

Synology 407 Series Server

User's Guide



Syno407Series_UG_20070808_enu

(Based on DS2.0 Ver. 2.0501)

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 © 2004-2007 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 one year 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	7
Introduction	7
Storing and Sharing Files via Internet	7
PC Data and Server Data Backup	7
Transferring Data via FTP	7
Managing Files through Web Browsers	7
Sharing Photos and Videos with Photo Station 2 + video	7
Enjoying Entertainment Data Stored on Server	7
Enjoying Music instantly with USB Speakers	8
Programming your Own Web Site	8
USB Printer Server.....	8
Specification	8
Limitations	9
Appearance.....	10
CS407/CS407e.....	10
RS407	12
LED Indication Descriptions Table	13
Managing Synology Server	14
Entering Web Management UI.....	14
Using Setup Utility	14
Accessing Web Management UI Manually	16
Managing Synology Server.....	17
Managing Volume	17
Managing Volume.....	17
Repairing Volume by Hot Swapping	18
Joining Windows Domain.....	18
Assigning Access Right for Domain Users	19
Resetting Administrator Password.....	20
Reinstalling Synology Server	20
Accessing Synology Server Data	21
Shared Folders.....	21
System Built-in	21
Administrator-Created.....	21
Setting Access Control	22
Setting Encoding.....	23
Accessing Shared Folders	24
Windows User.....	24
Mac User.....	26
Through FTP	26
Through File Station	27
Server Backup and PC Backup Solutions	28
Local Backup.....	28
Network Backup	29
Backup Personal Data	30
Before starting.....	30
Minimum System Requirement	30
Installing Synology Data Replicator II.....	30
Using Synology Data Replicator II	31
Backing up Synology Server Settings.....	31
Synology Server to PC Client	31
Synology Server to another Synology Server	32
Sharing USB Printer	33
Extra Features	34
Audio Station	34
iTunes Service.....	35
Multimedia Service.....	36

Download Station	37
Enabling Download Station	37
Installing Download Redirector.....	37
Web Station	38
Enabling Web Station and MySQL.....	38
Web Station's detail description.....	38
Photo Station 2 + video	39
Enabling Photo Station 2 + video	39
Photo Station 2 + video's detail description	39
Mail Notification.....	40
Firmware Update.....	41
Expanding HDD Capacity	42
External USB HDD.....	42
Replacing Larger Internal HDD	42
RAID 1 and RAID 5 Volume.....	42
Non-RAID and RAID 0 Volume	43
Troubleshooting	44
Appendix.....	45
Recommended Peripherals	45
Recommended NTP Server.....	45

About this User's Guide

This user's guide covers all the functions of Synology 407 series server. Some of the functions may only be available on specific models.

Getting to know your Synology Server

Introduction

Congratulations on your purchase of Synology 407 series server (“Synology Server”). Synology Server is specially designed for SMB & Enterprise users with multiple functions:

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 Synology Server data or back up PC data to Synology Server and 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 and Videos with Photo Station 2 + video

“Photo Station 2 + video” provides intuitive user interface to share your photos and videos online in a snap.

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.

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.

USB Printer Server

You can share USB 2.0 Printer through Local Area Network.

Specification

Item	CS407e	CS407	RS407
Hard Disk Interface	SATA	SATA	SATA
USB 2.0 Ports	× 2	× 2	× 2
LAN Port	RJ-45 10/100/1000Mbps	RJ-45 10/100/1000Mbps	RJ-45 10/100/1000Mbps
Windows User	Windows 98 onward	Windows 98 onward	Windows 98 onward
Mac User	Mac OS 9 onward	Mac OS 9 onward	Mac OS 9 onward
Maximum User Accounts	1,024	1,024	1,024
Maximum Group Accounts	128	128	128
Maximum Shared Folder	100	100	100
Maximum Concurrent Connections	64	64	64
NTP	Yes	Yes	Yes
FTP	Yes(+SSL/TLS)	Yes (+SSL/TLS)	Yes (+SSL/TLS)
Language Localization	English, French, German, Korean, Italian, Spanish, Danish, Norwegian, Swedish, Traditional Chinese,	English, French, German, Korean, Italian, Spanish, Danish, Norwegian, Swedish, Traditional Chinese,	English, French, German, Japanese, Korean, Italian, Spanish, Danish, Norwegian, Swedish, Traditional

Item	CS407e	CS407	RS407
	Simplified Chinese	Simplified Chinese	Chinese, Simplified Chinese
HDD Hibernation	Yes	Yes	Yes
Event Notification	Yes	Yes	Yes
Agency Certifications	FCC Class B 、 CE 、 BSMI	FCC Class B 、 CE 、 BSMI	FCC Class B 、 CE 、 VCCI Class A
Dimension	23.0cm x 16.8cm x 18.4cm	23.0cm x 16.8cm x 18.4cm	45.75 cm x 43.05 cm x 4.4 cm
Weight	2.23kg (excluding HDD)	2.23kg (excluding HDD)	7.2kg (excluding HDD)
Power Consumption And Environment Requirements	<u>Line voltage</u> 100V to 240V AC <u>Frequency</u> 50Hz to 60Hz <u>Operating Temperature</u> 50 to 95° F (10 to 35° C) <u>Storage Temperature</u> -40 to 185° F (-10 to 70° C) <u>Relative Humidity</u> 5% to 95% RH <u>Maximum Operating Altitude</u> 10,000 feet	<u>Line voltage</u> 100V to 240V AC <u>Frequency</u> 50Hz to 60Hz <u>Operating Temperature</u> 50 to 95° F (10 to 35° C) <u>Storage Temperature</u> -40 to 185° F (-10 to 70° C) <u>Relative Humidity</u> 5% to 95% RH <u>Maximum Operating Altitude</u> 10,000 feet	<u>Line voltage</u> 100V to 240V AC <u>Frequency</u> 50Hz to 60Hz <u>Operating Temperature</u> 50 to 95° F (10 to 35° C) <u>Storage Temperature</u> -40 to 185° F (-10 to 70° C) <u>Relative Humidity</u> 5% to 95% RH <u>Maximum Operating Altitude</u> 10,000 feet

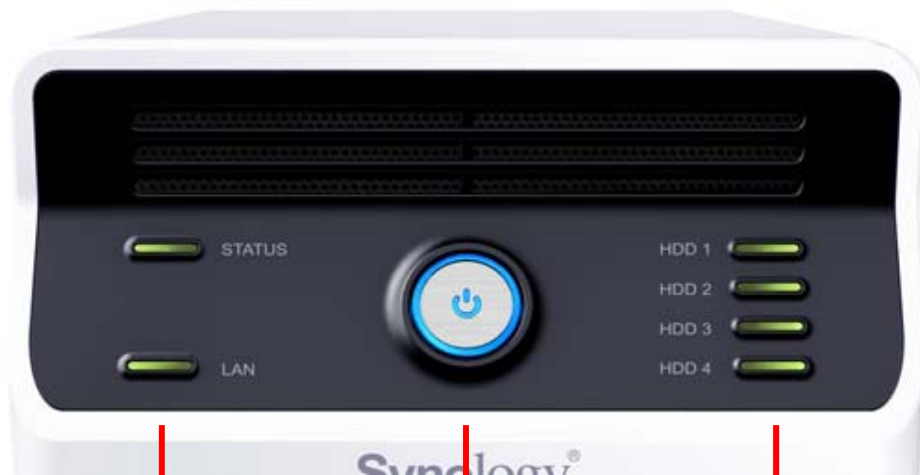
Limitations

1. Supports up to 1 USB printer.
2. Supports up to 2 USB disks.
3. For Mac users, Synology Server supports only USB printers with PostScript.

Appearance

CS407/CS407e

Front View



LED Indicators Power Button LED Indicators

Rear View

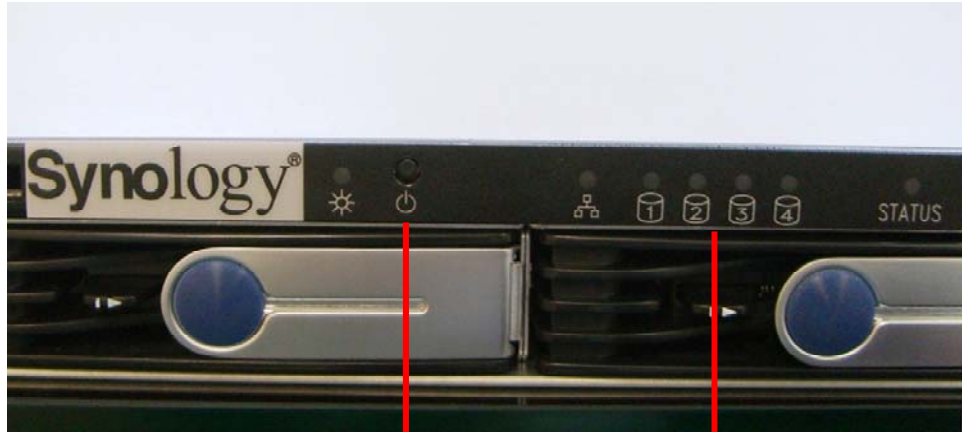


DC in LAN USB Fan
RESET

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	Front 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	<ol style="list-style-type: none"> 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 Port	Back Panel	The DC IN Port is where you connect the AC Power Adapter.

RS407

Front View



Power Button LED Indicators

Rear View



Power Fan LAN USB Console

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 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	<ol style="list-style-type: none"> 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

LED Indication	Color	Status	Description
Status	Green/Orange	Solid Green Light	Volume normal
		Solid Orange Light	Available volume space < 1GB
		Blinking Orange Light	<ul style="list-style-type: none"> Volume degraded or crashed No volume
		Blinking Orange and Green	Checking memory
LAN	Green	Solid	Network is up
		Blinking	Network is active
		Light Off	Network is down
HDD	Green	Solid	Disk ready
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Blinking	Cannot Read/Write
Power	Blue(CS407 Series) / Green (RS407)	Solid	System ready
		Blinking	<ul style="list-style-type: none"> System is booting System is shutting down
		Off	Power off

Managing Synology Server

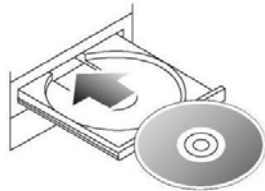
Entering Web Management UI

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

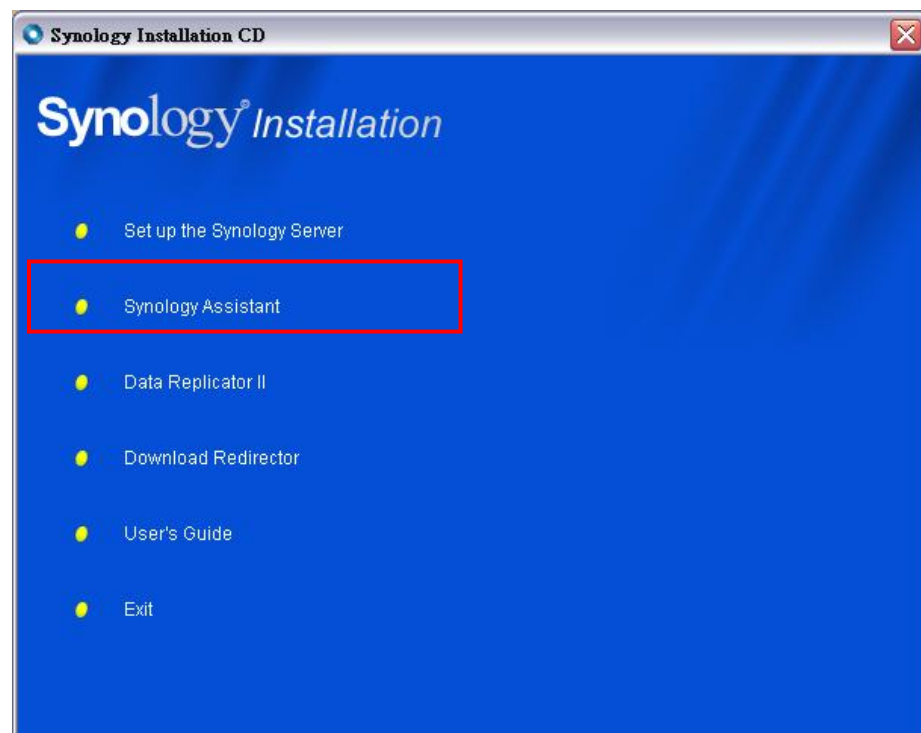
Using Setup Utility

[Windows User]

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



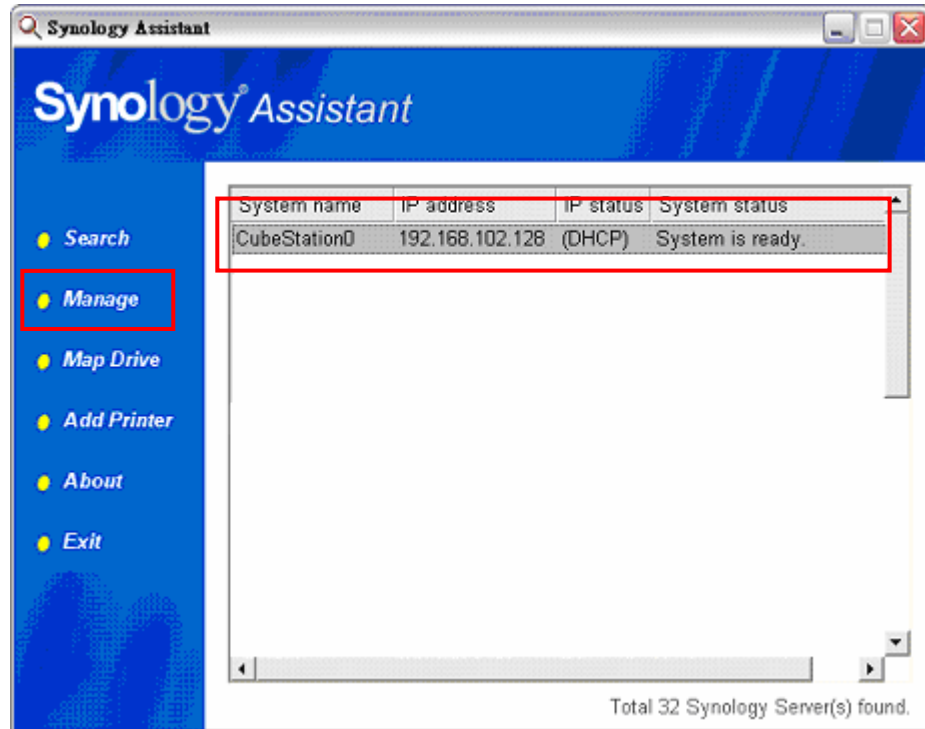
2. Choose "Synology Assistant" at the Autoup Menu.



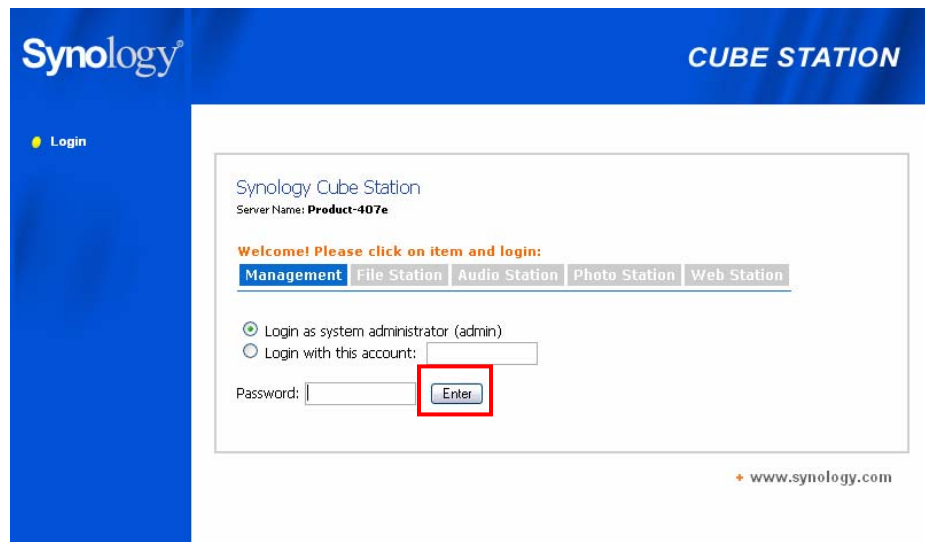
3. Follow the steps to complete installation.
4. After installation, double click on the desktop icon to execute the program.



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".

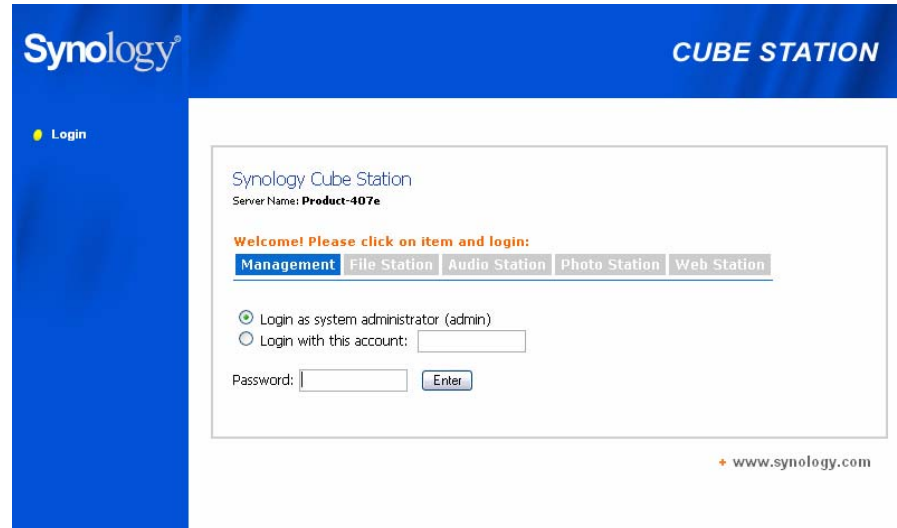
Please note:

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

Client	Browser
PC	IE 6.0 onward
Mac OS X 10.3.x	Safari 1.3 onward
Mac OS X 10.4.x	Safari 2.0 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.



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 on every page of the Web Management UI. Click on the “Help” button for further information whenever you encounter any problem.



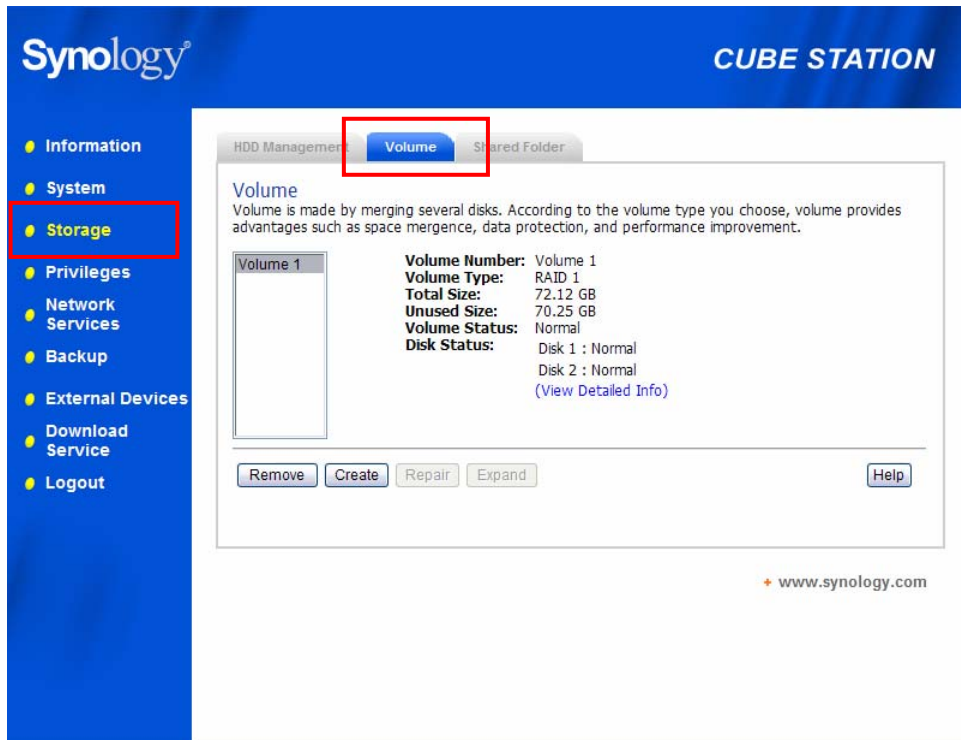
Managing Volume

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
Non-RAID	1	A Non-RAID volume must be created in one hard disk as an independent unit. In creating a Non-RAID 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.



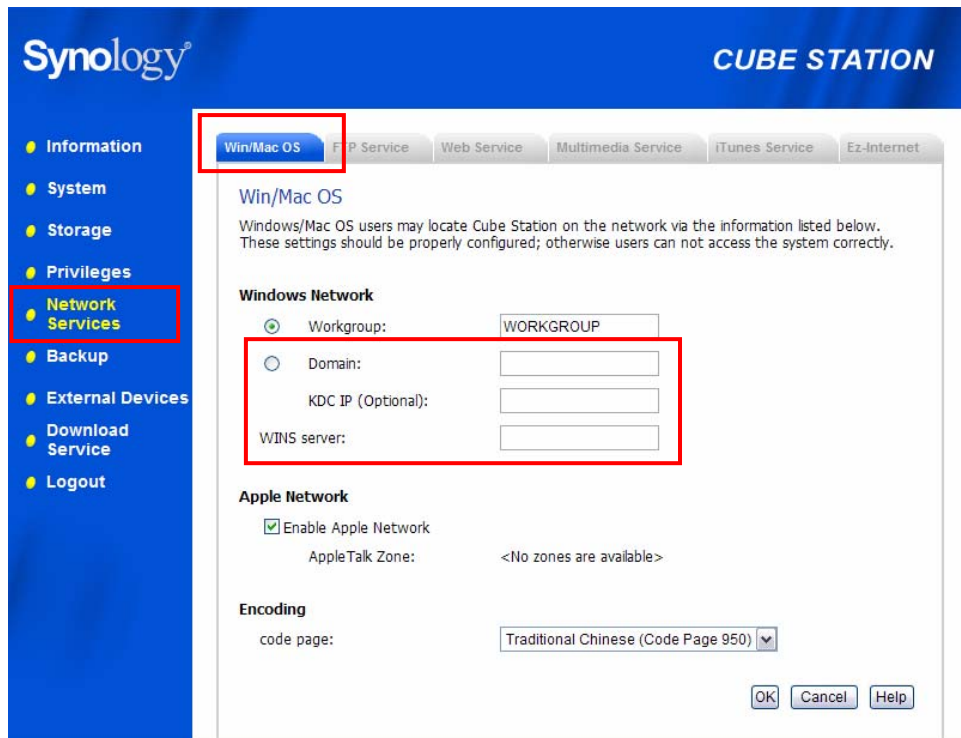
Repairing Volume by Hot Swapping

RS407 provides hot swapping function. When you need to replace crashed disks in RS407, 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 Synology Server. Synology Server supports both Active Directory Service (ADS) and NT4 domain. After being added to a Windows domain, the domain users only need to enter their domain account and password when trying to access the Synology Server. If the authentication succeeds, access will be granted.

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



Assigning Access Right for Domain Users

1. After adding Synology Server to a Windows domain, you can grant domain users' access rights to the shared folders on Synology server. Afterward, you will see domain users on the User page. Please refer to the "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.
2. 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 > Setting Access Control" section for details.

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.

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:

3. Press the "RESET" button and hold it for about 4 seconds. Release the button when the Synology Server emits a beep sound.
4. 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.
5. 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 set up access rights for users either with Windows or Mac to access shared folders.

Shared Folders

System Built-in

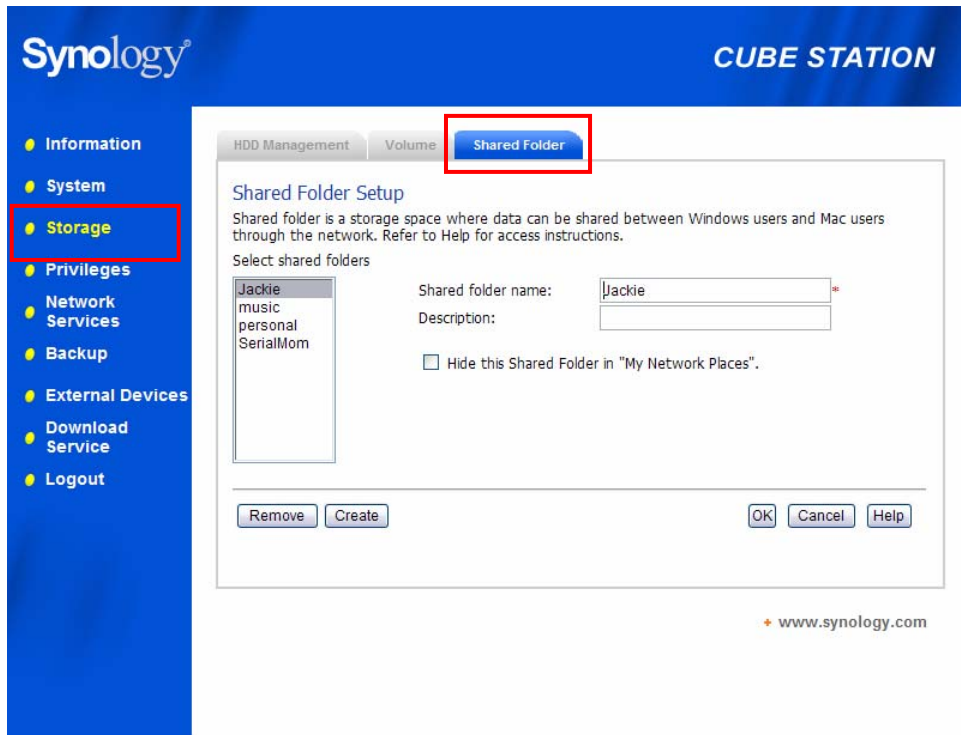
Below are system built-in shared folders. Administrator can delete them later after setup.

Name	Description
web	The shared folder "web" is for storing web pages. When Web Station is enabled, users can browse the constructed website through browser. For detailed information, please refer to "Extra Features > Web Station" section.
photo	The shared folder "photo" is for storing image files. Files in "photo" shared folder can be browsed when Photo Station or Multimedia Service is enabled. For detailed information, please refer to descriptions of Photo Station 2 + video and Multimedia Service.
music	Music files in "music" shared folder can be browsed through UPnP DMA when Multimedia Service is enabled. For detailed information, please refer to descriptions of Multimedia Service.
video	Video files in "video" shared folder can be browsed through UPnP DMA when Multimedia Service is enabled. For detailed information, please refer to the page "Network > Multimedia Service."
NetBackup	The shared folder "NetBackup" is for saving backed up files using Network Backup. Please refer to the page "Backup > Network Backup."
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 HDD Capacity> External USB HDD" section for details.

Administrator-Created

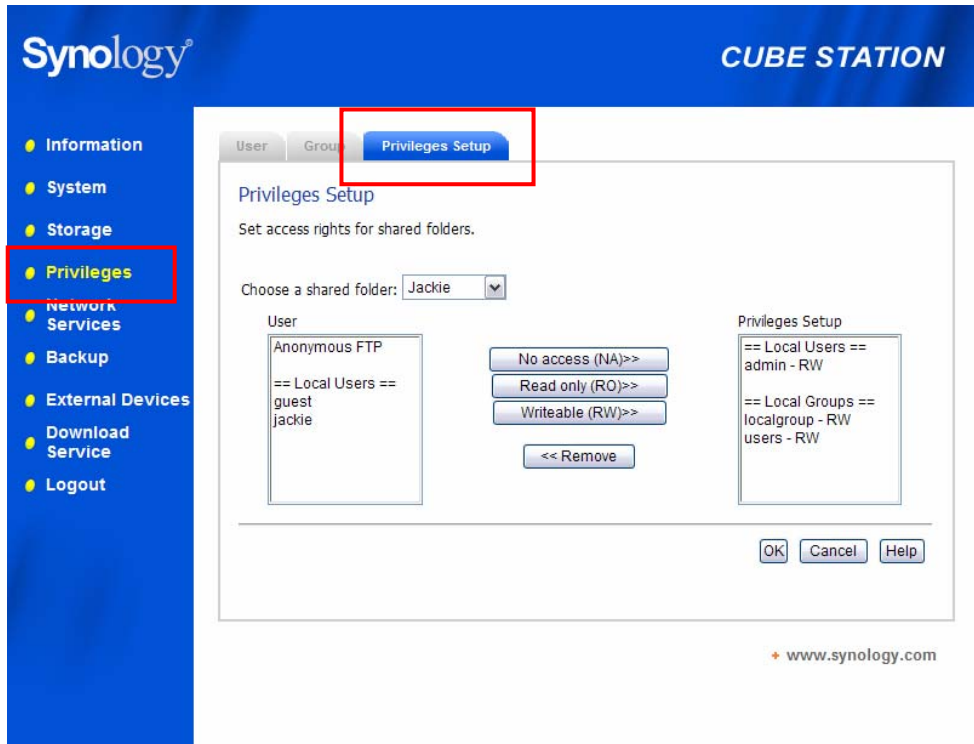
Apart from the above system built-in shared folders, Administrator can create shared folders on the page "Storage > Shared Folder" of the Web Management

UI. Shared folders created by Administrator can be deleted or renamed at any time.



Setting Access Control

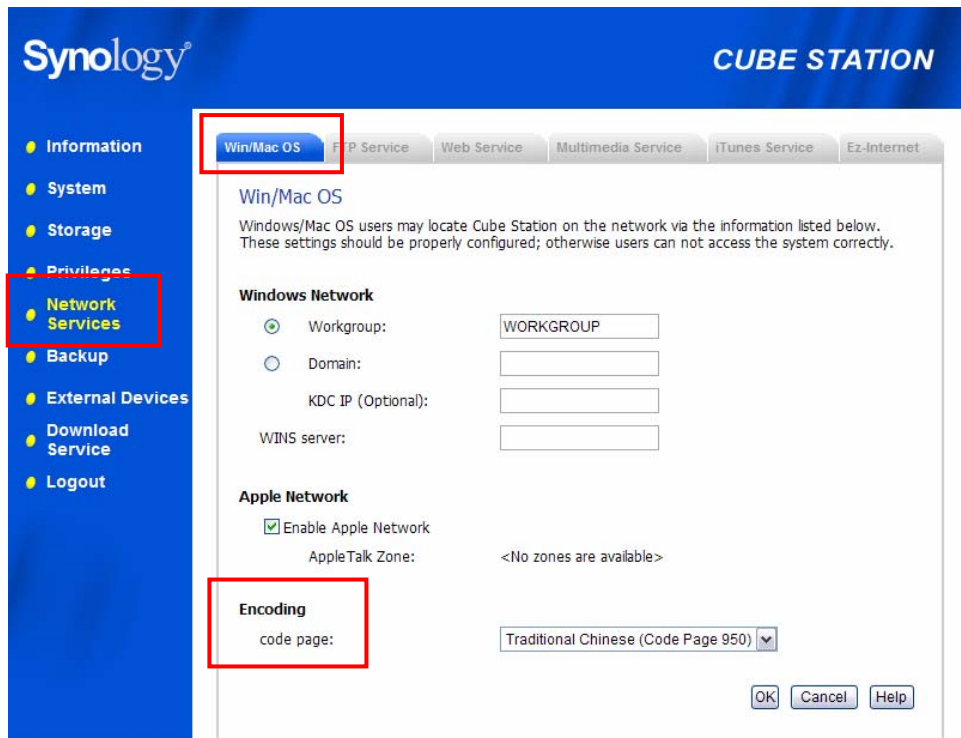
For security reasons, Administrator can go to the page "Privileges > Privileges Setup" of the Web Management UI and set access rights for different users by selecting the shared folder.



If Synology Server has been added to the Windows domain, you will see the domain users listed under the “User” list. You can also grant access right for the domain users on this page. After finishing the setting, click “OK”.

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 “Network Services > Win/Mac OS” of the Web Management UI for the setting.



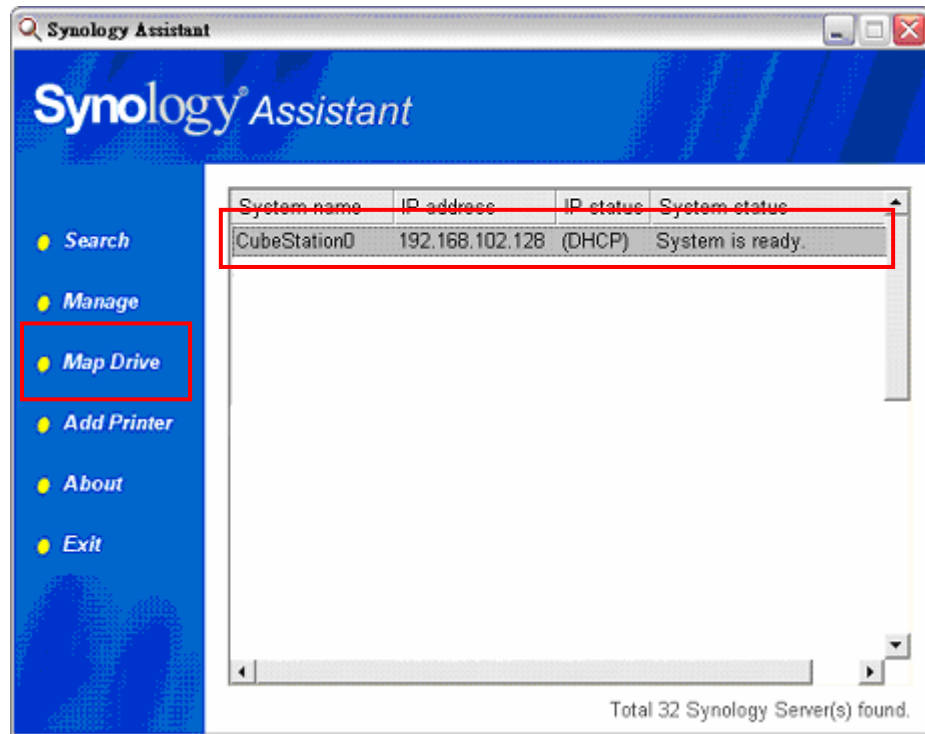
Accessing Shared Folders

Windows User

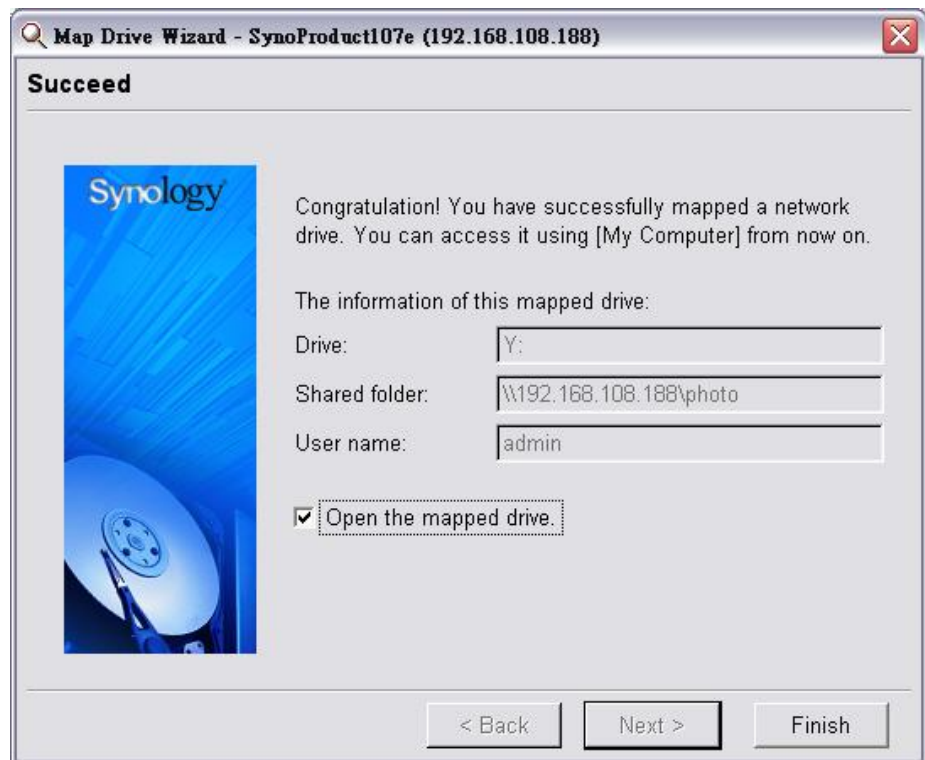
Windows users can access Synology Server's shared folders by using Setup Utility to map Network Drive

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:

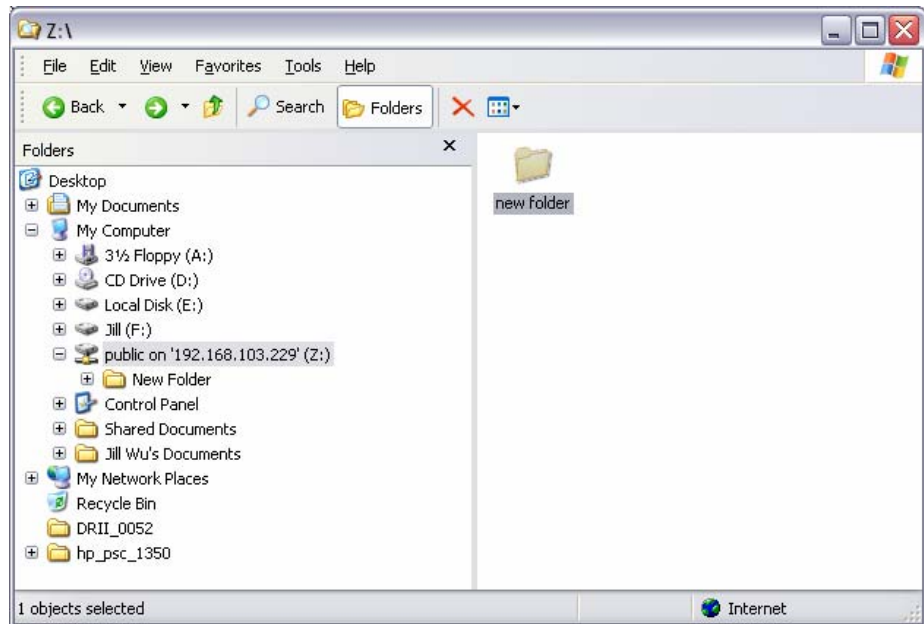
1. Run Synology Assistant.
2. Choose the server to map network drive.
3. Click on the "Map Drive" button on the left.



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

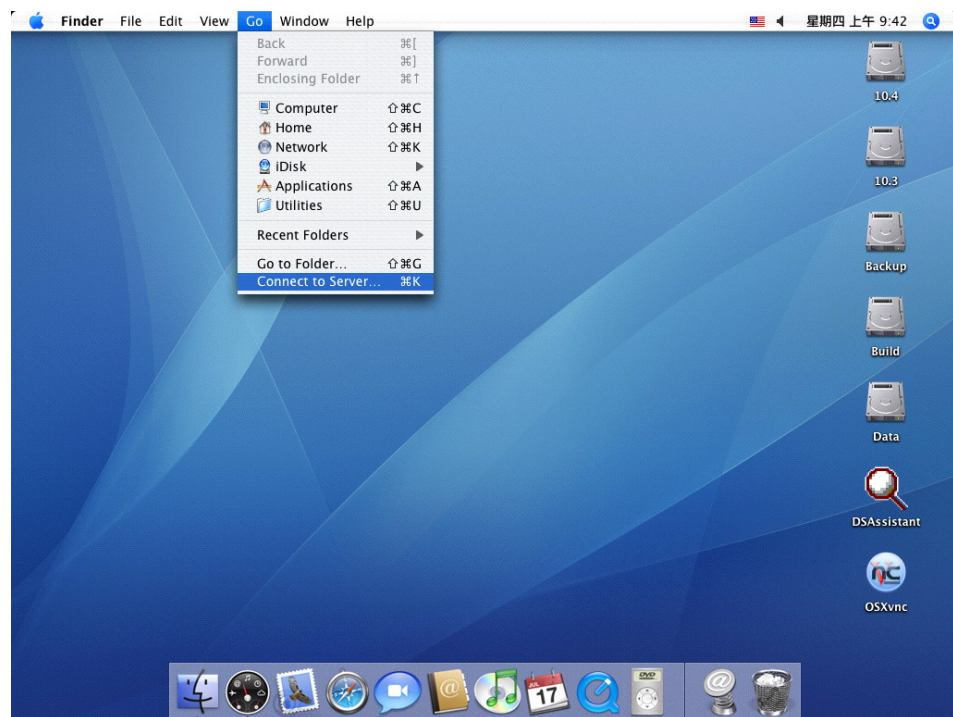


- Upon completion, user can access the mapped shared folder in Windows Explorer.



Mac User

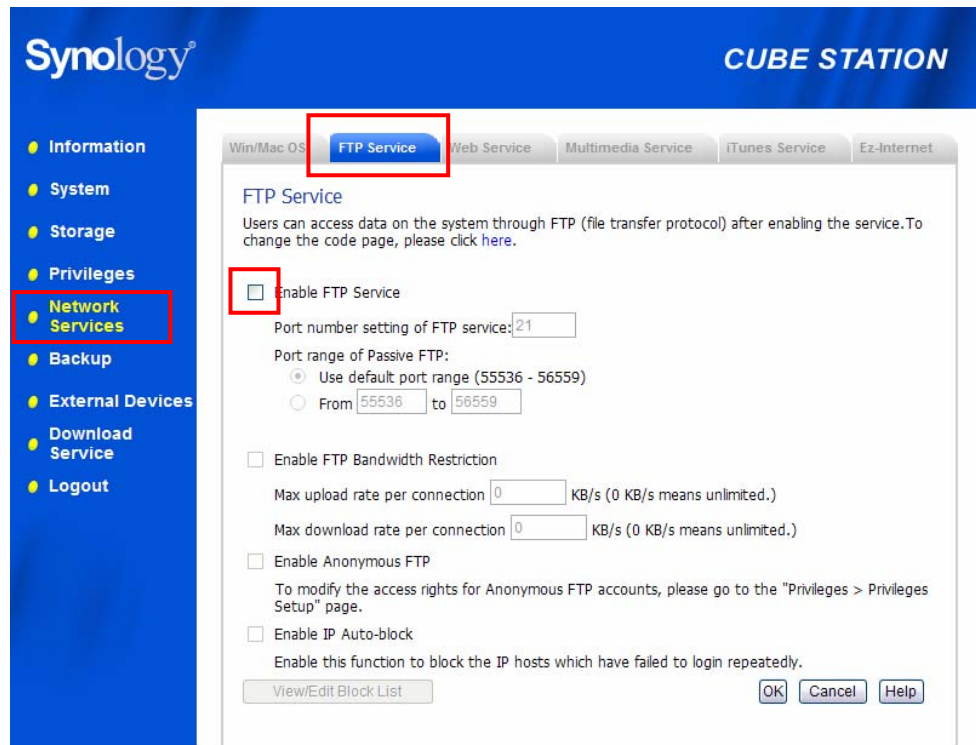
Mac user can use "Go > Connect to Server" to choose a Synology Server and access the shared folder on the server.



Through FTP

Synology server provides FTP service. Administrator can enable FTP service on the "Network Service > FTP Service" 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 Service” 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 “Network Services > Win/Mac OS” 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

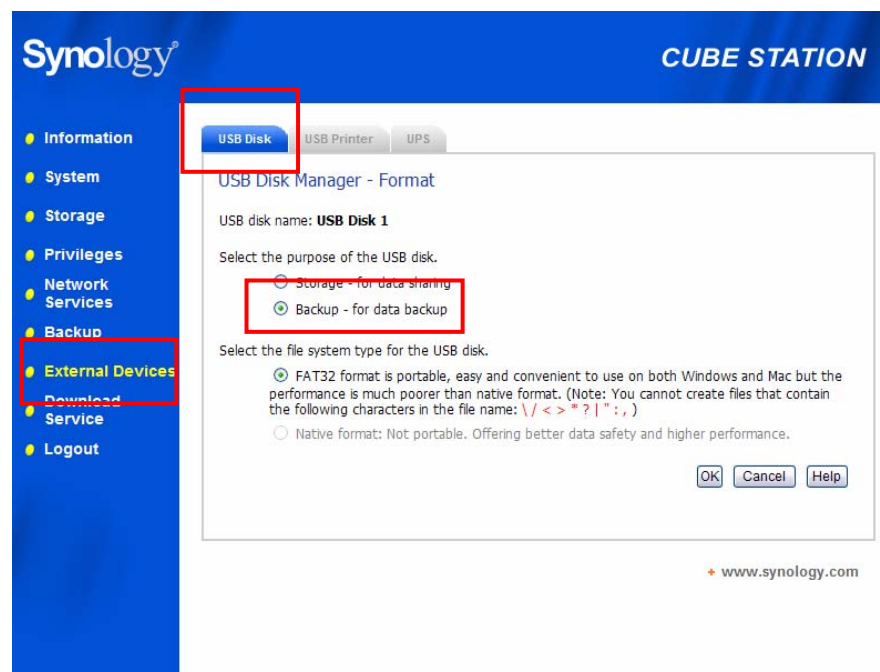
Synology Server provides complete backup solutions:

1. By using “Local Backup”, Administrator can back up Synology Server’s data to external USB 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).

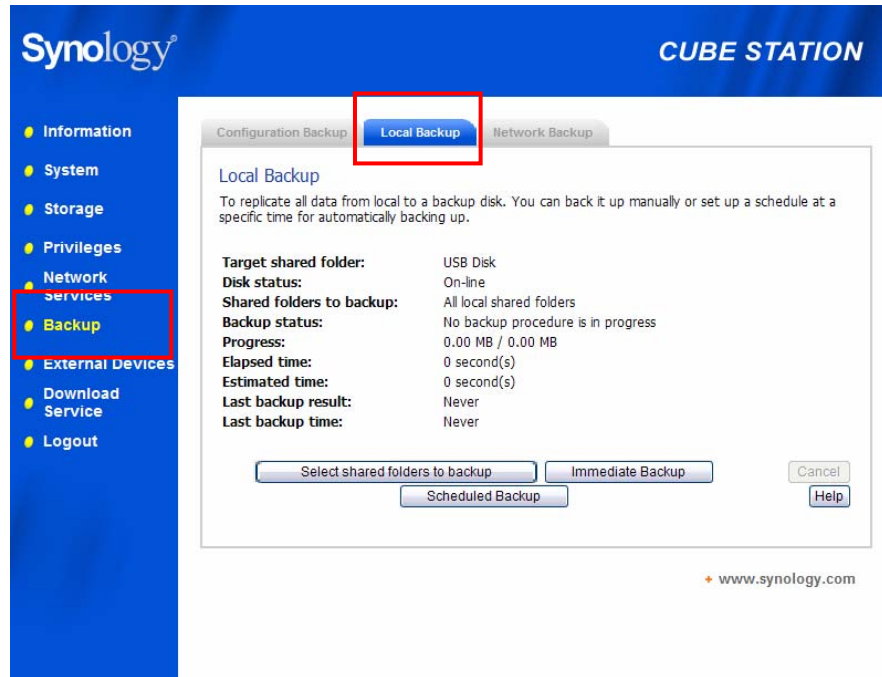
Local Backup

Please follow the below steps to perform Local Backup:

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

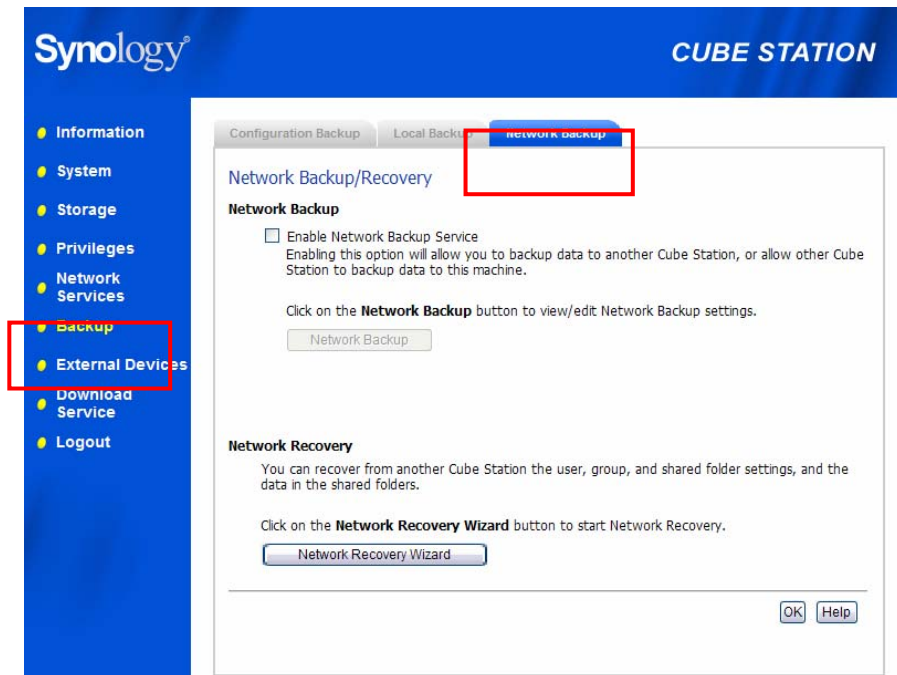


3. Go to the page “Backup > Local Backup” to set up your backup task.



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 option is enabled on both Target and Client Server before performing the task. Go to "Backup > Network Backup" page for detail information.



Backup Personal Data

Windows users can install “Synology Data Replicator II” 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 II, 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 II, please ensure:

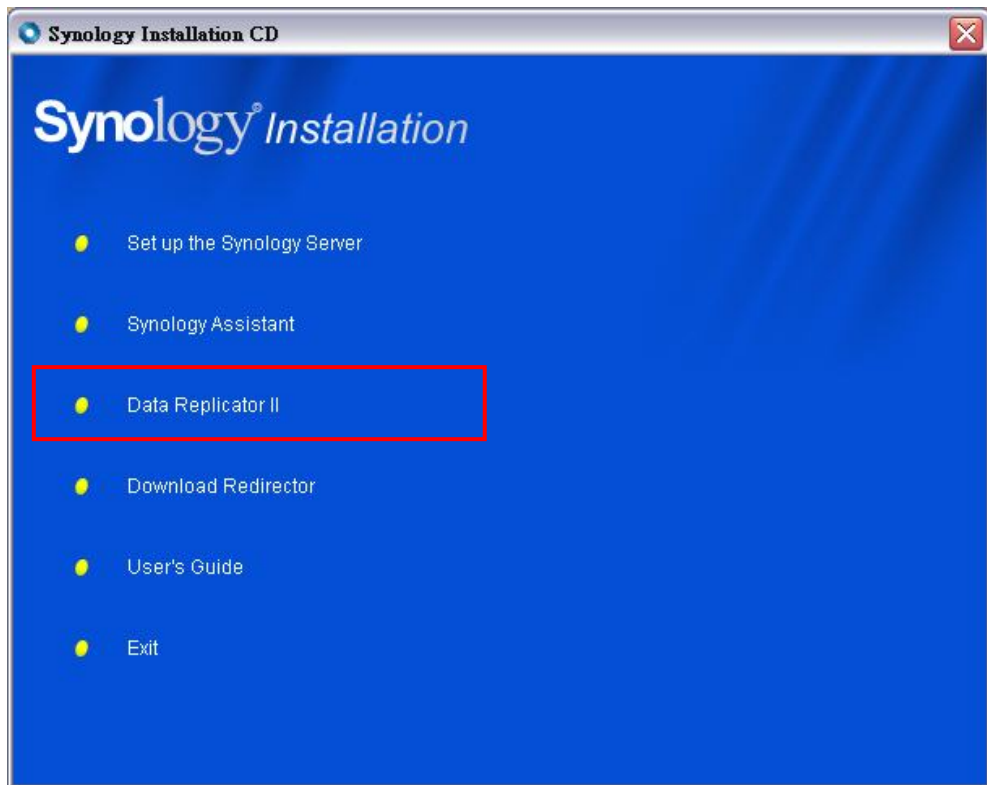
1. Client PC and Synology Server uses the same encoding for backup to perform adequately.
2. Synology Data Replicator II is the next generation of Synology Data Replicator. It can only restore backup data on Synology Server generated by itself. If users have backed up data on Synology Server using Synology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

Minimum System Requirement

1. Free HDD Space: 5MB
2. Operating System: Windows 98/ME/2000/XP
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 II

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



Using Synology Data Replicator II

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

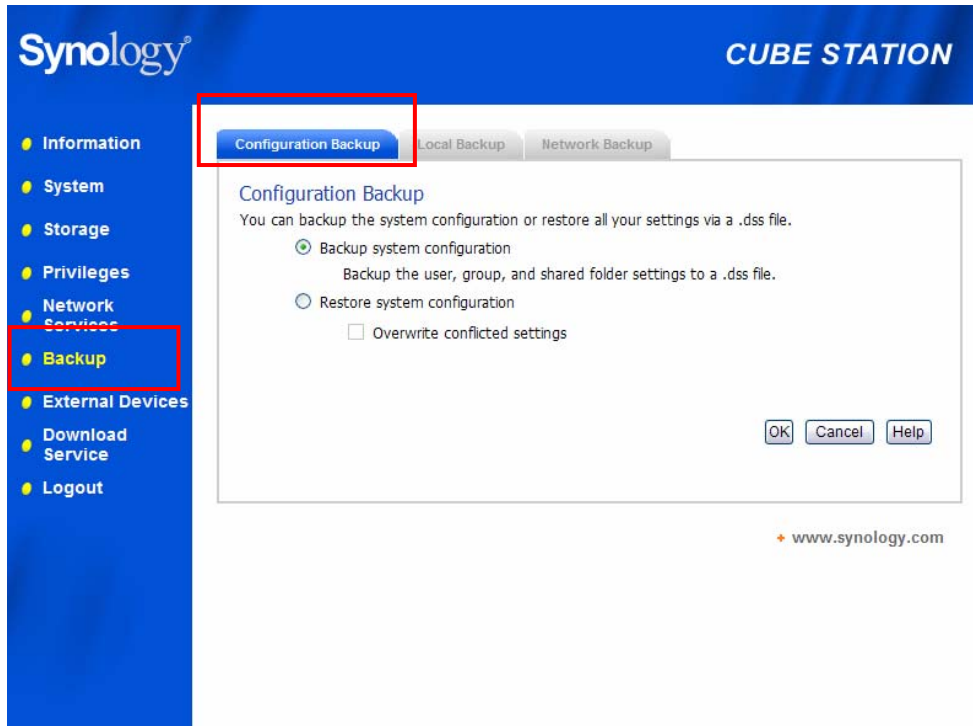


Backing up Synology Server Settings

There are two options for you to backup 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.

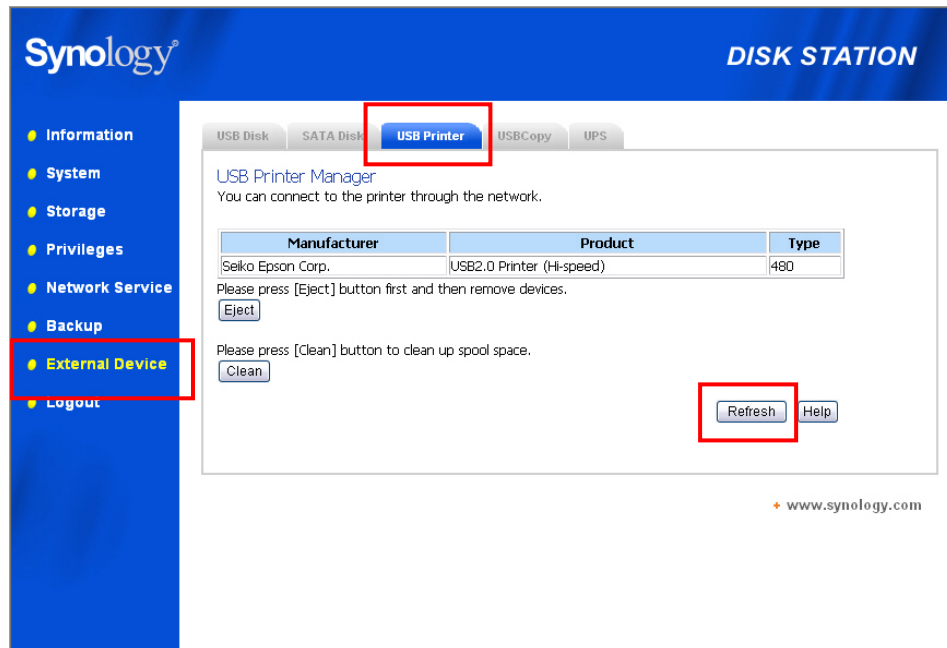


Synology Server to another Synology Server

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

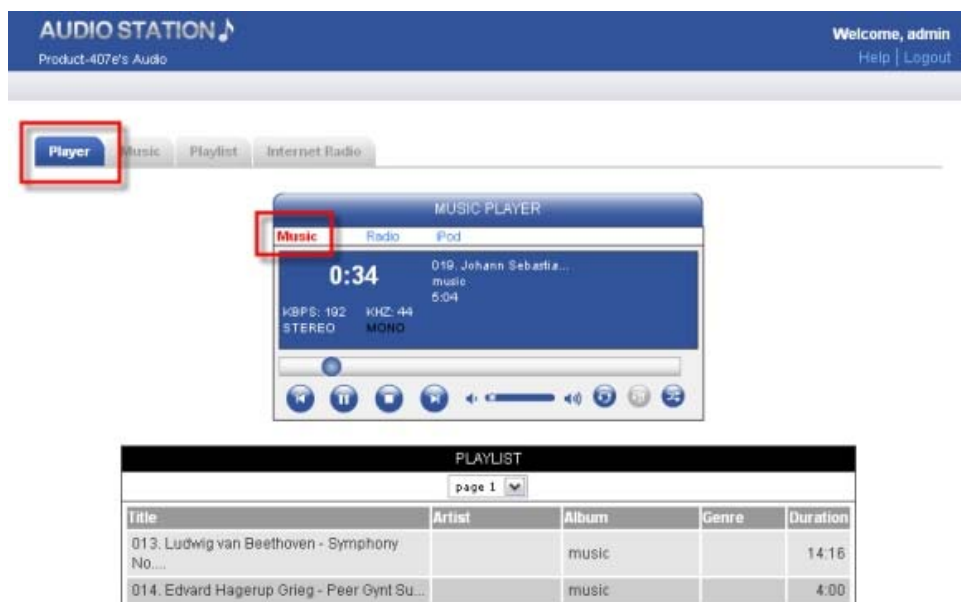
Synology Server supports Windows 98 and above users, and Mac OS 9 and above users to share USB Printer. For the detailed settings on different platforms, please refer to the page “External Devices > USB Printer” of the Web Management UI.



Extra Features

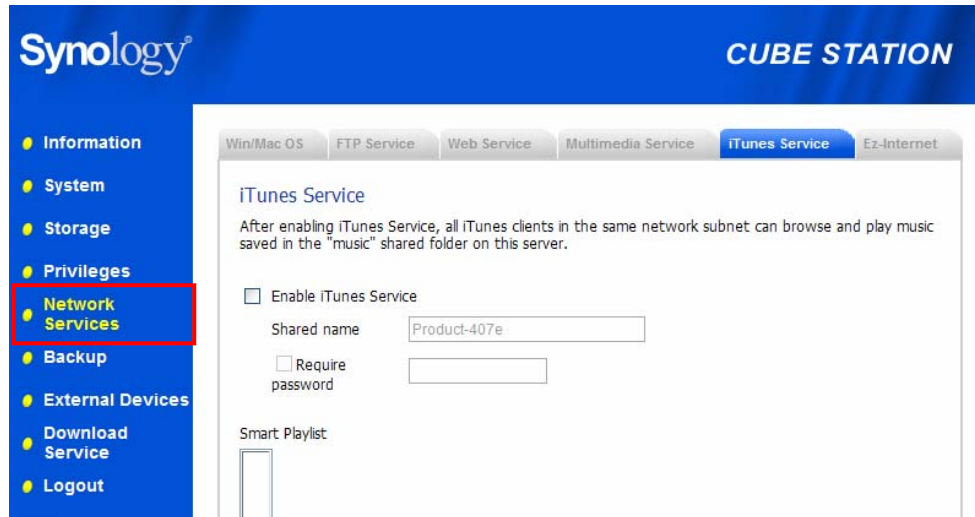
Audio Station

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.



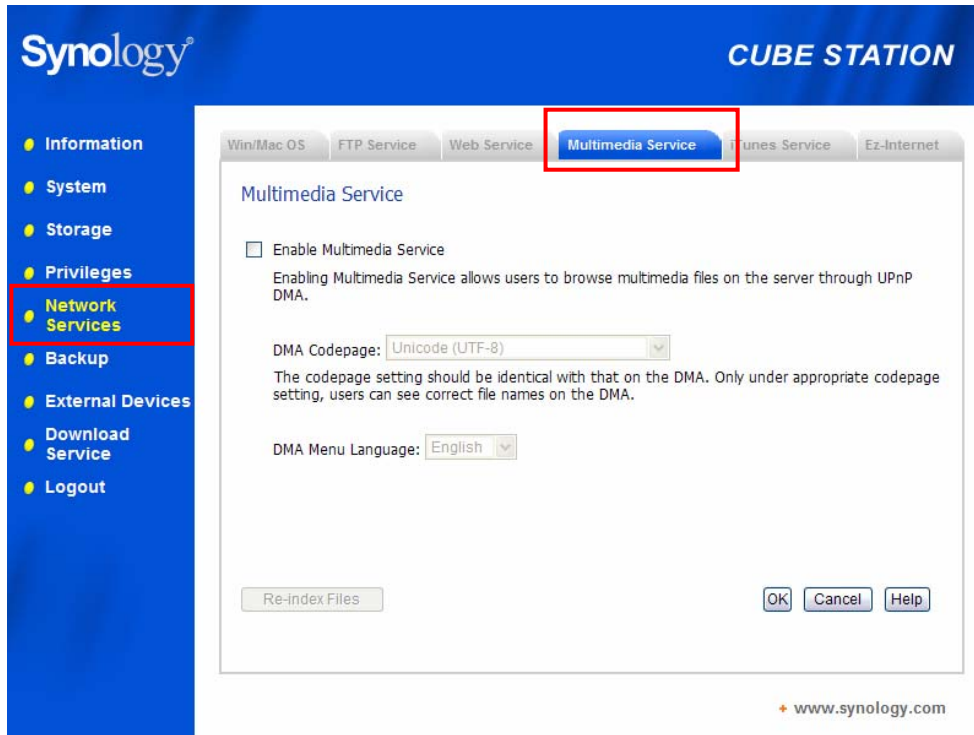
iTunes Service

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 Service” page of the Web Management UI.



Multimedia Service

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

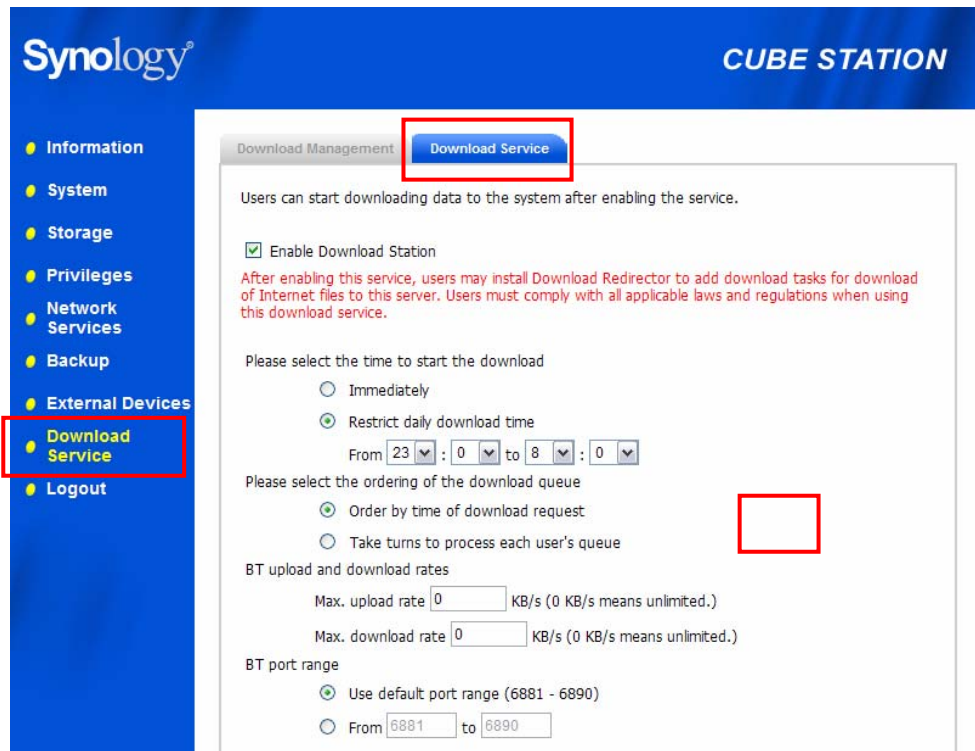
Enabling Download Station

Go to the “Download Service > Download Service” 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 Service > Download Management” 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 Service” page.

Web Station’s detail description

Please click on “Read Tutorial” link under “Enable Web Station”.

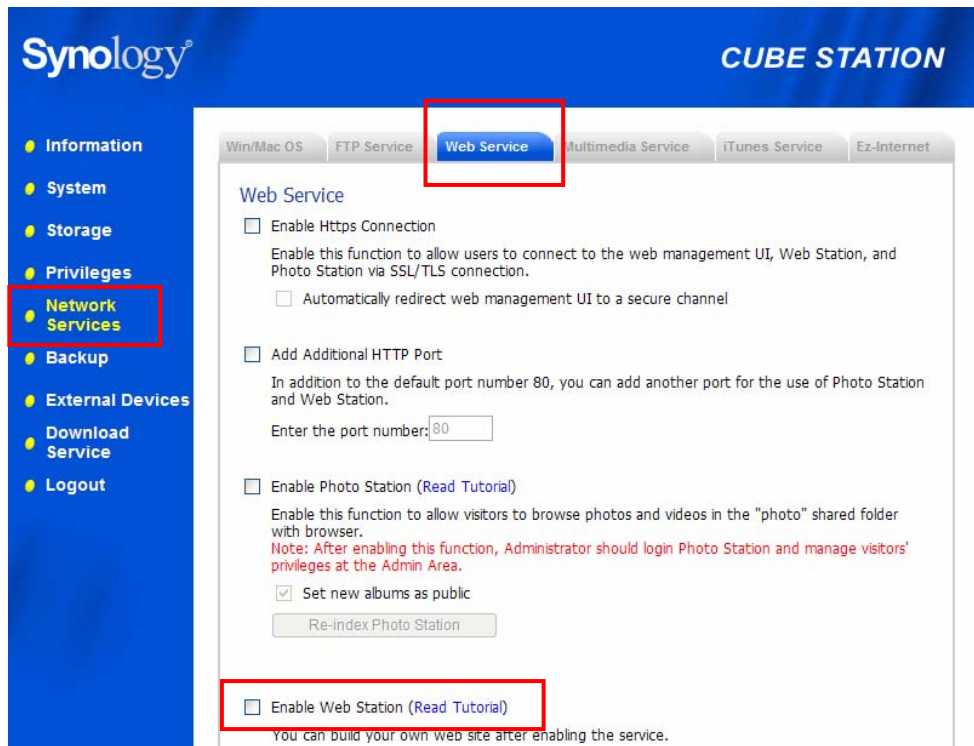


Photo Station 2 + video

The all new “Photo Station 2 + video” is stylish and even easier and faster. Administrator can not only set up album cover, but also enter descriptions of albums, photos and videos, and choose whether to allow visitors’ comments. Moreover, access right control can be set up to control privacy.

Enabling Photo Station 2 + video

Go to the “Network Services > Web Service” page.

Photo Station 2 + video’s detail description

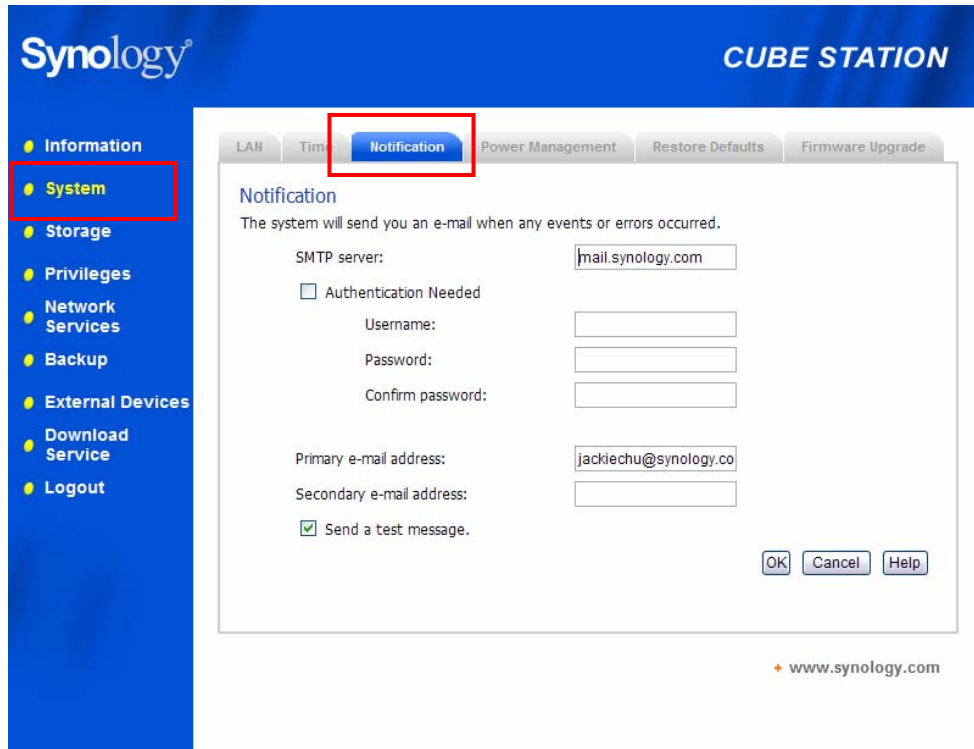
Please click on “Read Tutorial” link under “Enable Photo Station 2 + video”.

The screenshot shows the Synology CUBE STATION interface. The top navigation bar includes the Synology logo and 'CUBE STATION'. Below it, a row of service tabs is visible: Win/Mac OS, FTP Service, Web Service (highlighted with a red box), Multimedia Service, iTunes Service, and Ez-Internet. On the left sidebar, a list of menu items includes Information, System, Storage, Privileges, Network Services (highlighted with a red box), Backup, External Devices, Download Service, and Logout. The main content area is titled 'Web Service' and contains several configuration options:

- Enable Https Connection
Enable this function to allow users to connect to the web management UI, Web Station, and Photo Station via SSL/TLS connection.
 - Automatically redirect web management UI to a secure channel
- Add Additional HTTP Port
In addition to the default port number 80, you can add another port for the use of Photo Station and Web Station.
Enter the port number:
- Enable Photo Station ([Read Tutorial](#))
~~Enable this function to allow visitors to~~ browse photos and videos in the "photo" shared folder with browser.
Note: After enabling this function, Administrator should login Photo Station and manage visitors' privileges at the Admin Area.
 - Set new albums as public
 -
- Enable Web Station ([Read Tutorial](#))
You can build your own web site after enabling the service.

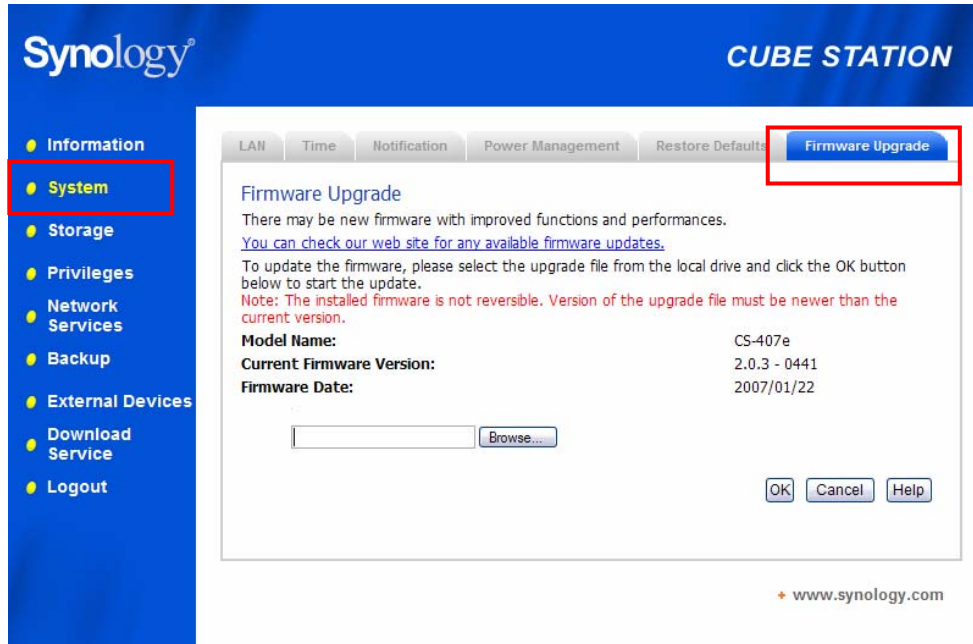
Mail Notification

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 Upgrade” 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.

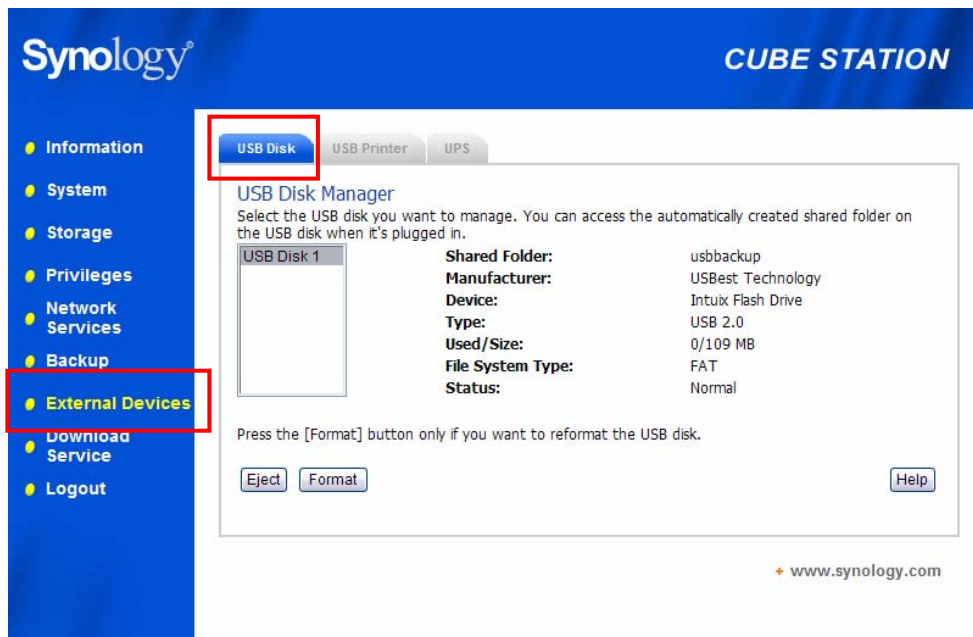
Expanding HDD Capacity

Administrator can expand HDD capacity by connecting external HDD, or replacing a larger capacity internal 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.



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:

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.

Non-RAID and RAID 0 Volume

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

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>