders, Administrator can create shared folders on the page "Privileges > Shared Folder" of the Web Management UI. Shared folders created by Administrator can be deleted or renamed at any time.



Setting Access Control

For security reasons, Administrator can go to the "Privileges > Shared Folder" page of the Web Management UI and assign user privileges of accessing the shared folders.



Setting Encoding

Synology Server uses Unicode to manage files. The benefit of using Unicode is to avoid file inaccessibility between users who use different languages. However, for users without Unicode support on their PC, Administrator can set the encoding method of the files to overcome the problem. Please go to the page "System > Language" of the Web Management UI for setup.



Accessing Shared Folders

From the same network

Windows User

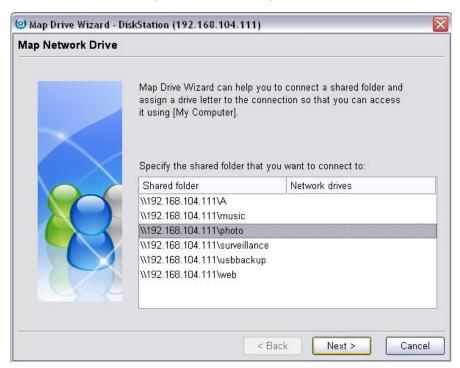
Windows users can access the Synology Server's shared folders by using Setup Utility to map Network Drive

Synology Assistant, which is included in the Installation CD, not only helps Administrator manage Synology Server, but also provides users with the following steps to map Network Drive:

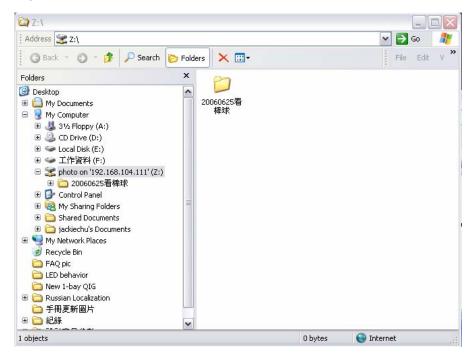
- 1. Run Synology Assistant.
- 2. Choose the server to map network drive.
- 3. Click on the "Map Drive" button on the left.



4. Follow the on-screen steps to finish the setup.



5. Upon completion, user can access the mapped shared folder in Windows Explorer.



Mac User

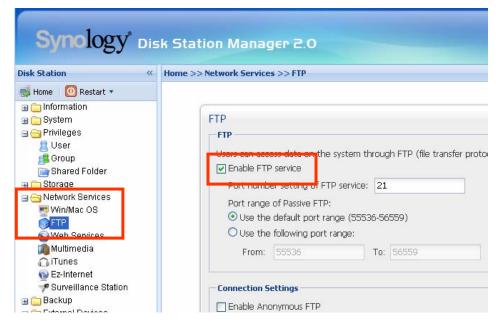
Mac user can use "Go > Connect to Server" to choose a Synology Server and access the shared folder on the server.



From different network

Through FTP

Synology server provides FTP service. Administrator can enable FTP service on the "Network Service > FTP" page of the Web Management UI. Windows users and Mac users can thus access data in Synology Server by FTP Protocol. Synology server supports Secure FTP by default when administrator enables the FTP service. To prevent data from being access while transferring, users can also use "FTP over SSL" or "FTP over TLS" on the FTP client to make the data more secure. For the detailed information of using FTP and its limitation, please refer to Help on "Network Services > FTP" page.



Please note:

- 1. Administrator has the option to adjust FTP Bandwidth or enable Anonymous login.
- 2. FTP Service does not support Unicode. Before enabling FTP Service, please go to "System > Language" page and setup codepage according to user's client PC.

Through File Station

Synology File Station is a web-based file management tool. In the user interface of the File Station, users can upload, download, copy, move, and delete files and folders. For detailed function descriptions, please refer to the online Help in the File Station user interface.

Server Backup and PC Backup Solutions

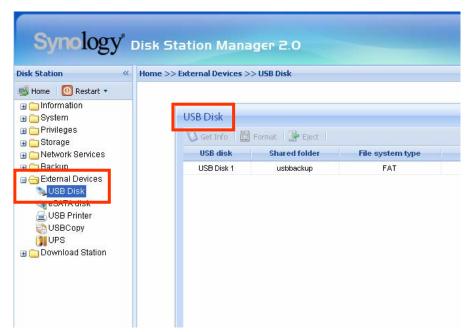
Synology Server provides complete backup solutions:

- 1. By using "Local Backup", Administrator can back up Synology Server's data to external USB or SATA HDD.
- 2. By using "Network Backup", Administrator can back up Synology Server's data to another Synology Server or an rsync compatible server.
- 3. By installing Synology Data Replicator II software on the client PC, Windows users can back up data from PC to Synology Server.
- 4. Administrator can also back up Synology Server's User, Group, and Shared folders (see details below).

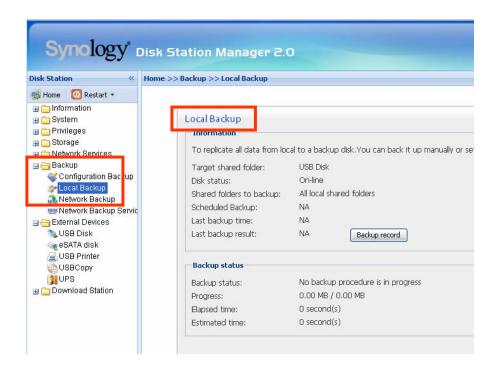
Local Backup

Please use the Backup Wizard or follow the below steps to perform Local Backup:

- 1. Connect an external USB HDD or SATA HDD to the corresponding port on Synology Server.
- 2. Go to the page "External Devices > USB Disk" or "External Devices > eSATA Disk" of the Web Management UI, and format the HDD as "backup purpose".

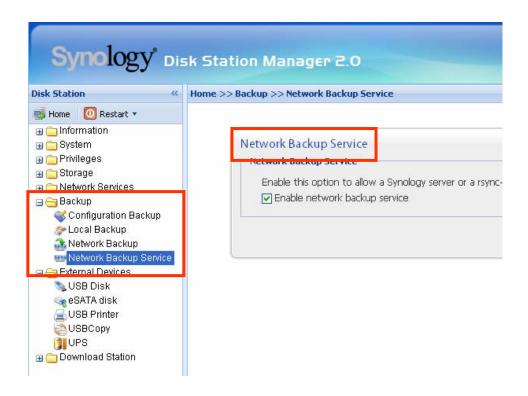


3. Go to the page "Backup > Local Backup" to set up your backup task.



Network Backup

Network Backup allows Administrator to back up Synology Server's data to another Synology Server or an rsync-compatible server through network. Please ensure Network Backup is enabled on the target server before performing the task. Go to the Help on "Backup > Network Backup Service" page for detail information.



Backing up Personal Data

Windows users can install "Synology Data Replicator 3" backup software which can be found on the installation CD. They can back up client PC data to Synology Server to maintain a good copy of data whenever needed.

Using Synology Data Replicator 3, users can:

- 1. Monitor selected folders on client PC and perform real-time backup when any modification to the file is made.
- 2. Adjust backup versions and restore points.
- 3. Restore backup data on Synology Server to client PC at user's preference.

Before starting

Before using Synology Data Replicator 3, please ensure:

- Client PC and Synology Server uses the same encoding for backup to perform adequately.
- Synology Data Replicator 3 is the next generation of Synology Data Replicator. It can only restore backup data on Synology Server generated by itself. If users have backed up data on Synology Server using Synology Data Replicator, we recommend restoring data on Synology Server to PC first before using Synology Data Replicator 3.

Minimum System Requirement

- 1. Free HDD Space: 5MB
- 2. Operating System: Windows 2000 and onward
- 3. Best Screen Resolution: 1024*768 and above
- 4. Microsoft Networking over TCP/IP enabled and has network connection with Synology Server.

Installing Synology Data Replicator 3

Insert Installation CD into Windows user CD/DVD-Rom drive. Click on "Synology Data Replicator 3", and follow on-screen instructions.



Using Synology Data Replicator 3

After installation, double click on the software icon to execute the program. Click on "Help" for detail description.

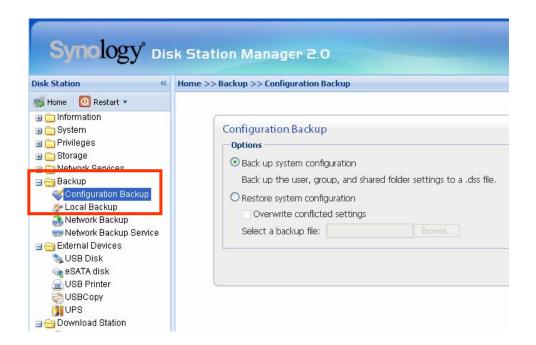


Backing up Synology Server Settings

There are two options for you to back up Synology Server's "User", "Group", "Shared Folder" settings for easy maintenance and restoration.

Synology Server to PC Client

Go to the page "Backup > Configuration Backup" of the Web Management UI to back up settings from Synology Server to PC Client.

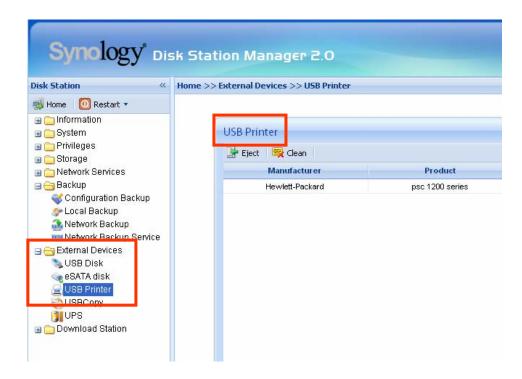


Synology Server to another Synology Server

The data backed up to another Synology Server or an rsync compatible server using "Network Backup" automatically includes the "User", "Group", "Shared Folder" settings. When you recover the data, you can choose if you want to recover these settings.

Sharing USB Printer

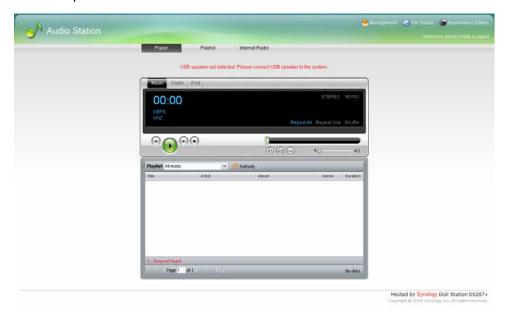
Synology Server helps users to share the USB Printer. Please refer to Help on the "External Devices > USB Printer" page of the Web Management UI for the detailed settings on different platforms.



Extra Features

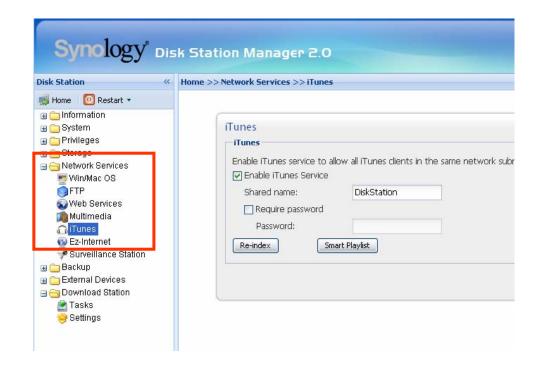
Audio Station

By connecting a set of verified USB speakers and the Synology Remote receptor to the USB ports on the Synology Server, users will be able to enjoy the music stored on the Synology Server with the music player in the Audio Station web interface, or by the direction-free remote control. Besides music on the Synology Server, users can also listen to Internet radio stations, or play music from the connected iPod. For detailed function descriptions, please refer to the online Help in the Audio Station web interface.



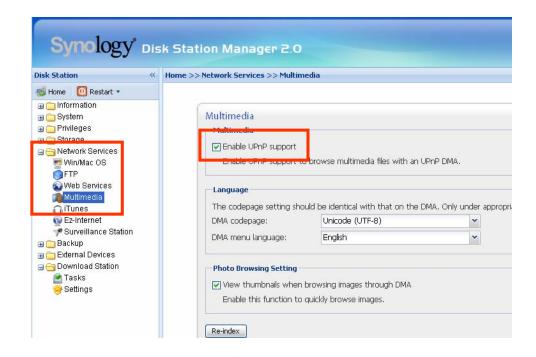
iTunes Service

When "iTunes Service" is enabled, users can play music files stored on Synology Server with any iTunes clients on the same subnet. For the detailed information and its limitation, please refer to Help on "Network Services > iTunes" page of the Web Management UI.



Multimedia Service

When "UPnP Service" is enabled, users who have UPnP DMA (Digital Media Adapter) can browse multimedia files on Synology server. Please go to "Network Services > Multimedia" page for further setup.



Download Station

Synology server can download files from Internet through BitTorrent, FTP, and HTTP. PC users and Mac users can either install Download Redirector or go to the "Download Station" section of the Web Management UI to add download tasks and manage the download queue.

Before start adding download tasks, you should enable Download Station on the server and install Download Redirector on PC or Mac.

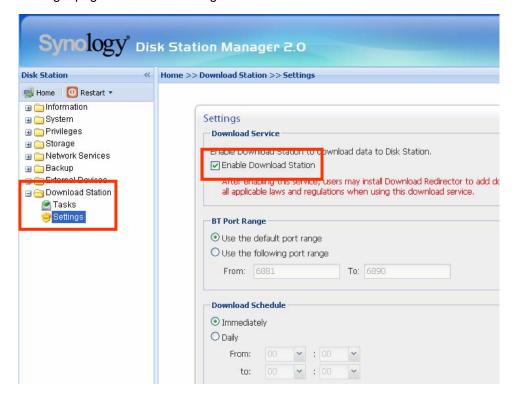
Enabling Download Station

Go to the "Download Station> Settings" page.

Installing Download Redirector

Insert Installation CD into the CD/DVD-Rom drive. Click on "Download Redirector", and follow on-screen instructions to complete installation.

For the detailed description of Download Redirector, please refer to Help on Download Redirector program window, or hit Help on "Download Station> Settings" page of the Web Management UI.



Web Station

Personal or corporate website can be easily setup using "Web Station." By integrating with PHP and MySQL, users can also setup online shop. PHP support is turned on by default, MySQL requires manually enabling.

Enabling Web Station and MySQL

Go to the "Network Services > Web Services" page.

Web Station's detail description

Please click on "Read Tutorial" link next to "Enable Web Station".

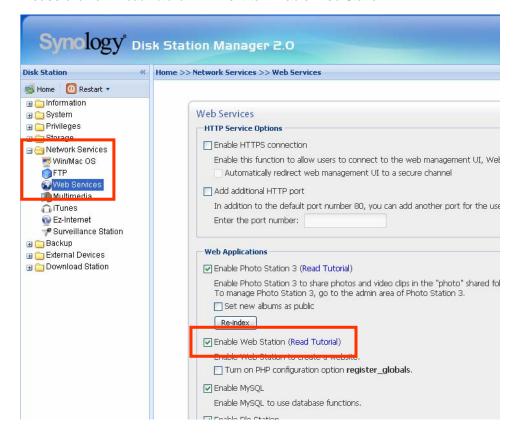


Photo Station 3

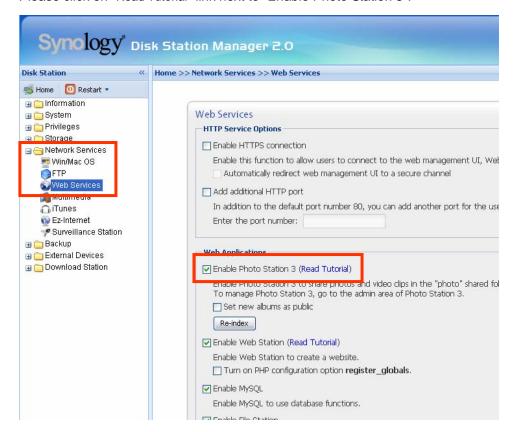
"Photo Station 3" is the new online album function integrating a blogging system. After uploading the folder which contains photos and videos to the "photo" shared folder, Photo Station 3 will start to create thumbnails automatically. Administrator can then sign in to Photo Station 3 to manage the album and create blogs.

Enabling Photo Station 3

Go to the "Network Services > Web Services" page.

Photo Station 3's detail description

Please click on "Read Tutorial" link next to "Enable Photo Station 3".



Surveillance Station

By using "Surveillance Station", you can monitor the live image of various IP cameras attached on the network, flexibly control the video recording options and record the videos.

The supported camera number varies from different models for the best performance. For the supported camera number, please refer to the product specification table.

Enabling Surveillance Station

Go to the "Network Services > Surveillance Station" page.



Surveillance Station's detailed description

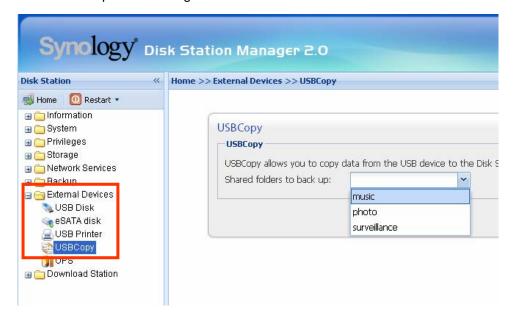
For detailed function descriptions, please click Help on the Surveillance Station Web Management UI.

USBCopy*

When a USB Device is connected to the USB port at the front panel, by pressing the "COPY" button all the data in the USB Device will be copied to Synology Server's internal HDD.

Setting USBCopy Target Location

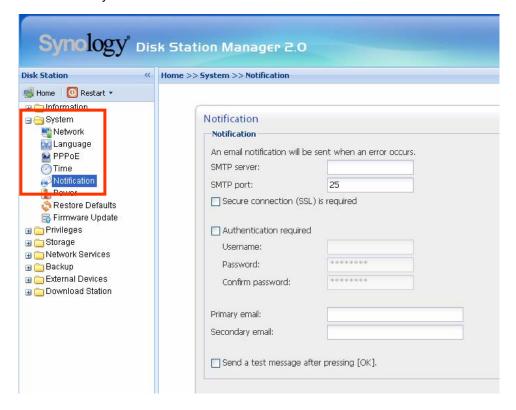
You can setup USBCopy target location on the "External Devices > USBCopy" page of the Web Management UI. When pressing the "Copy" button from now on, data will be copied to the target location.



^{*} Supported on specific models only. Please refer to the product

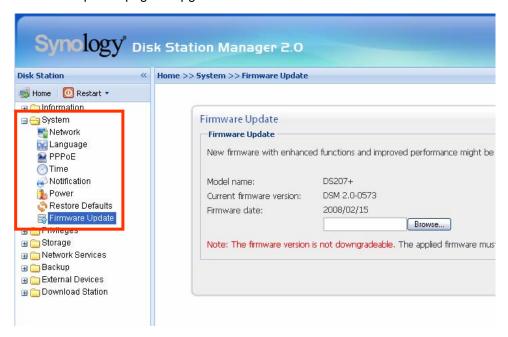
Mail Notification

Administrator can enter email address on the page "System > Notification". Synology Server will send email to the address whenever an important event occurs to notify Administrator.



Firmware Update

To keep your Synology Server up to date, Administrator can go to "System > Firmware Update" page to upgrade firmware.



Note: Normally, upgrading the firmware of the Synology server will not affect data on the Synology server. However, to ensure data security, it is recommended that you back up your data before update.

Expanding Storage Capacity

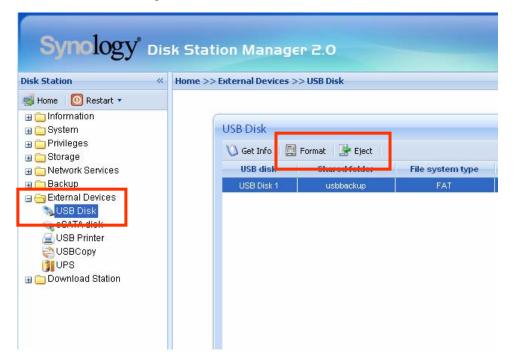
Administrator can expand the storage capacity by connecting external hard disks, replacing the internal hard disk with a larger one, or adding a hard disk to the volume.

External HDD

External USB HDD

When connecting an external USB HDD to Synology Server's USB port, "usbshare1" shared folder will be created automatically. Upon disconnecting external USB HDD, the shared folder will be removed. For more than 1 external USB HDD is connected, "usbshare2", "usbshare3" will be created accordingly.

To Eject or Format external USB HDD, go to the page "External Devices > USB Disk" of the Web Management UI.



External SATA HDD*

When connecting an external SATA HDD to Synology Server's eSATA port, "satashare" shared folder will be created automatically. Upon disconnecting External SATA HDD, shared folder will be removed.

To Eject or Format external SATA HDD, go to the page "External Devices > eSATA Disk" of the Web Management UI.

^{*} Supported on specific models only. Please refer to the product

Replacing Larger Internal HDD

When the internal HDD storage is run out, Administrator can follow the steps to replace a larger HDD and keep using the original data:

Basic and RAID 0* Volume

- 1. Replace the original internal HDD with a larger one.
- 2. Connect the original HDD to the USB/eSATA port.
- 3. Copy the data from the original HDD to the new HDD.
- 4. Remove the original HDD.

RAID 1 and RAID 5 Volume*

- 1. Replace the smallest hard disk of the volume with a larger one.
- 2. After system has detected the new hard disk, click "Expand" on the "Storage > Volume" page of the Web management UI.
- 3. Repeat steps above until you finish replacing all hard disks you want to change.

Adding a HDD to a RAID 5 Volume*

You can expand the storage capacity of the RAID 5 volume by adding a spare HDD to the RAID 5 volume., Please refer to the online Help on the "Storage > Volume" page of the Web Management UI for detailed instructions.

^{*} Supported on specific models only. Please refer to the product

Troubleshooting

For any questions about managing your Synology Server, please refer to the "Help" button at every page of the Web Management UI. For any questions other than that, please visit Synology Inc. website (www.synology.com) for further assistant.

Appendix

Recommended Peripherals

For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit www.synology.com.

Recommended NTP Server

The main purpose of Network Time Protocol (NTP) is for synchronizing clocks of computer system over data network. We have provided a few recommended NTP servers. For more information about NTP Server, please visit http://www.eecis.udel.edu/~mills/ntp/servers.html

Below are few recommended NTP server:

- 1. time.apple.com
- 2. time.asia.apple.com
- 3. time.euro.apple.com
- 4. time.nist.gov
- 5. time.windows.com

For more information, please refer to: http://ntp.isc.org/bin/view/Servers/WebHome

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com