asustor

User Guide

For Network Attached Storage

Ver. 5.0.0.0920 (For ADM 5)

Introduction 5
Getting Started with ASUSTOR Data Master (ADM) 8
Installing ASUSTOR NAS and ADM 8
Logging in to ASUSTOR Data Master 8
Taskbar 9
Pre-Installed Apps 16
Settings 16
General 16
Network 21
Regional Options 24
Hardware 25
Notification 30
Certificate Manager 32
Network Recycle Bin 32
Scheduling 33
EZ-Connect 34
Manually Connect 35
ADM Maintenance 37
Registration 38
Services 38
SMB 38
AFP 41
NFS 42
FTP Server 42
WebDAV 45
Terminal 45
Rsync Server 46
TFTP Server 47
SNMP 48
SFTP 49
Reverse Proxy 50
Web Center 50
Overview 50
Web Server 51
Virtual Host 52
Implementation 53
Storage Manager 53
Overview 53
Volume 54
Drive 60
iSCSI 64
iSCSI LUN 65
Snapshot Center 65
Overview 65

Volume 66
iSCSI LUN 69

EZ Sync Manager 72
EZ Sync Manager for ADM 72
Connection 75
Log 76
Information 76
Settings 77
Recycle Bin 78

Access Control 78
Local Users 78
Local Groups 80
AD/ LDAP 81
You can enable the LDAP client here. 82
AD/ LDAP Users 82
AD/ LDAP Groups 83
Shared Folders 83
App Privileges 88
Permission Mapping Table 89

Backup Central 90
Remote Sync 90
SMB Backup 91
FTP Backup 92
Internal Backup 93
External Backup 94
One Touch Backup 95
System Settings ..... 錯誤! 尚未定義書籤。

App Central 97
External Devices 98
Overview 98
Hard Drives 99
Printer 99
Wi-Fi 100
UPS 101
Bluetooth Devices 102
External Optical Drive 102

System Information 103
About This NAS 103
Network 103
Log 104
Online Users 105

Dr. ASUSTOR 105

Activity Monitor 106

File Explorer 107

From App Central 110
ASUSTOR Live 111
Download Center 111
MariaDB 114
Surveillance Center 115
UPnP Media Server 115
SoundsGood 117
LooksGood 118
Photo Gallery 3 119
VPN Server 119
Takeasy 120
ASUSTOR Portal 121
Antivirus Protection 122
Mail Server 122
Syslog Server 123
DataSync Center 124
HiDrive Backup 125
Cloud Backup Center 125
Utilities 127
ACC (ASUSTOR Control Center) 127
AEC (ASUSTOR EZ Connect) 127
ABP (ASUSTOR Backup Plan) 128
AES (ASUSTOR EZ Sync) 128
Mobile Apps 130
AiData 130
AiMaster 131
AiRemote 131
AiDownload 132
AiMusic 132
AiFoto3 133
AiVideos 133
AiSecure 134
EULA 135
GNU General Public License 137

Chapter

1

Introduction

Thank you for choosing ASUSTOR network attached storage (NAS).

From cross-platform file sharing to multimedia server applications to App Central, ASUSTOR NAS provides you with a rich assortment of features, allowing you to explore the unlimited potential of NAS.

ASUSTOR Data Master (ADM): The Amazing Starts Here

Your NAS comes preloaded with ASUSTOR Data Master (ADM), an operating system developed by ASUSTOR. Designed around the use of Apps, ADM's intuitive web-based interface allows for easy organization and a user-friendly experience. This user manual will introduce you to all the rich assortment of preloaded applications (Apps) on your NAS.

Your Ideal Private Cloud

ASUSTOR's exclusive EZ ConnectTM technology lets you access your NAS from almost anywhere on the planet. Whether by computer or mobile device you need only an Internet connection to access your NAS from anywhere and at any time.

Cross-Platform File Sharing

ASUSTOR NAS provides flawless cross-platform file sharing. No matter what operating system you are using, you can still effortlessly connect to your NAS and access your data.

Embrace the Cloud, Enjoy Peace of Mind

Experience the convenience of cloud computing in a stress free environment. ASUSTOR's ADM Defender and support for encryption provide the highest standard of security for your system.

Your Data is Safe with Us

ASUSTOR NAS offers a complete host of data protection and backup solutions. Features such as RAID and two-way transfer support offer bullet-proof protection and flexible application. Savor a stress free and liberating user experience.

The Hub of Your Home Entertainment

Make ASUSTOR NAS the hub of your home entertainment and enjoy digital entertainment like you never have before. Countless Apps such as ASUSTOR Portal, LooksGood, SoundsGood, Photo Gallery and UPnP Multimedia Server allow you to enjoy digital entertainment in every corner of your home.

Vigilant Security

ASUSTOR's Surveillance Center lets you collectively manage an array of IP cameras, helping you keep an eye on your most valued assets. You can even take snapshots and control the pan, tilt and zoom functions of all cameras. In the event of any disruptions, Surveillance Center will notify you at once, giving you complete peace of mind.

iSCSI and Virtualization

Seamlessly integrate with any existing IT environments. Enjoy flexible and cost-efficient shared storage. ASUSTOR NAS supports the use of iSCSI and NFS in addition to being verified as, Citrix and Hyper-V ready.

Protect Our Planet with ASUSTOR

It is our mission to continue to develop exceptionally energy efficient products. From their inception, all ASUTOR NAS products are designed and developed around ecologically friendly concepts. Features such as, Night Mode, disk hibernation, power scheduling and fan control all help you to save power. Furthermore, each ASUSTOR NAS is fully compliant with EuP standards (EuP 2.0).

Unnoticeable quiet

For products like NAS that need to run for a long time, if the noise is very loud during operation, many users will be unbearable. ASUSTOR NAS's exclusive low-noise design makes the operation sound almost unnoticeable, satisfying your high-quality requirements of the living environment.

Enrich Your Mobile Life

Imagine having your photos, media files and important documents always at your fingertips. ASUSTOR offers an array of mobile applications to make your digital lifestyle complete.

App Central: Unleash the Unlimited Potential of NAS

The Apps that come pre-installed with ASUSTOR NAS are just the beginning. At your convenience, browse through and download any additional Apps that peak your interest from App Central. Explore the unlimited potential of ASUSTOR NAS while creating a personalized NAS for yourself.

Online Resources

Features | Compatibility | Downloads | Technical Support | FAQ | ADM Live Demo

Forum | ASUSTOR College

Terms of Use

All ASUSTOR products have undergone stringent and comprehensive testing. Under normal user operation and within the warranty period, ASUSTOR will assume responsibility for any hardware failures. Before using this product, please read the End-User License Agreement (EULA) **located at the end of this user manual.**

Chapter

2

Getting Started with ASUSTOR Data Master (ADM)

This section will introduce you to the process of logging in, using Searchlight and using the taskbar in ASUSTOR Data Master (ADM).

Installing ASUSTOR NAS and ADM

Before you begin using your NAS, please make sure that you have installed hard disks, connected the NAS and have properly initialized it. For detailed instructions on setting up your ASUSTOR NAS and installing ADM, please see the ***Quick Installation Guide*** for your ASUSTOR NAS model.

Quick Installation Guide https://www.asustor.com/service/downloads

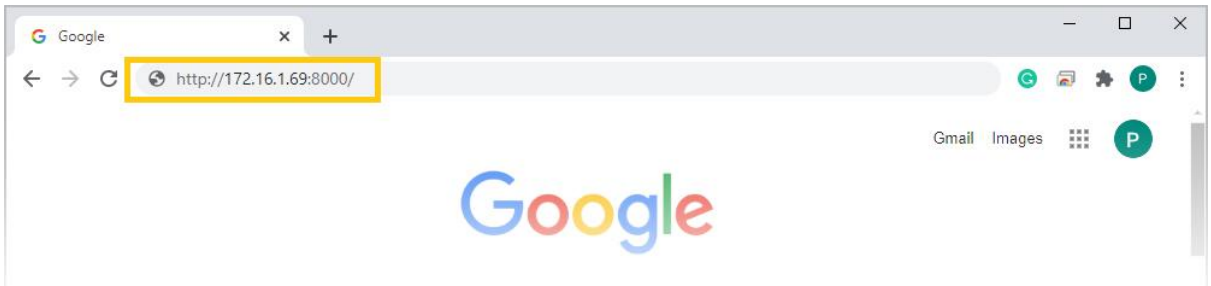
Logging in to ASUSTOR Data Master

After installation and initialization, you can use the following methods to log in to your ASUSTOR NAS:

Connection within the local network (LAN)

Method 1： Use **ASUSTOR Control Center (ACC)** to scan your local area network for ASUSTOR NAS devices. Select your NAS and then click on the "Open" button to go to bring up the login screen. ACC can be downloaded from Downloads

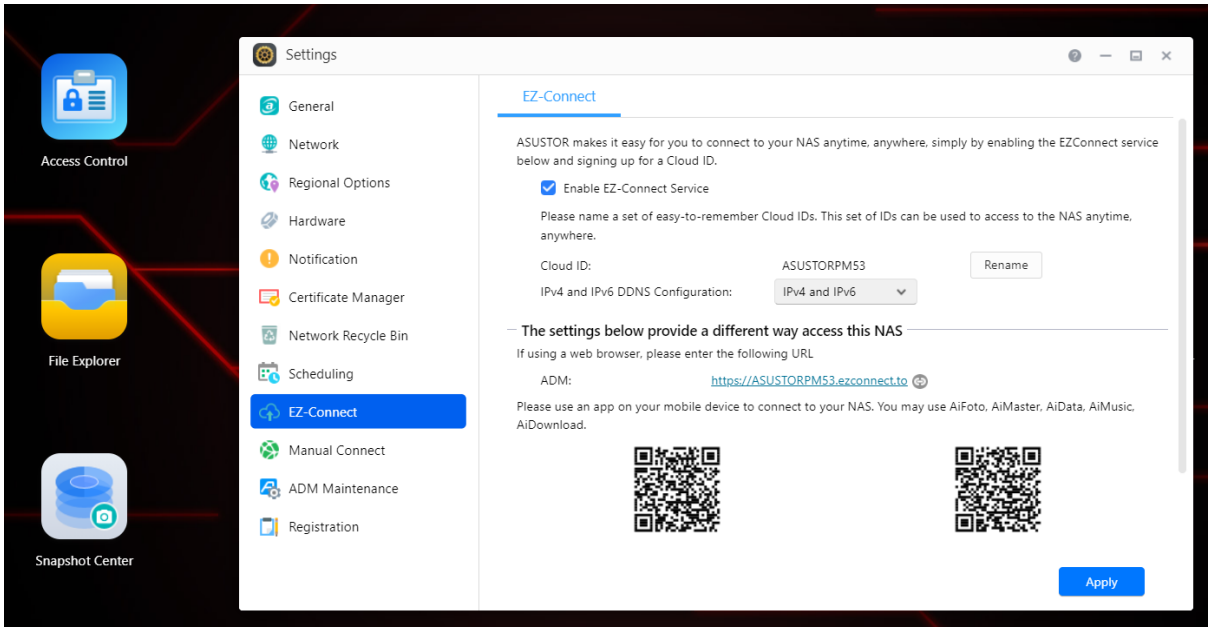
Method 2： If you already know the IP address for your ASUSTOR NAS on your local area network, you can directly enter it into your web browser to connect to your NAS. For example: http://172.16.1.69:8000/ **(The 8000 in the image is the default port)**



Connection outside the local network (WAN)

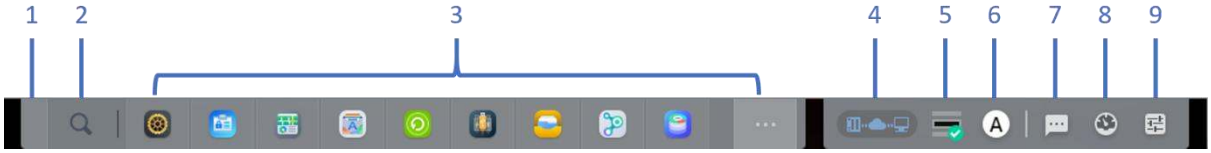
Method 3：If you are connecting to your ASUSTOR NAS remotely, you can enter CloudID.ezconnect.to or CloudID.myasustor.com into your web browser to connect to your NAS. For example: http://john.ezconnect.to or http://john.myasustor.com:8000

Reminder: When connecting remotely, please remember to register your NAS and then enable EZ Connect under [Settings] → [EZ-Connect] → [Enable EZ-Connect Service]. After configuring a Cloud ID for your NAS, you will be able to connect to it remotely using your customized hostname.



Taskbar

Taskbar is located at the top area of ADM and includes the below items and functions:



1. **Show desktop:** Minimizes all windows.

2. **Searchlight: Easily find apps and files without extra indexing. Instantly preview files, file information and location with ASUSTOR Searchlight. Click one of the search results on the left to show image previews while more information is found on the right. Use the keyboard's up and down arrow keys to view different results. Double click or press Enter to open a result.**
3. **App Icons:**

Open apps: Open apps appear here and can be **pinned, restored, minimized** or **closed**.

Pin to taskbar: Right click an app in the taskbar to bring up a context menu where the app can be pinned.

Unpin from taskbar: Right click an app in the taskbar to bring up a context menu where the app can be unpinned.

4. EZ Connect.to Relay Service:

This icon means that you are connecting using the EZ-connect.to relay service. Connections using EZ-Connect.to will be slower and download abilities will be limited.

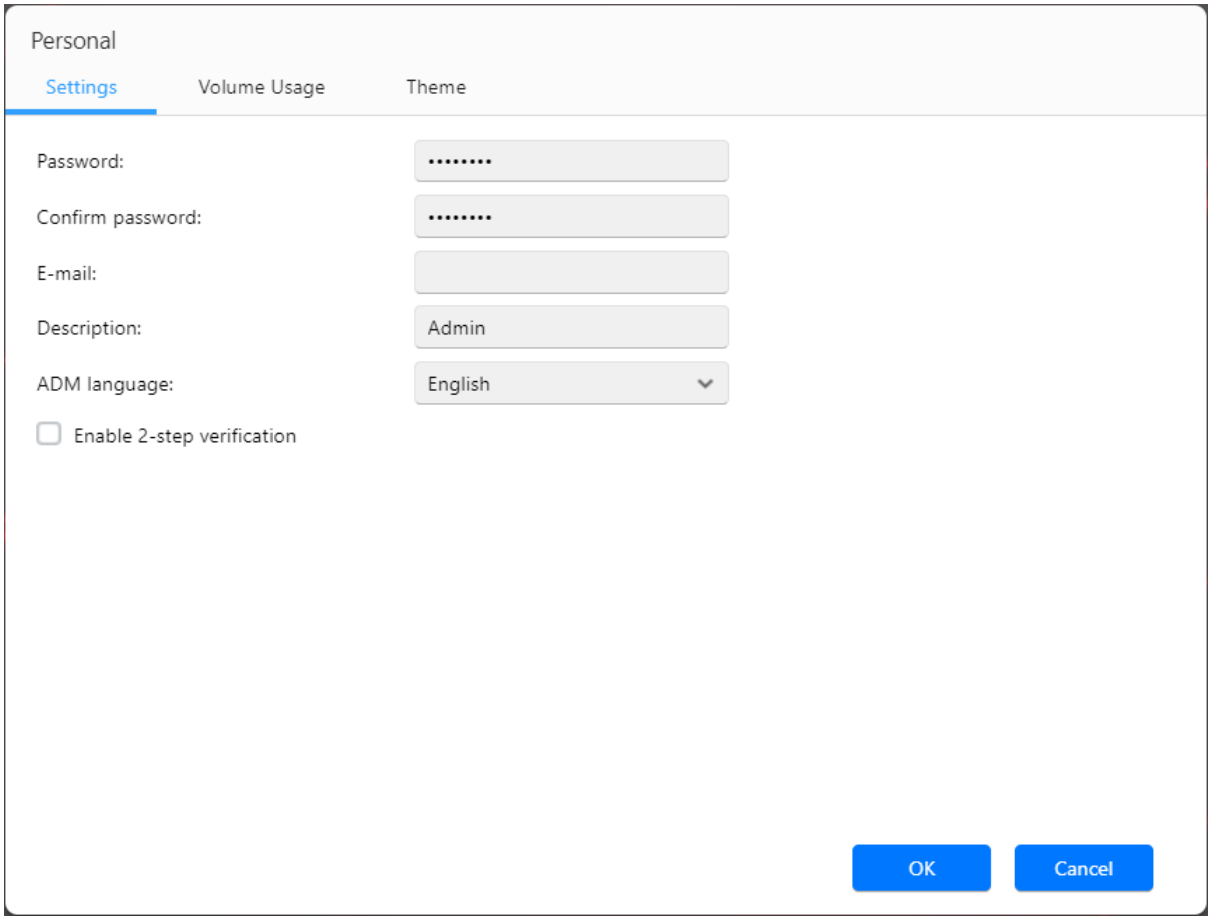
5. Task Monitor: Check and monitor different background tasks like uploading, copying and moving files.

6. Account Options: Displays options for account **settings, sleeping, restarting, shutting down** and **signing out.**

Settings: Selecting Settings provides you with tabs options for account settings, volume usage and themes.

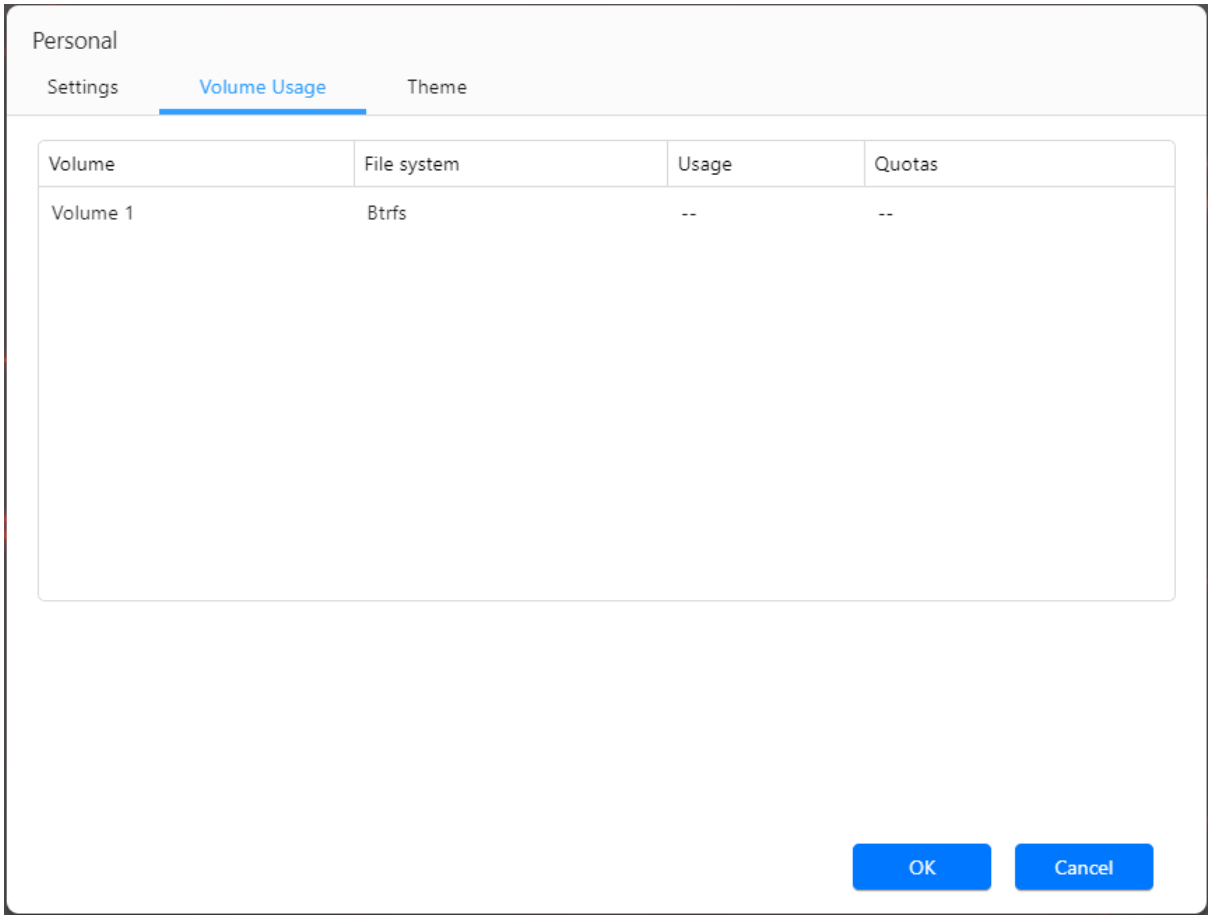
Personal:

Configure **account password, email address, description** and **UI language.** If using an administrator account, two-**step verification can be enabled**. Desktop settings arranges app icon in several ways, including 5x3, 6x3 or 7x4.



Volume Usage:

Here, you can view information regarding your hard disk storage volumes such as usage and storage quota.



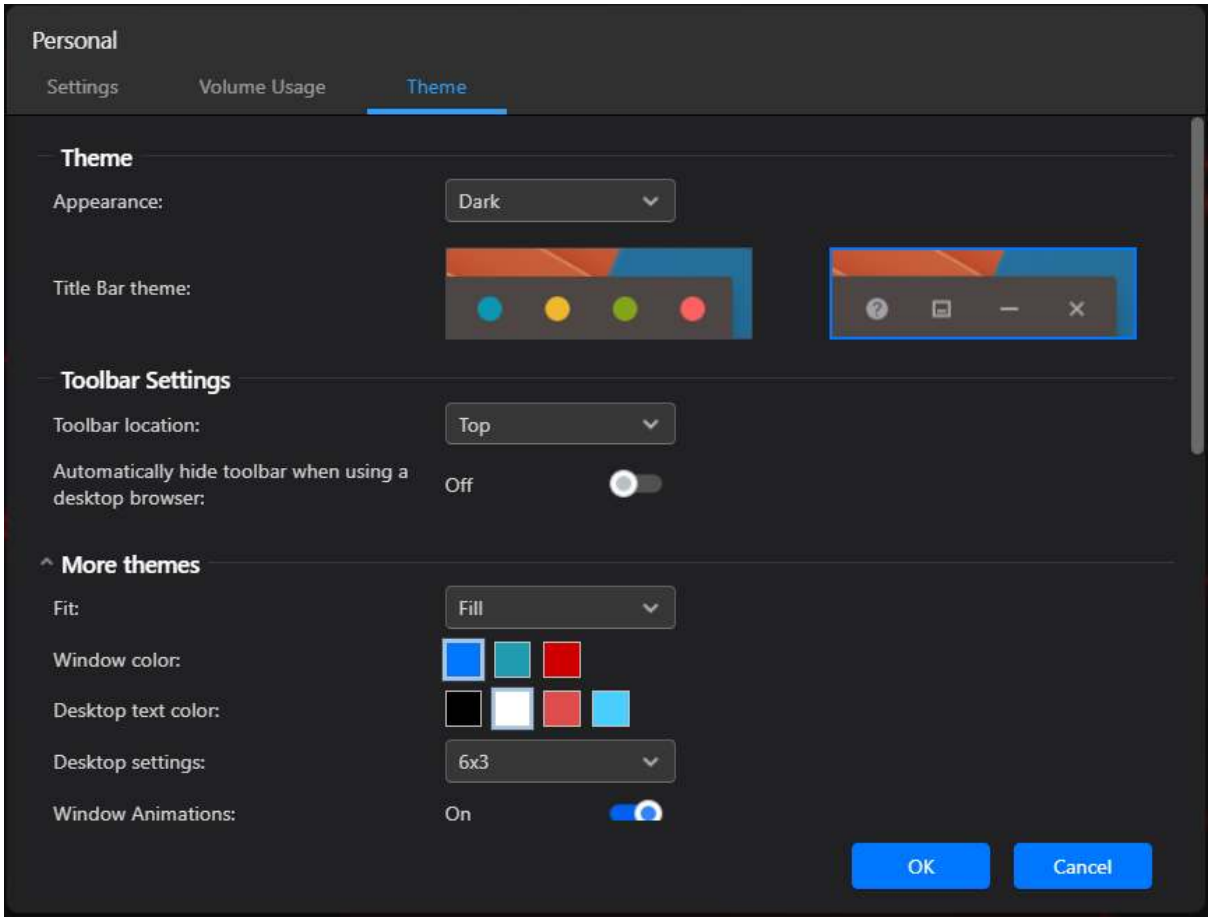
Theme:

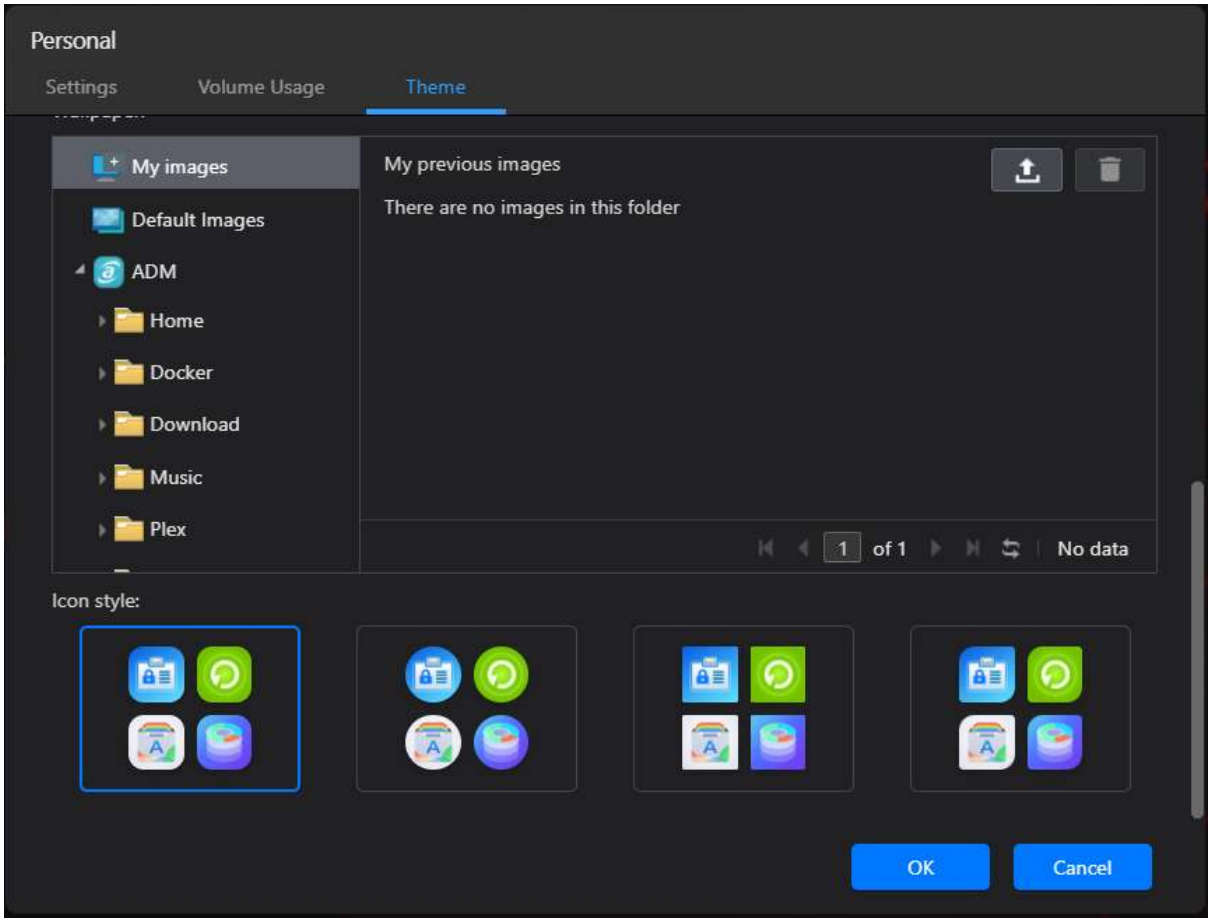
Appearance: Options for auto, light or dark modes.

Title Bar theme: Options for changing the appearance of the title bar.

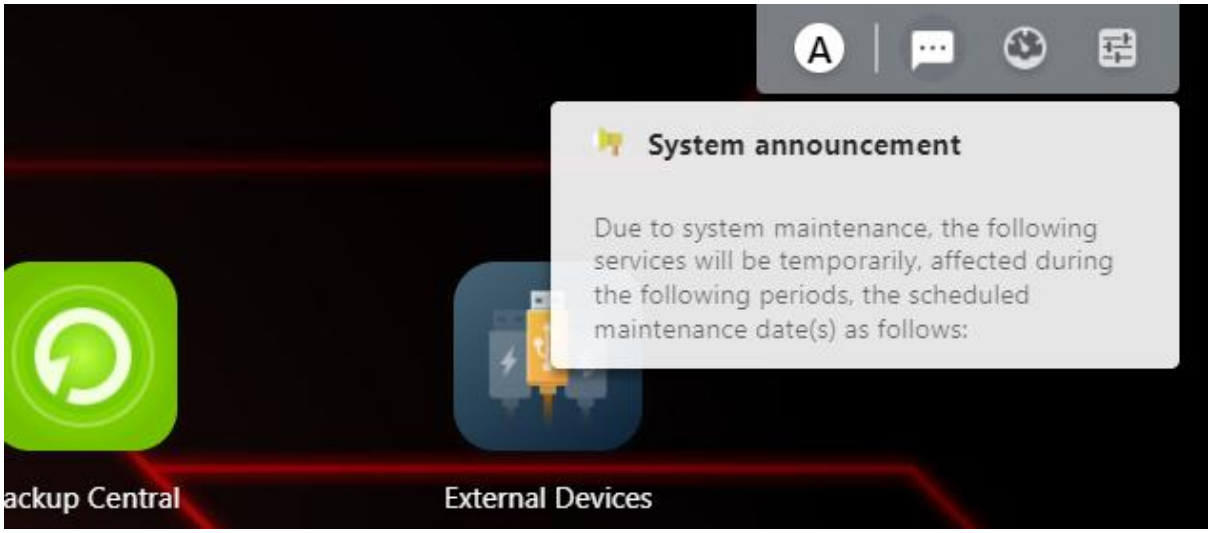
More themes:

Options for additional themes that include changing the background, text colors, icons and window colors. You can also upload images to the NAS or select an image already on the NAS to set a custom wallpaper.


Personal
Settings
Volume Usage
Theme
Theme
Appearance:
Dark
Title Bar theme:
Toolbar Settings
Toolbar location:
Top
Automatically hide toolbar when using a desktop browser:
Off
More themes
Fit:
Fill
Window color:
Desktop text color:
Desktop settings:
6x3
Window Animations:
On
OK
Cancel

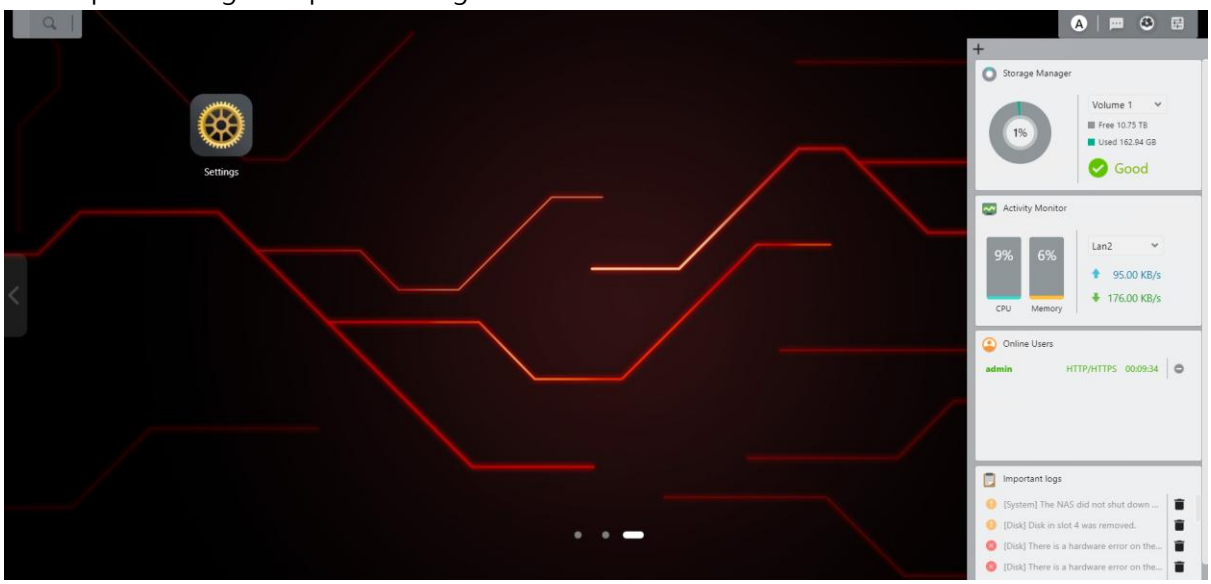

Personal
Settings
Volume Usage
Theme
My images
Default Images
ADM
Home
Docker
Download
Music
Plex
My previous images
There are no images in this folder
1
of 1
No data
Icon style:
OK
Cancel

7. System Announcement:



System announcement are displayed here. Customize system announcements by going to Sign In Page Style under General in Settings. System announcements are like bulletin boards that convey information to those using the NAS, for example, to notify employees of downtime or maintenance.

8. Tools: Click plus to add information from Storage Manager, Activity Monitor, Online Users and Important Logs for quick viewing.



9. Preferences: ADM settings are now in an easy-to-use central location, making finding the right settings even easier. One click is all that is needed to browse and change settings. Preferences is now found on the taskbar on the top right.

Preferences
Settings
General
Network
Regional Options
Hardware
Notification
ADM Defender
Certificate Manager
ADM Update
Network Recycle Bin
Scheduling
EZ-Connect
Manual Connect
Factory Default
Registration
Access Control
Local Users
Local Groups
AD / LDAP
AD / LDAP Users
AD / LDAP Groups
Shared Folders
App Privileges
Services
SMB
AFP
NFS
FTP Server
WebDAV
Terminal
Rsync Server
TFTP Server
SNMP
SFTP
Reverse Proxy

Chapter

3

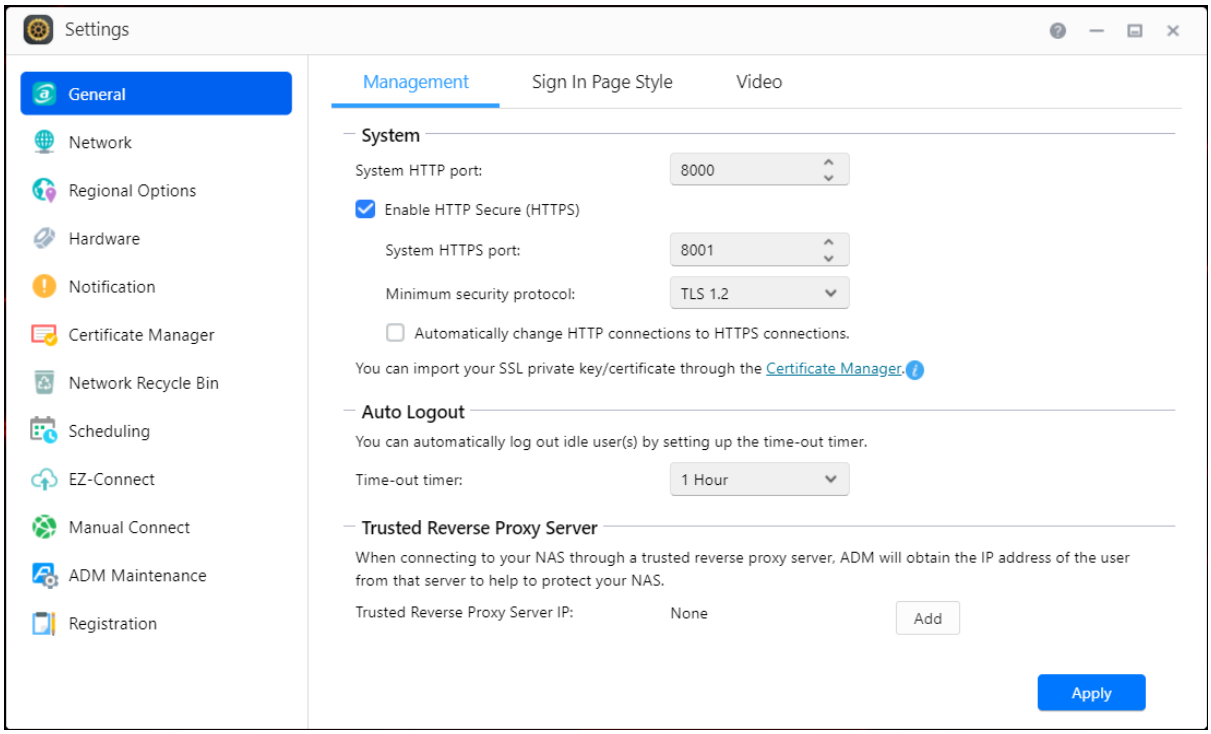
Pre-Installed Apps

Pre-installed Apps include the configuration of function and service settings for hard disks and hardware. You can configure everything from system related settings to user access rights.

Settings

General

Here you can manage the system HTTP port and auto logout settings. Auto logout will logout users if they remain idle past the specified period of time.



(1) Management

System HTTP Port：

This is used to specify the port you wish to use to connect to ADM's web based user interface. You can access your NAS by opening a web browser and entering your IP address followed by a colon and the specified port number.

For example: http://192.168.1.168:8000

Enable HTTP Secure (HTTPS):

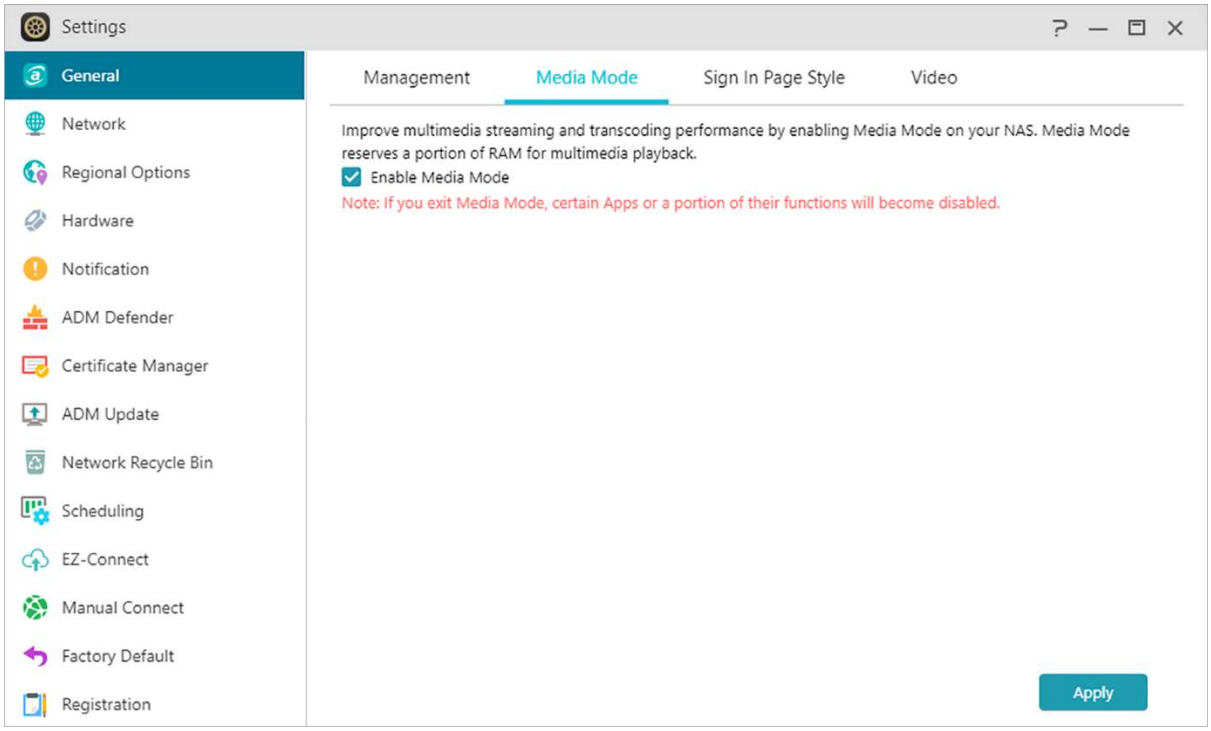
HTTP Secure functionality uses a dedicated, yet separate, secure communications port to connect to ADM's interface to enable safer data transfer. All that is needed is to open a web browser, enter the IP address of the NAS followed by a colon and the HTTPS port number to connect to ADM. (Example: **https: //192.168.1.168:** 8001). ADM has options for importing **SSL certificates or keys** in Certificate Manager and to make HTTPS connections mandatory.

Timeout timer:

For security concerns, users that remain idle past the specified period of time after logging on will be automatically logged off.

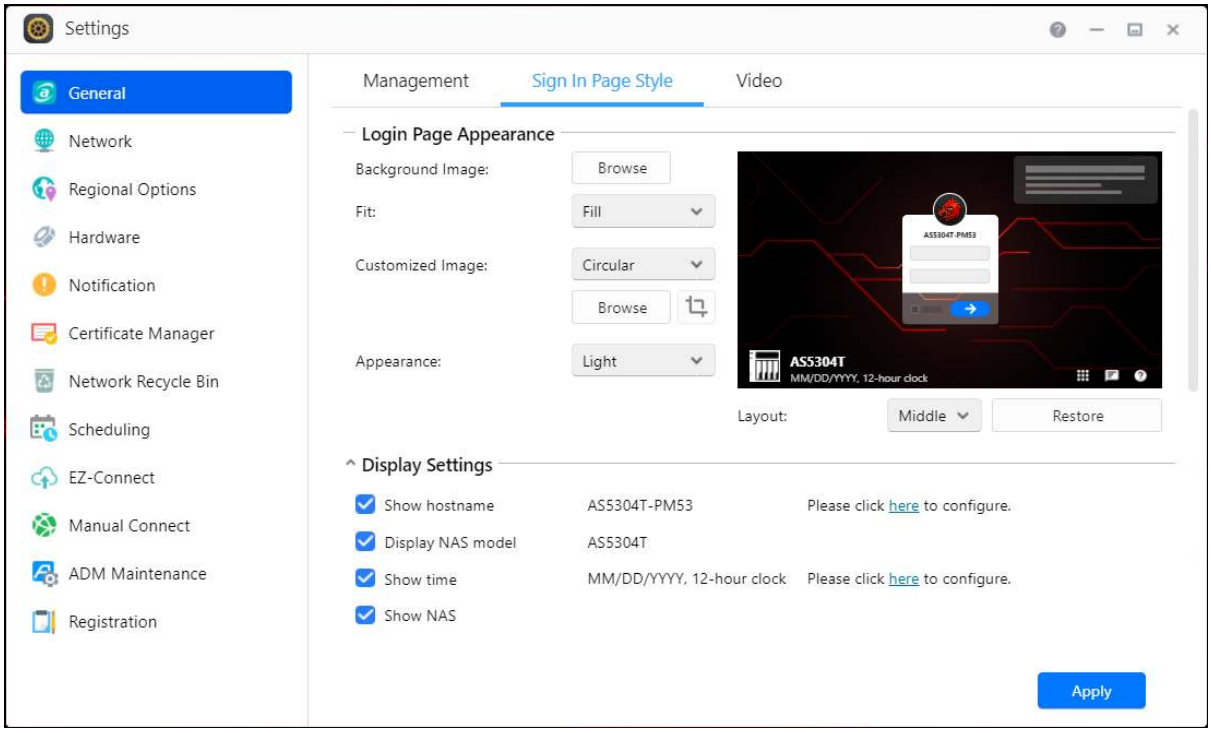
(2) Media mode

Media mode improves multimedia streaming and transcoding performance by reserving 512 MB of RAM on some ASUSTOR models.



(3) Sign In Page Style

Under Sign In Page Style you will be able to configure the following



Login Page Appearance:

Background Image: Changes wallpaper. Supports JPEG images.

Fit: Fill, tile or stretch wallpaper.

Custom Image: Enables or disables custom image on the sign in page as well as choose either a rectangular or circular image. Cropping can also be done to adjust the position and focus of an image. Supports JPEG images.

Appearance: Options for light, dark or automatic modes.

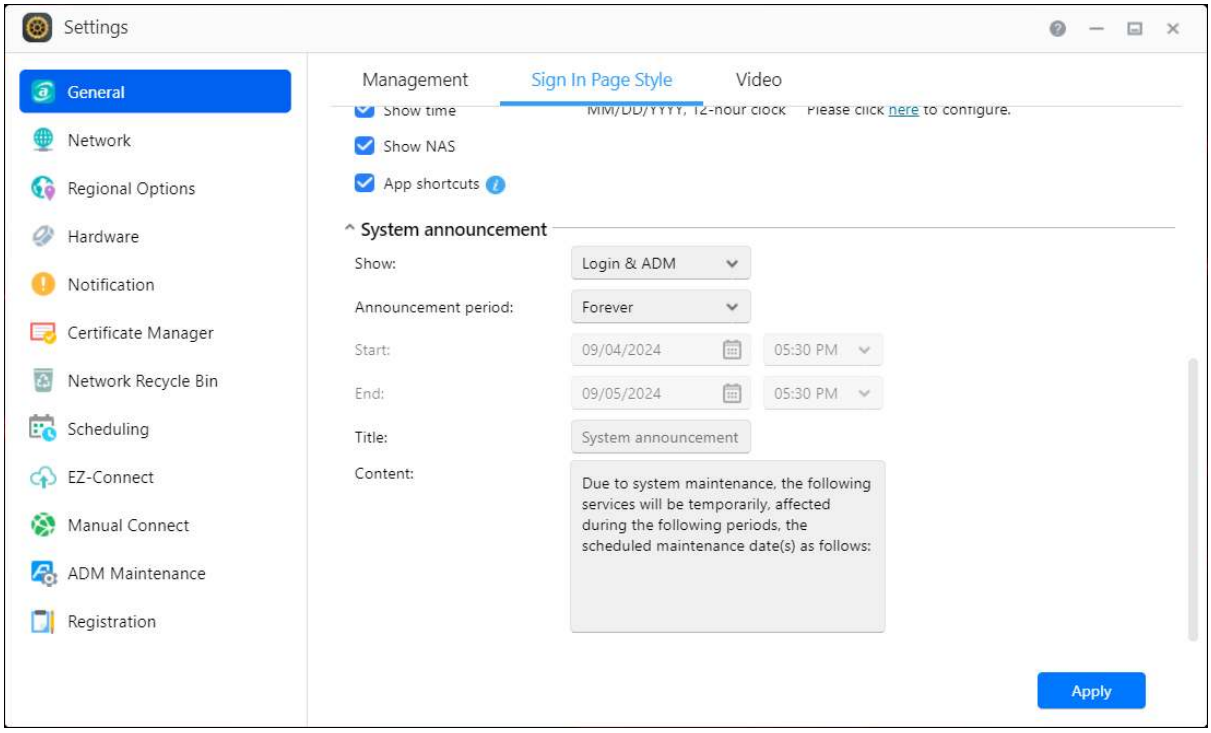
Layout: Options for adjusting the layout of the sign in page。

Display Settings:

Here you can change the display settings like [Show time], [Show hostname], [Show NAS], and [App shortcuts].

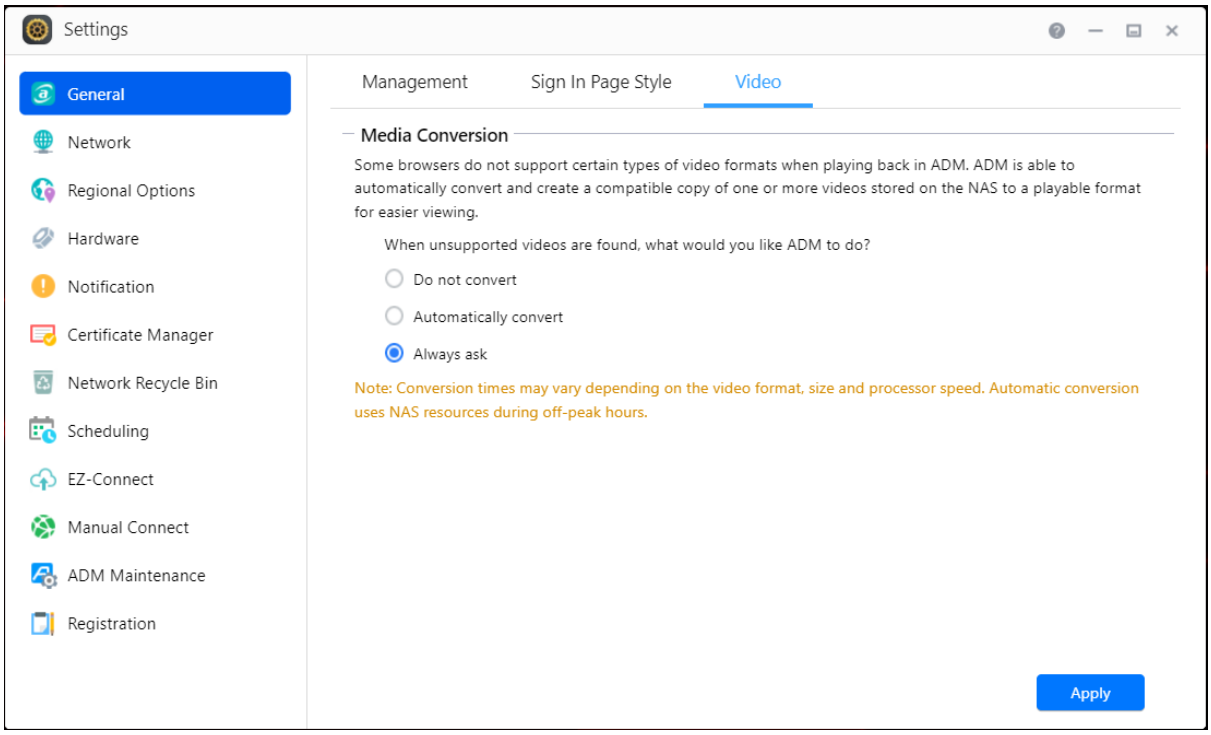
System announcement:

Displays announcements on the login page and specify announcement content as well as display time.



(4)Video

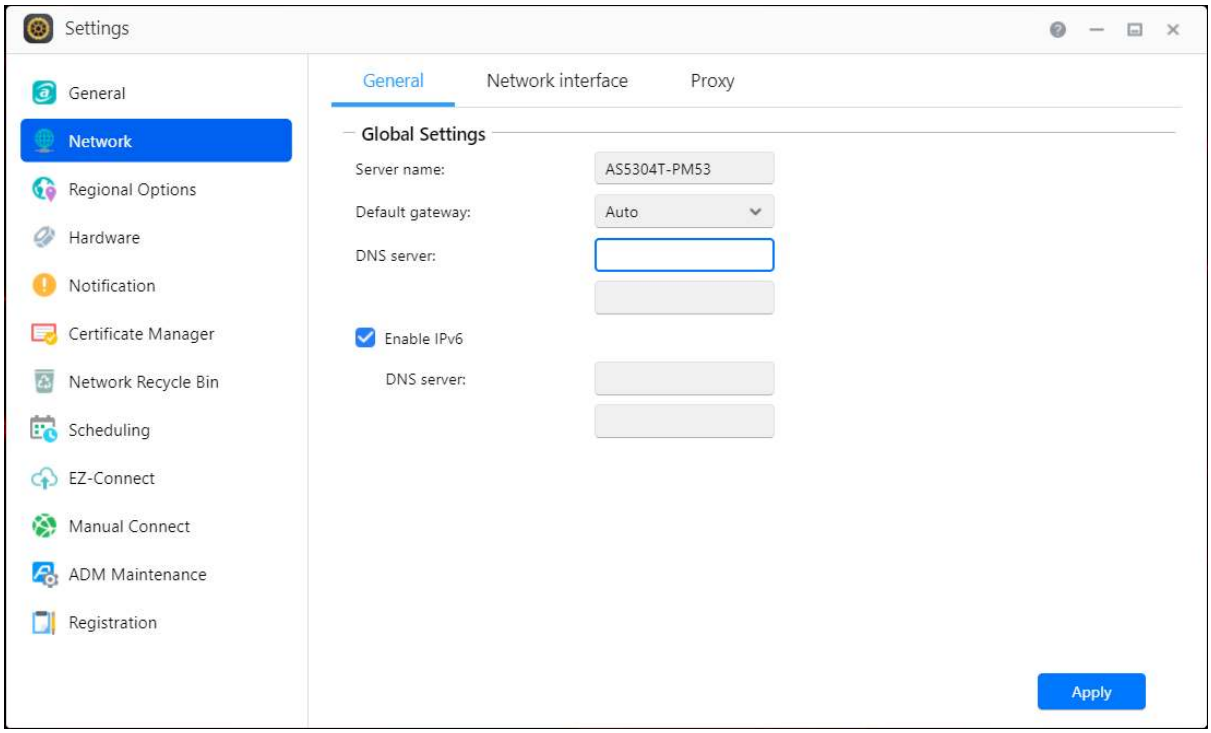
Converts unplayable videos to a playable format in File Explorer or Photo Gallery 3.



Network

Here you can configure the server name, LAN and Wi-Fi settings. Other settings include IP address, DNS server and default gateway .

Note: This function may differ depending on the NAS model in use.



(1)General

Server Name: An online name for your NAS.

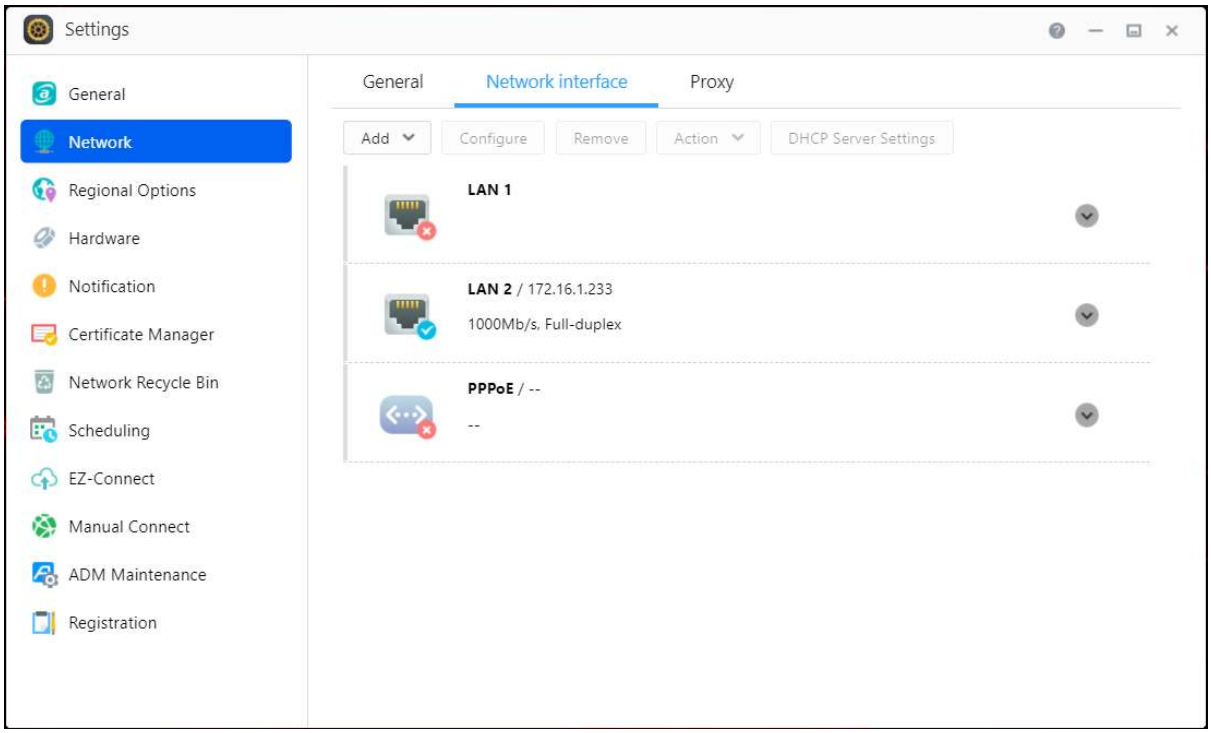
Default Gateway: The default gateway that you wish to use.

DNS Server:

Here you can set the DNS server that you wish to use. Should you choose to obtain your IP address via DHCP the system will automatically obtain the available DNS servers for you. (Network interface->LAN->Configure->Obtain IP address automatically) If you choose to manually enter an IP address then you will have to manually enter a DNS server as well. (Network interface->LAN->Configure->Set up IP address manually)

Reminder: Using an invalid DNS server will affect some network related functions. (i.e., Download Center). If you are uncertain about how to proceed, please choose to obtain your IP address automatically.

(2) Network interface



Add：Create VPN or Create Link Aggregation

Create VPN：

Here you can let your ASUSTOR NAS become a VPN client, and via PPTP or Open VPN, connect to a VPN server to access a virtual private network. ASUSTOR NAS supports the use of different connection settings files, allowing you to connect to the VPN server of your choice. The ASUSTOR VPN client currently supports the two most common connection protocols: PPTP, OpenVPN and Wireguard VPN.

Reminder: The VPN client cannot be used simultaneously with the VPN Server. If you need to use the VPN client, please first stop any use of the VPN server.

Create Link Aggregation：

Link aggregation (a.k.a. trunking, bonding or teaming) combines two or more network connections into one. To use link aggregation, your Ethernet cables must be connected to the same network switch and your network switch must support link aggregation.

Configure：Here you can set up IPv4 or IPv6 related settings. You can also obtain IP address automatically or set up IP address manually.

Action：Once you set up a VPN client, you can select that VPN clientand click [Action] to manage the use.

DHCP Server Settings：

You can configure the DHCP settings only if the **IP address was configured manually**.

- Lease time (hr): Enter a value (1-720) to set the DHCP lease time (in hours) for IP addresses assigned to DHCP clients.
- Primary/Secondary DNS: Enter the Primary/Secondary DNS address for DHCP clients.
- Domain Name: Set the domain name for the DHCP server.
- Subnet List: You can add subnets here.
- DHCP Client List: Here you can check the list of DHCP clients and their network configurations (e.g. MAC address, IP address, hostname, and the amount of time left before the DHCP lease expires).
- DHCP Reservations: If you want a client to always receive the same IP address during DHCP lease renewal, you can add the client to the DHCP reservation list.

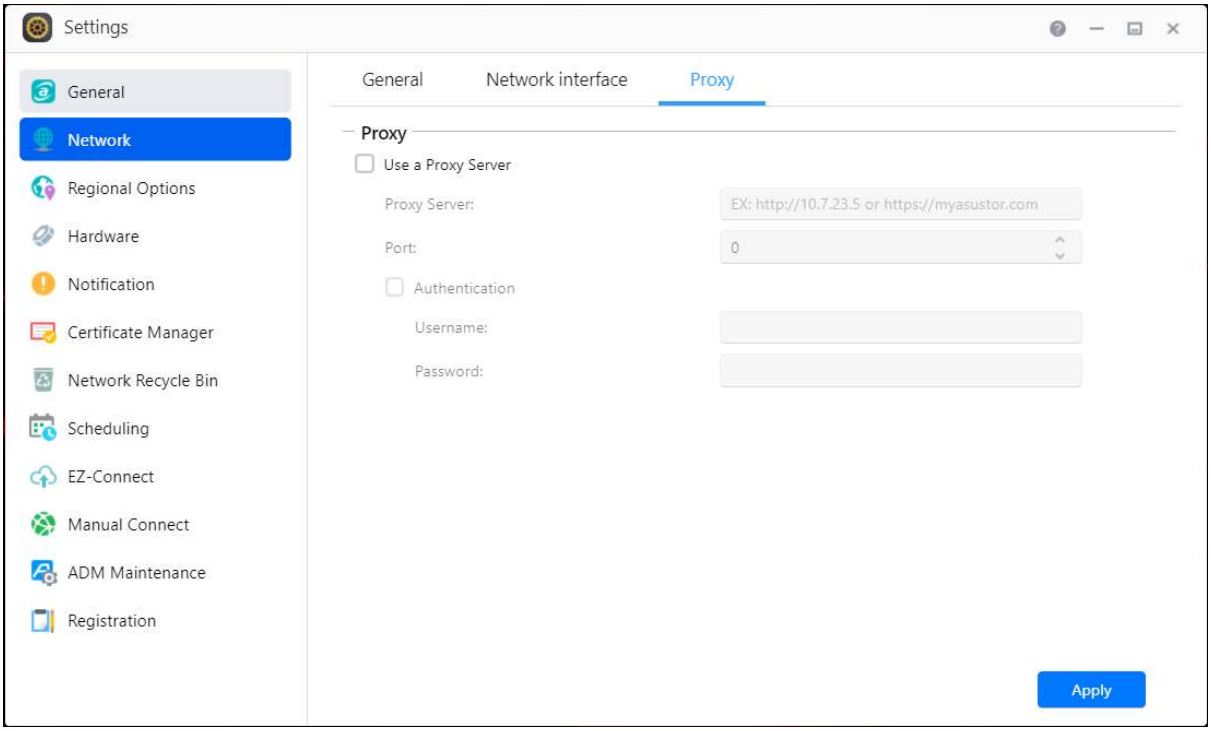
PPPoE：

If you are using DSL or a cable modem to connect to the Internet and your Internet service provider uses PPPoE (Point to Point Protocol over Ethernet), you can go to [Settings] > [Network] > [PPPoE] and enter your account information to allow the system to connect to the Internet without having to go through a router. If you wish to get more information about PPPoE, please contact your Internet service provider or network administrator.

(3)Proxy：

Here you can enable proxy server connections, allowing the NAS to connect to the internet via a proxy server.

- Proxy Server: The address of the proxy server you wish to connect to. (Supports HTTP and HTTPS)
- Port: The communications port of the proxy server.
- Authentication: If the proxy server you are using requires authentication, you can enable it here and then enter your username and password.

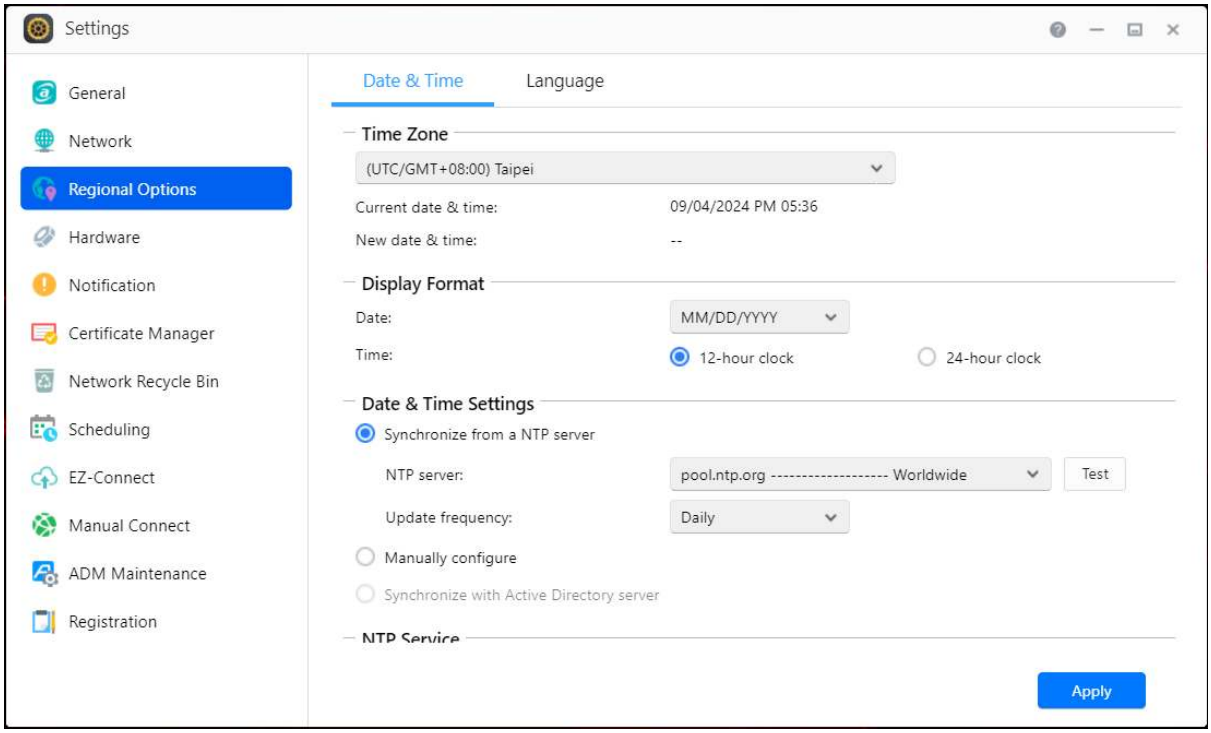


See More

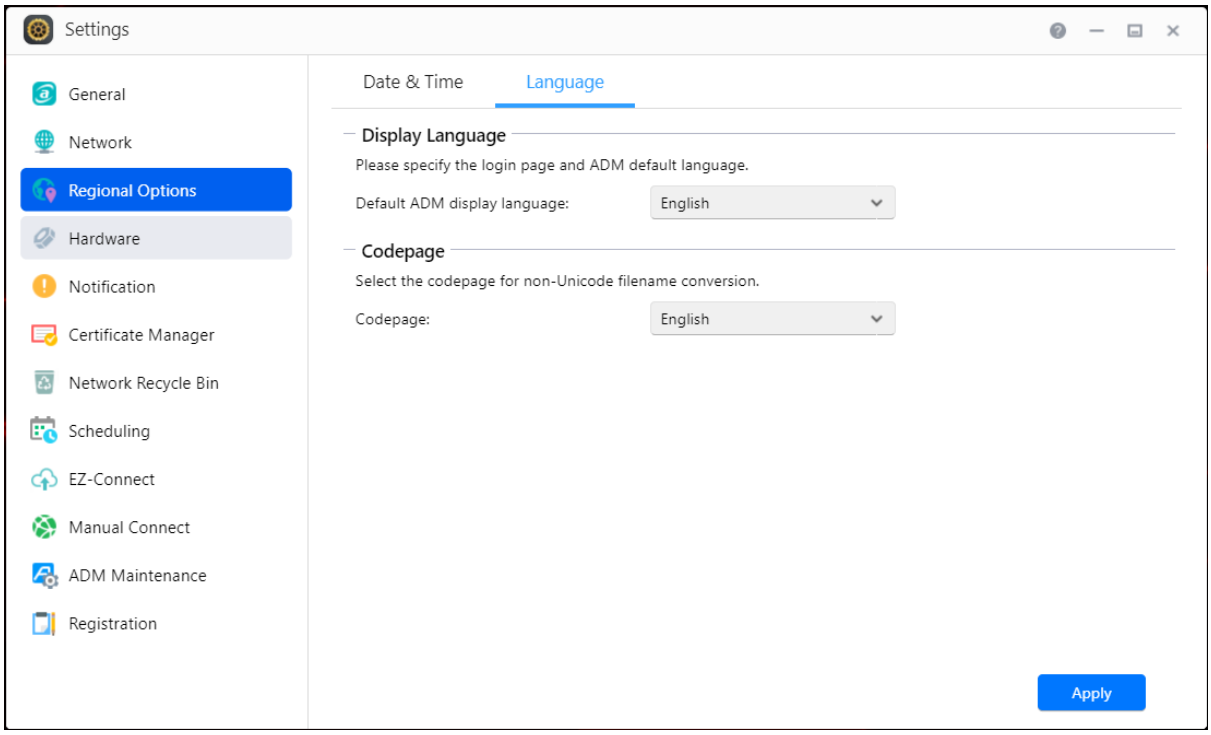
NAS 105 – Networking: A Beginner's Guide
NAS 307 – Networking: Link Aggregation
NAS 322 - Connecting Your NAS to a VPN

Regional Options

Here you can adjust the settings for date and time, display format, time zone and daylight saving time.



Codepage: In order to avoid garbled characters in the file name when using the app in some cases, it is recommended that you set the language code here according to your personal common language, so that the correct file name can be displayed while using the app.



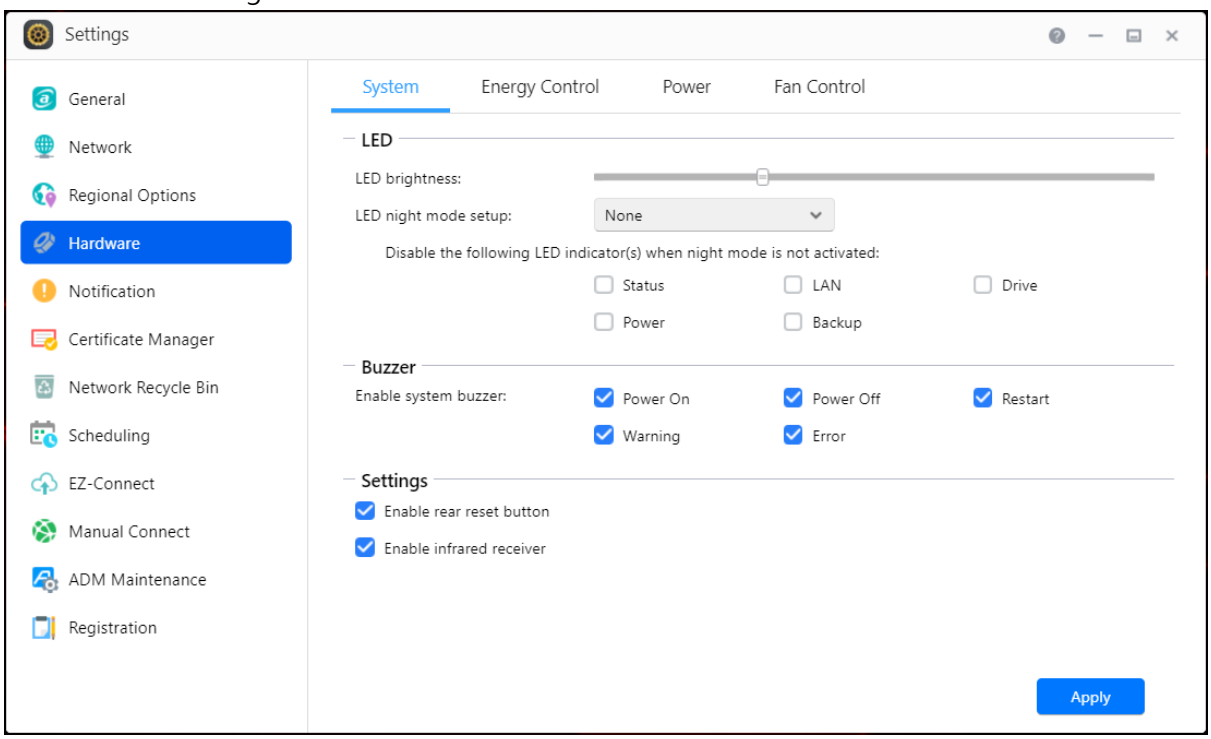
Hardware

Here you can configure settings for the LED indicators, buzzer, hard disk hibernation, power usage, fan speed and LCD display panel.

Note: This function may differ depending on the NAS model in use.

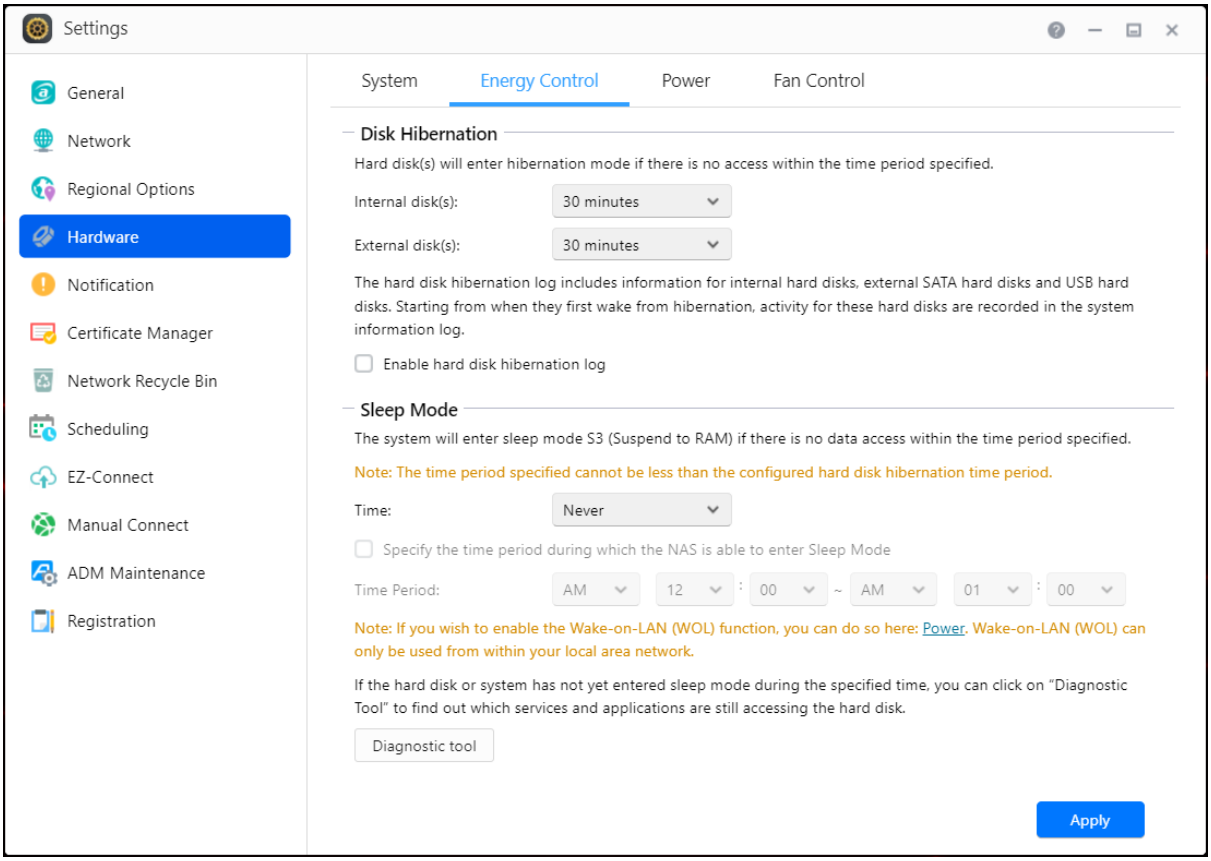
System:

Here you can choose to disable any of the LED indicators to save power. By selecting "night mode", only the system power LED indicator will be enabled. It will flash an orange light every 10 seconds. "Night mode scheduling" will allow you to configure the start time and duration of night mode. You can also configure settings for the buzzer, reset button and infrared receiver here. In certain Rackmount model, we provide Service LED which allows you to easily find the NAS location among a lot of machines.



Energy Control:

- Disk Hibernation: Your hard disks will enter hibernation mode when left idle for the period of time specified here. Once in hibernation, the hard disk LED indicator on the front of the disk tray will flash once every 10 seconds to indicate that the disk is hibernating. If an access error is detected on a hard disk, the LED indicator on the front of the disk tray will be lit red.
- Sleep Mode: Here you can configure the time period the NAS will remain idle before automatically entering Sleep Mode (S3). In addition to RAM, all of the NAS's hardware will stop running in order to conserve energy.
- Diagnostic Tool: If the hard disk or system has not yet entered sleep mode during the specified time, you can click on "Diagnostic Tool" to find out which services and applications are still accessing the hard disk.



Why won't my ASUSTOR NAS enter into Sleep Mode (S3)?

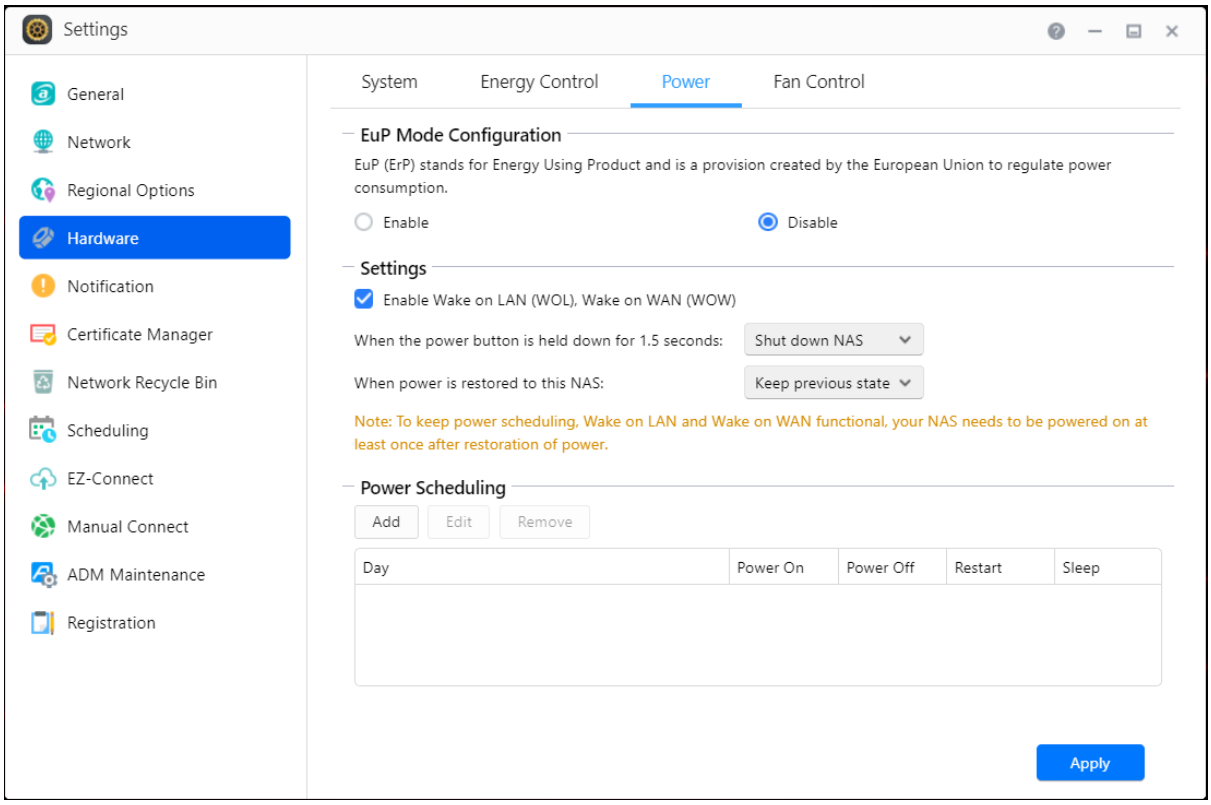
The following services will affect the NAS's ability to enter into Sleep Mode (S3) as they require hard disk access while running

- Download Center, Takeasy download tasks, RSS scheduled downloads, unable to enter Sleep Mode (S3) when subscription downloads from multimedia websites are in progress
- Unable to enter into Sleep Mode (S3) when Photo Gallery 3 or Looksgood doing media file conversion or Surveillance Center recording video.
- Unable to enter into Sleep Mode (S3) when the following Apps are syncing:DataSync Center, ASUS WebStorage
- Unable to enter into Sleep Mode (S3) when the following Apps are executing backup tasks: Cloud Backup Center,HiDrive, RALUS, WonderBox
- Unable to enter into Sleep Mode (S3) when the following Apps are doing background task : Plex, UPnP server, Owncloud, Docker-ce related apps
- Unable to enter into Sleep Mode (S3) when using Windows service: Join your NAS to a domain (AD) or become a Local Master browser
- PC\MAC mounts the NAS folder as a network drive.

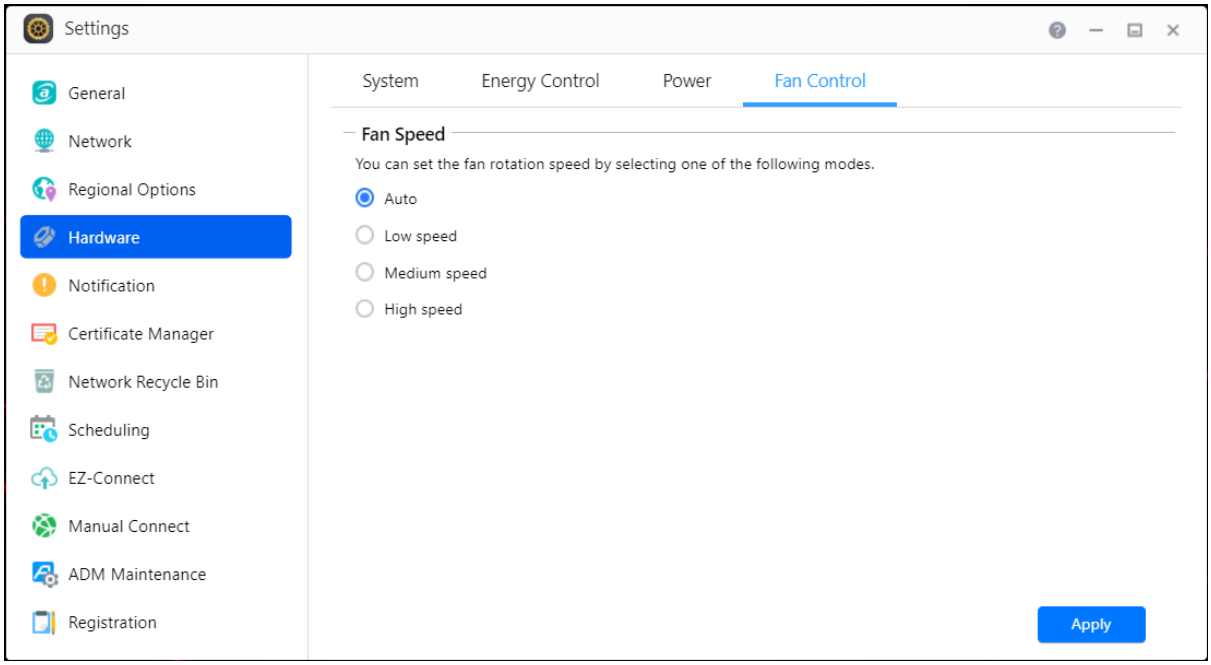
- ASUSTOR Control Center, Backup Plan, Download Assistant will check the connection settings with the NAS at any time when using it. This may also cause the NAS hard drive to fail to enter hibernation.

You can also use the previous mentioned Diagnostic Tools to check whether there are service programs not mentioned above, which causes the NAS to fail to enter sleep mode.

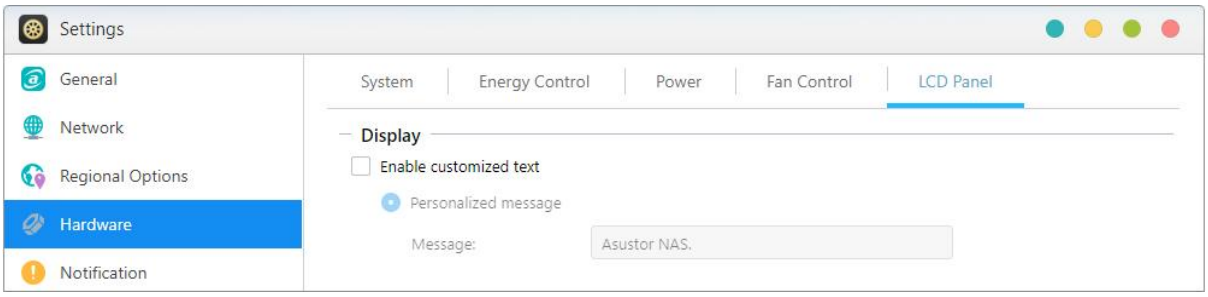
Power: Here you can manage power usage settings such as EuP, Wake-On-LAN (WOL) /Wake-On-WAN (WOW) and power scheduling.



Fan Control: Here you can set the rotation speed for the fan. If you are not sure about which speed to select, you can simply select Auto. This will automatically adjust the fan speed in accordance with the temperature of the system.



LCD Panel: You can have the LCD panel display a customized scrolling message. This function is only available on the models with LCD panel.



Note: Reset Button

If for some reason you cannot connect to your NAS, this button can be used to return a portion of the settings to their default values. The data stored inside will not be affected.

- The system administrator account (admin) password will be reset back to "admin".
- The system HTTP and HTTPS ports will be reset back to 8000 and 8001 respectively.
- The system will revert to automatically obtaining an IP address. You can then use ASUSTOR Control Center to search for your NAS
- ADM Defender will be reset and will allow all connections.

Reminder: You must hold the reset button down until you hear a "beep" for the settings mentioned above to be reset.

Notification

You can configure this setting to send you notification immediately in the event that the system encounters any problems.

E-mail:

Accounts that will be used for sending e-mail notifications can be set here. Google, Microsoft or another SMTP server email address can be used to send notifications. Multiple accounts can be set up but only one may be used as the primary account. While configuring accounts to receive e-mail notifications, the types of system notifications that will be received by these accounts can also be customized.

SMS:

Accounts of the SMS service provider that will be used for sending SMS notifications can be set here. While configuring a mobile phone number to receive SMS notifications, it is also possible to set the type of system notifications that will be received by these recipients.

Push Notification:

Here you can enable the push notification setting for the AiMaster mobile app which can be downloaded from the Apple App Store or Google Play. When designated system events occur, your ASUSTOR NAS will immediately send notification to the Apple/Google push notification server which will then forward it to your mobile device.

Advanced:

Custom rules for the event notifications can be set here. ADM event notifications can now be filtered by keywords. With support for daily, weekly, and monthly summaries, it' s easy to regularly review all important events in one email thread. Different rules can be set for different notification recipients and allows the correct owners to handle important events more efficiently.

You can click add to configure the push notification via the push services provider: Pushbullet or Pushover. Please refer to NAS 201-Configuring Push Notifications

You can click edit. Here you can enable the push notification setting for the AiMaster mobile app which can be downloaded from the Apple App Store or Google Play. When designated system events occur, your ASUSTOR NAS will immediately send notification to the Apple/Google push notification server which will then forward it to your mobile device. Supports iOS 10.0 and onwards/Supports Android 6 and onwards。

Available on the iPhone App Store

ANDROID APP ON Google play

Warning: Push notifications are transmitted to your device from Apple/Google's push notification servers. A poor Internet connection or abnormalities in Apple/Google's push notification service could potentially prevent AiMaster from correctly receiving notifications.

Certificate Manager

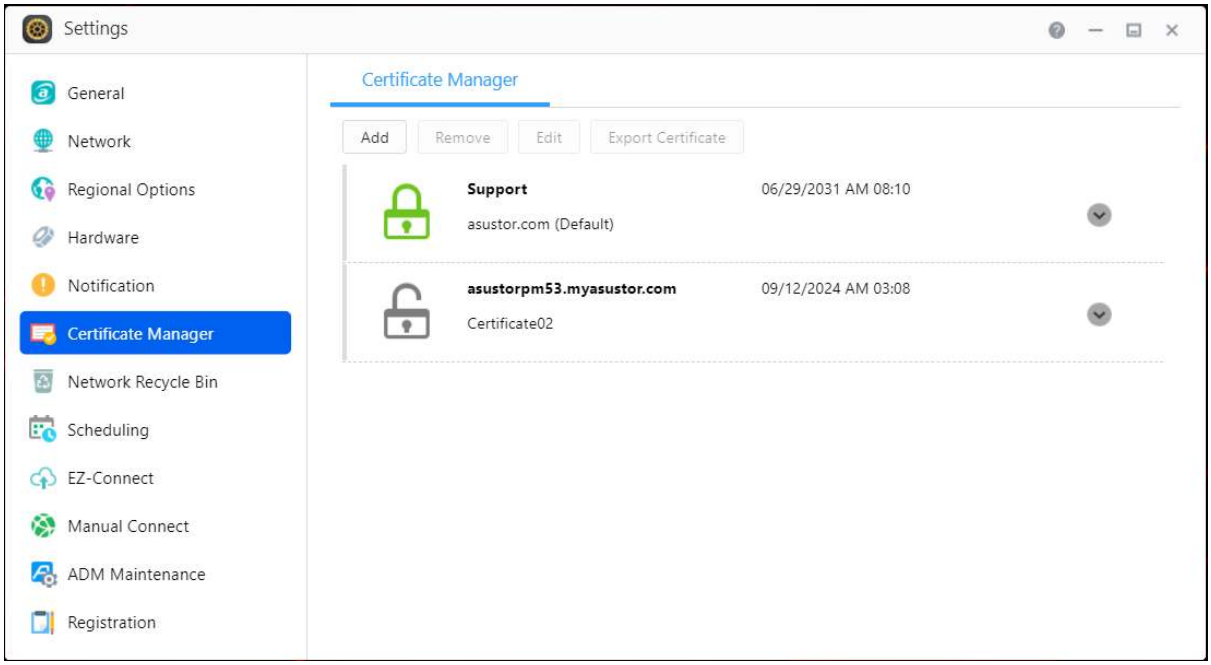
Using Certificate Manager, you can import a valid certificate to establish an SSL connection. All communication data (including identity credentials and transmitted information) among your NAS and all clients will be automatically encrypted over the SSL connection. This helps prevent the data from being eavesdropped on or modified over Internet. SSL applicable services on ASUSTOR NAS include:

ADM management connections (HTTPS)

Web server connections (HTTPS)

FTP server connections (FTPS)

Mail server connections (POP3s, IMAPs)



The Certificate Manager in ASUSTOR NAS can directly connect to Let's Encrypt to generate a valid certificate and install it automatically. This helps you to enhance NAS security with an SSL connection in a fast and easy way at zero cost. Moreover, before the Let's Encrypt issued certificate expires, Certificate Manager can be configured to perform an automatic renewal.

See More

NAS 324 - Using HTTPS to Secure NAS Communication

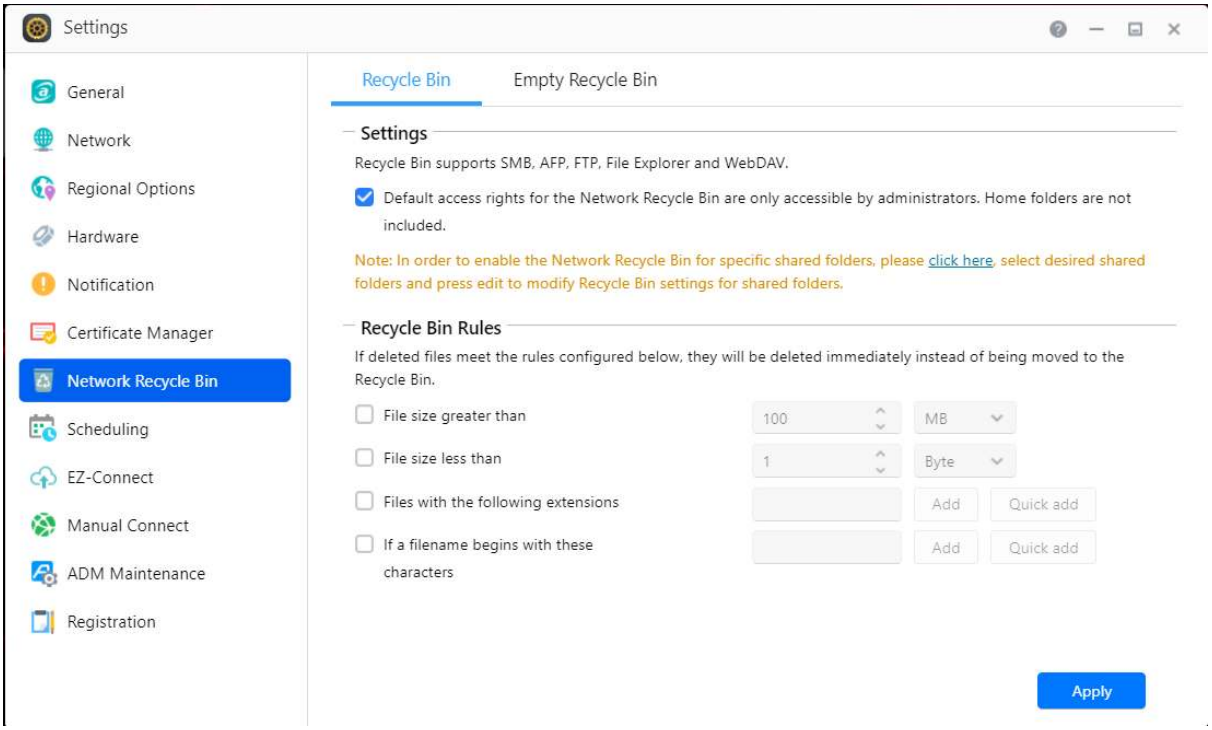
Network Recycle Bin

In order to enable the Network Recycle Bin for specific shared folders, please select "Access Control" > "Shared Folders", and then select the desired shared folder. Next, click on the "Edit" button to configure it.

The configurations made on the "Recycle Bin" and "Empty Recycle Bin" tabs will be applied to all enabled Network Recycle Bins.

After enabling Network Recycle Bin, all files deleted via the following protocols will be moved to the Recycle Bin:

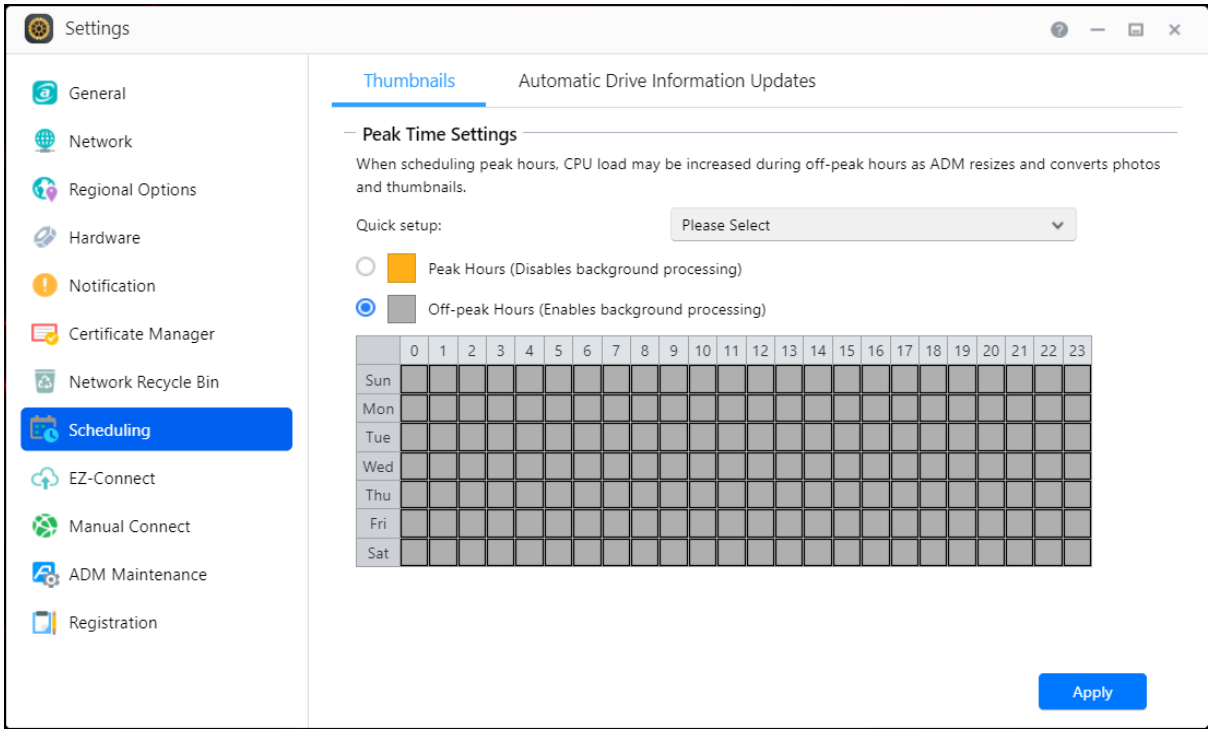
- SMB File Service (CIFS/SAMBA)
- Apple Filing Protocol (AFP)
- File Transfer Protocol (FTP)
- File Explorer
- WebDAV



Scheduling

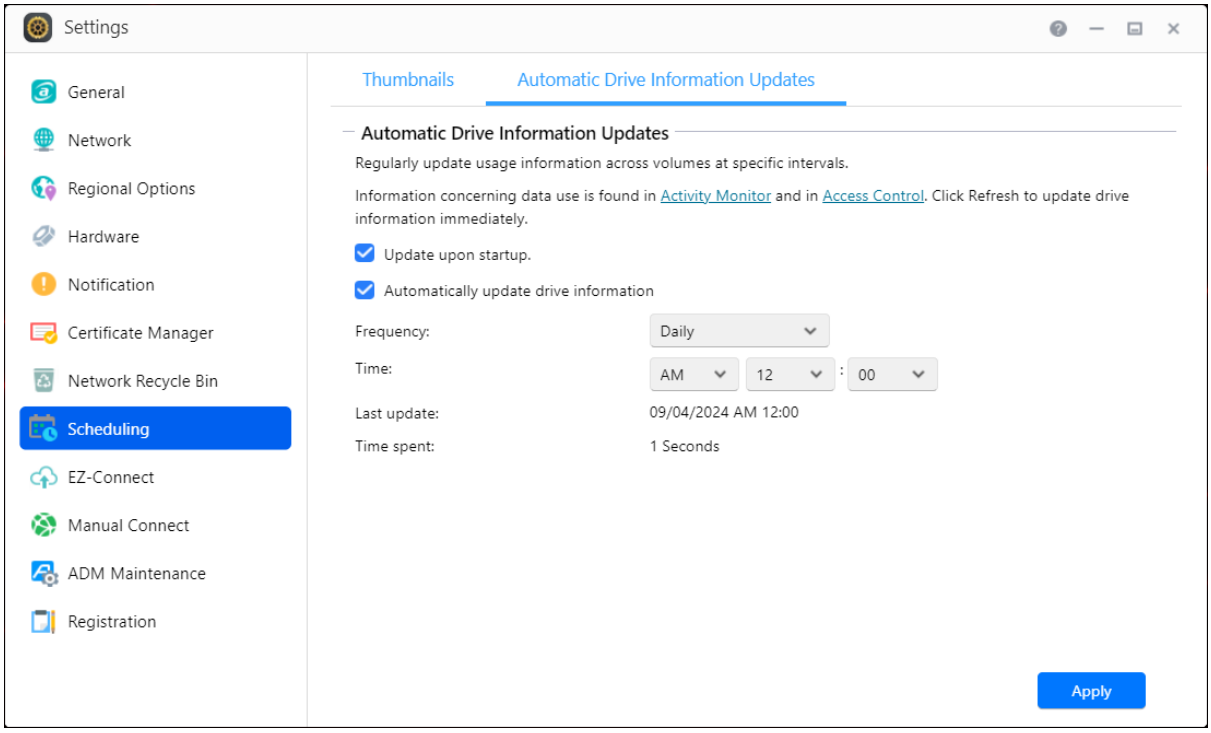
(1)Thumbnails:

Schedules times when background processes can do work and utilize CPU resources.



(2) Automatic Drive Information Updates:

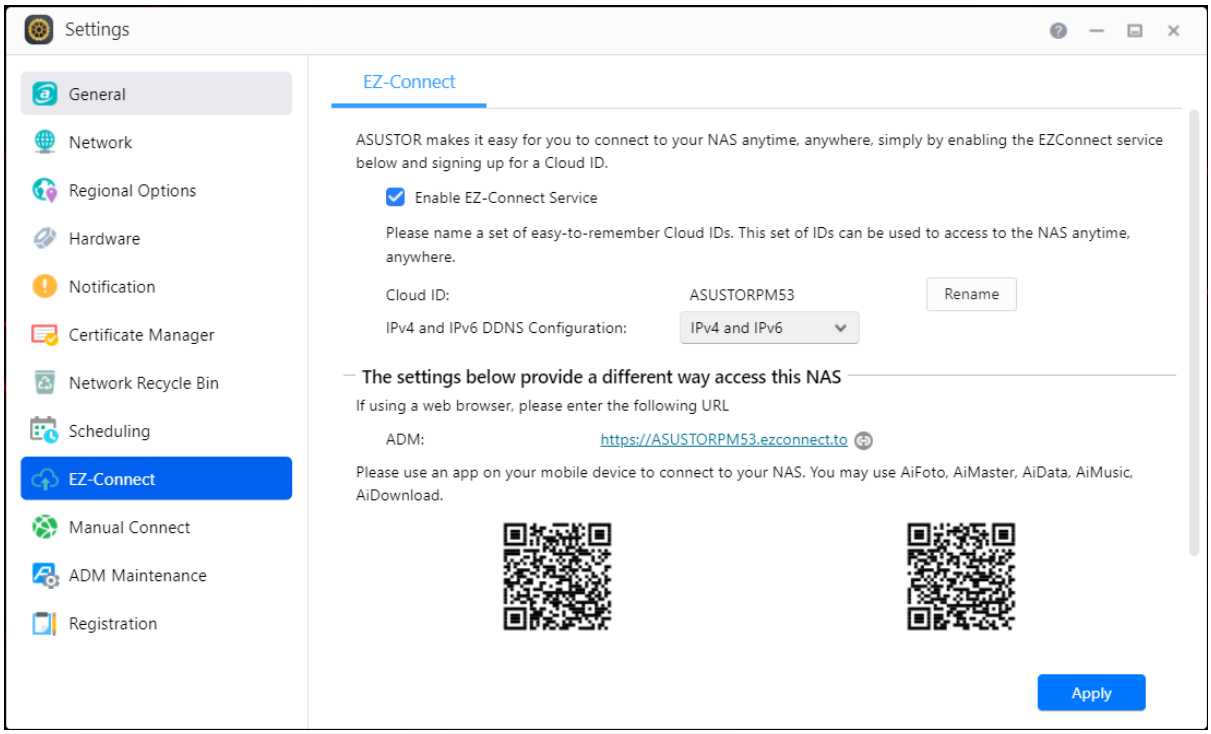
Updates drive usage information across volumes at specific intervals. Can cause hard drive usage to spike.



EZ-Connect

Here you can configure all the necessary settings for remote access.

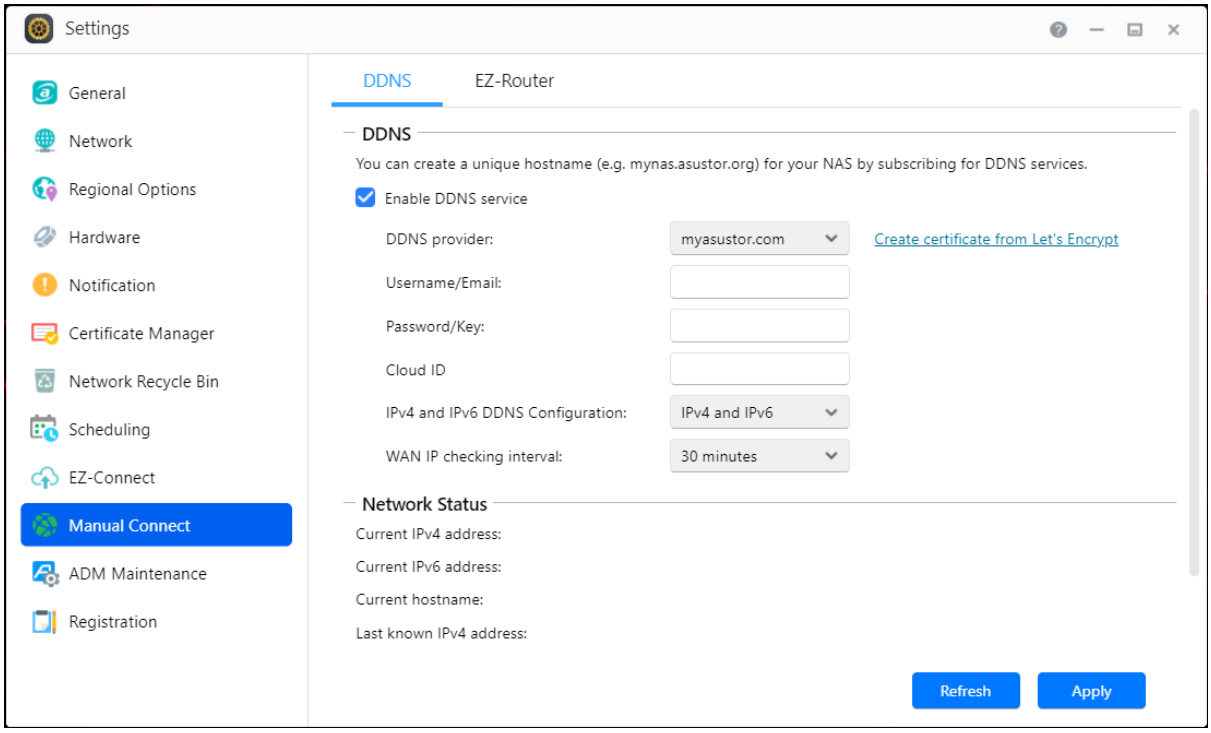
Enable EZ-Connect Service：Here you can obtain a Cloud ID for your NAS. By entering the Cloud ID into ASUSTOR client applications or Cloud ID.ezconnect.to into browser, you can access your NAS without having to enter the host/IP information.



Manually Connect

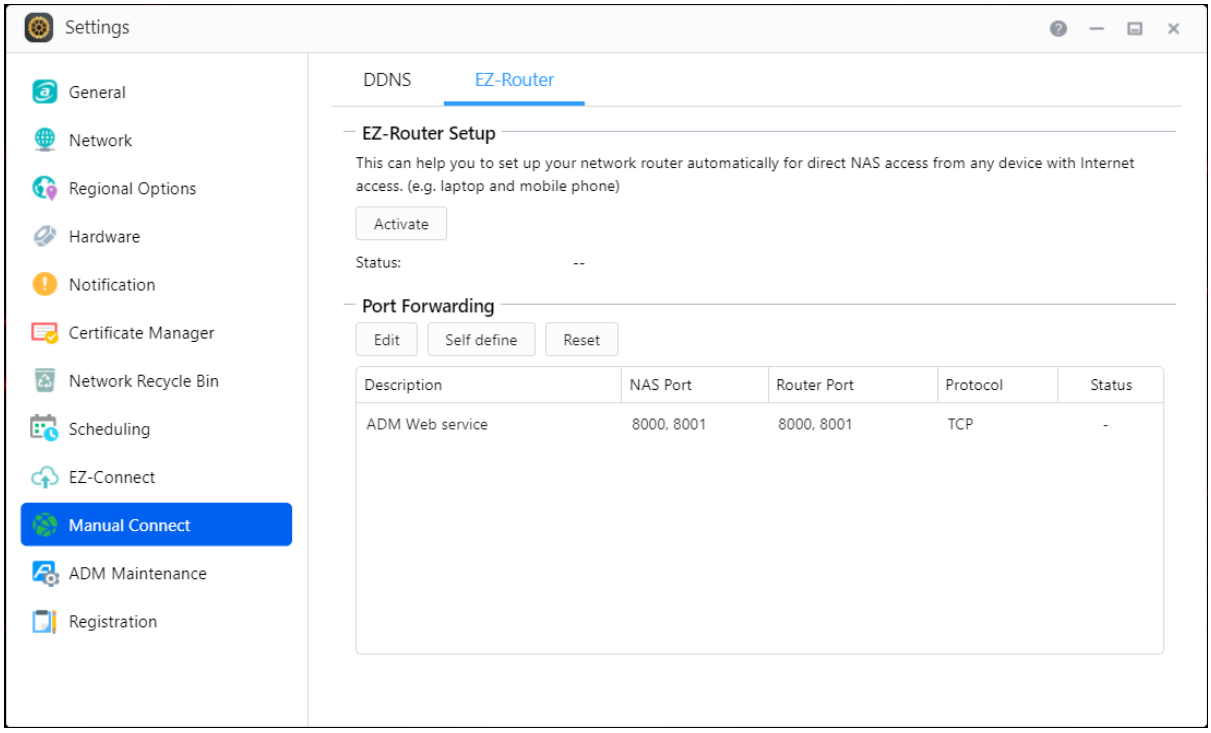
DDNS:

Here you can create or configure your DDNS account. DDNS allows you to use a persistent host name (i.e., nas.asustor.com) to connect to your NAS. You won't have to worry about remembering your NAS's IP address. This feature is often used in dynamic IP environments.



EZ-Router:

Here you can set up your network router automatically for direct NAS access from any device with Internet access.



Reminder: Your router must support UPnP/NAT-PMP. Please note that not all routers support automatic configuration. Please see the hardware compatibility list found on the ASUSTOR

website for more information. To know the network ports list used by ASUSTOR services, please refer to: What network ports are used by asustor services

See More:

NAS 227 - Introduction to AEC (ASUSTOR EZ Connect)
NAS 224 - Remote Access - Manual Connect
Compatibility - EZ-Router

Related:

ADM Maintenance

ADM Update:

Here you can obtain the latest version of ADM to ensure system stability and to upgrade software features.

Live Update: After enabling Live Update, the system will notify you of any available updates when you log in to ADM.

Set automatic scheduled updates: After enabling this option, the system will automatically check for available updates during the configured time. If updates are available, the system will automatically proceed to download and install them.

Note: If, during ASUSTOR App upgrades, the system shuts down or the upgrades are interrupted due to unknown causes, the system will attempt the upgrades again at the next scheduled time.

Manual Update: You can go to ASUSTOR's official website to download the latest version of ADM.

Factory Reset:

Here you can restore the system back to its factory default settings. After this, the system will return to its pre-initialized state. For security reasons, you will be asked to enter the administrator password before performing this operation. You can then initialize the system again through ASUSTOR Control Center or by logging into ADM.

Note:

After the system is restored to its factory default settings, all previous settings and files will be permanently deleted. You will not be able to recover these settings and files. Please ensure that you have backed up the data on your NAS before you begin this operation.

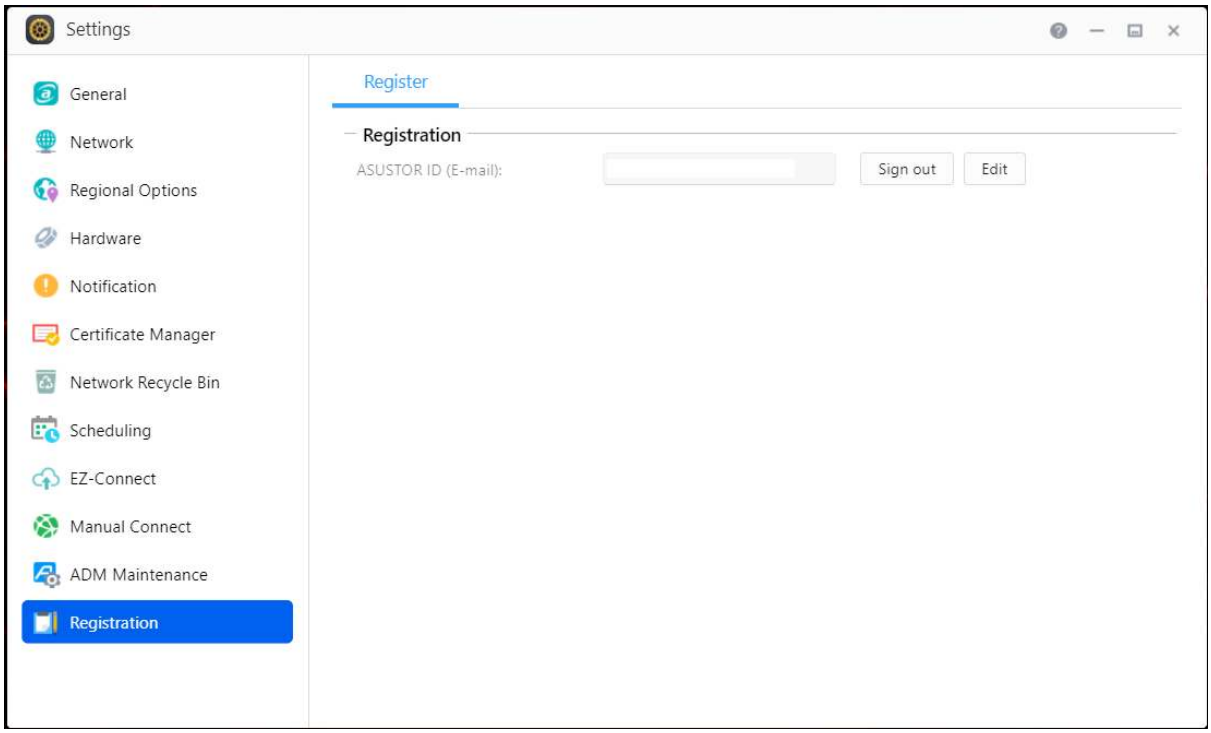
It is not possible for anyone to reinitialize a NAS that contains a WORM shared folder set to compliance mode. This means that the NAS cannot be restored to factory settings.

Settings Backup:

Here you can export or restore system settings in .bak format (file extension). This feature also supports scheduled backup, which means that you can create scheduled backup jobs and then export the settings to a specified location on your NAS.

Registration

Here you can sign up for a personal account (ASUSTOR ID) and register your product. Once the product has been registered, your ASUSTOR ID will be automatically enabled.

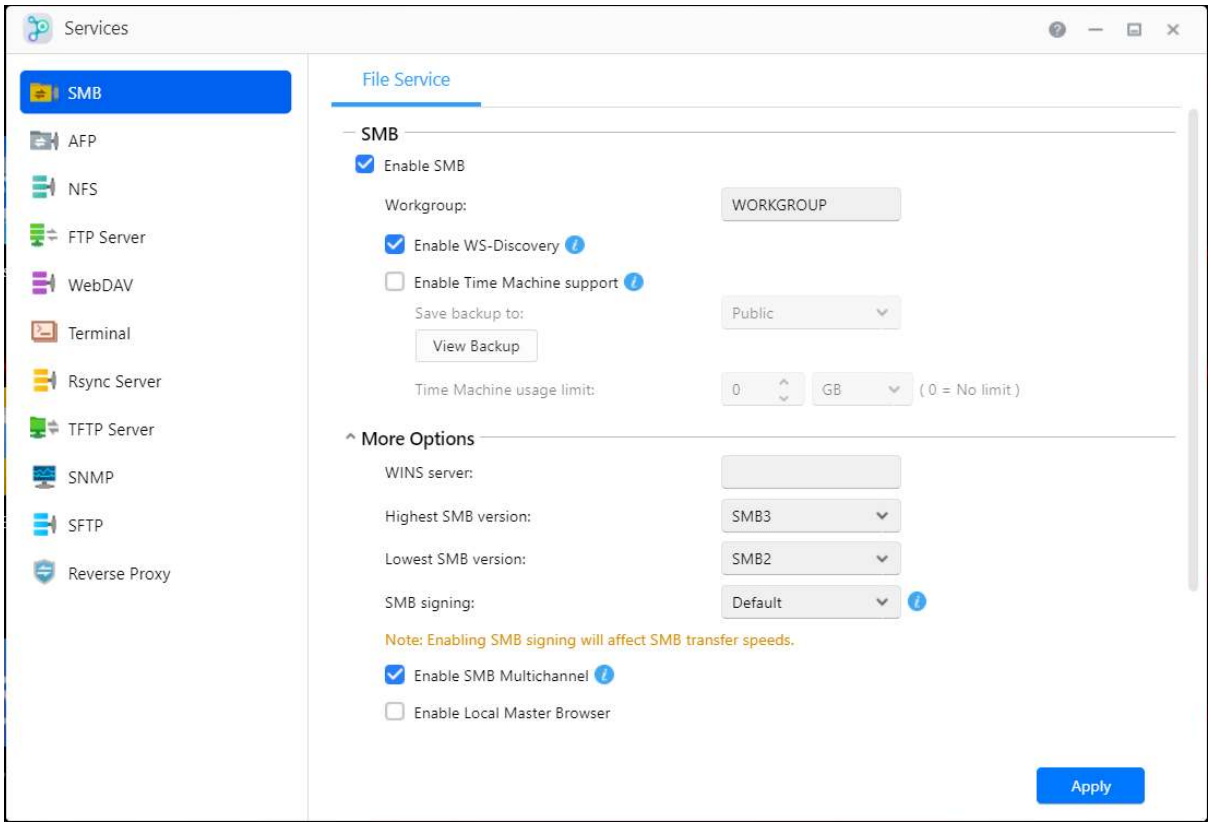


Services

Here you can configure network related services such as FTP server and TFTP server.

SMB

SAMBA is the open source implementation for SMB and works with most major operating systems. This also enables your NAS to join an Active Directory, also known as AD, which enables access rights for domain users, groups and shared folders on Windows when accessing the NAS.



Workgroup:

This is the workgroup on your local area network that your NAS belongs to.

WINS Server:

Microsoft Windows Internet Name Service (WINS) is a NetBIOS name-to-IP-address mapping service. Window users will locate the system more easily on TCP/IP networks if the system has been configured to register with a WINS server.

Max/Min SMB protocol:

Sets highest and lowest SMB levels.

- SMB 3: SMB 3 has been supported since Windows 8 and Windows Server 2012. It is the enhanced version of SMB 2.
- SMB 2: SMB (Server Message Block) 2 has been supported since Windows Vista and is the enhanced version of SMB. SMB 2 adds the ability to compound multiple SMB actions into a single request to reduce the number of network packets and enhance performance.

Enable SMB Multichannel:

SMB Multichannel allows you to combine the speed of multiple Ethernet ports for speeds up to and above double performance depending on network conditions and number of Ethernet ports used. This feature only allows for combining the Ethernet ports of the same speed and type.

Example: 2.5GbE and 10GbE ports cannot be combined.

Enable Local Master Browser:

After enabling this option, your NAS will, from your local area network, collect the names of all other computers in its workgroup.

Reminder: Enabling this feature may prevent your hard disk(s) from going into hibernation.

Allow only NTLMv2 authentication:

NTLMv2 stands for NT LAN Manager version 2. When this option is enabled, login to the shared folders by Microsoft Networking will only be allowed using NTLMv2 authentication. If the option is disabled, NTLM (NT LAN Manager) will be used by default and NTLMv2 can be negotiated by the client. The default setting is disabled.

Enable Samba VFS modules to enhance macOS compatibility:

This option enables the catia, fruit and streams_xattr modules on Samba. These modules increase compatibility for macOS Finder on Samba for features that include but are not limited to special characters and metadata. If you are experiencing difficulty accessing SMB volumes with macOS with certain apps, enabling this option may resolve these issues.

Disable Opportunistic Locking:

For networks that require multiple users concurrently accessing the same file such as database, it is suggested to disable Opportunistic Locking. To prevent one file being edited by multiple users simultaneously, such mechanism should be implemented in the document processing software (for example, Microsoft Office programs).

Enable debug logging:

When this option is enabled, detailed logs will be stored for debugging purposes. Enabling this option affects system performance.

- Note

Enable Time Machine in AFP to use Time Machine with your NAS.

Enable WS-Discovery:

WS-Discovery makes your NAS visible to your Windows PC on your local network. To find and browse the contents of your NAS, open the network browser, named "Network" in Windows File

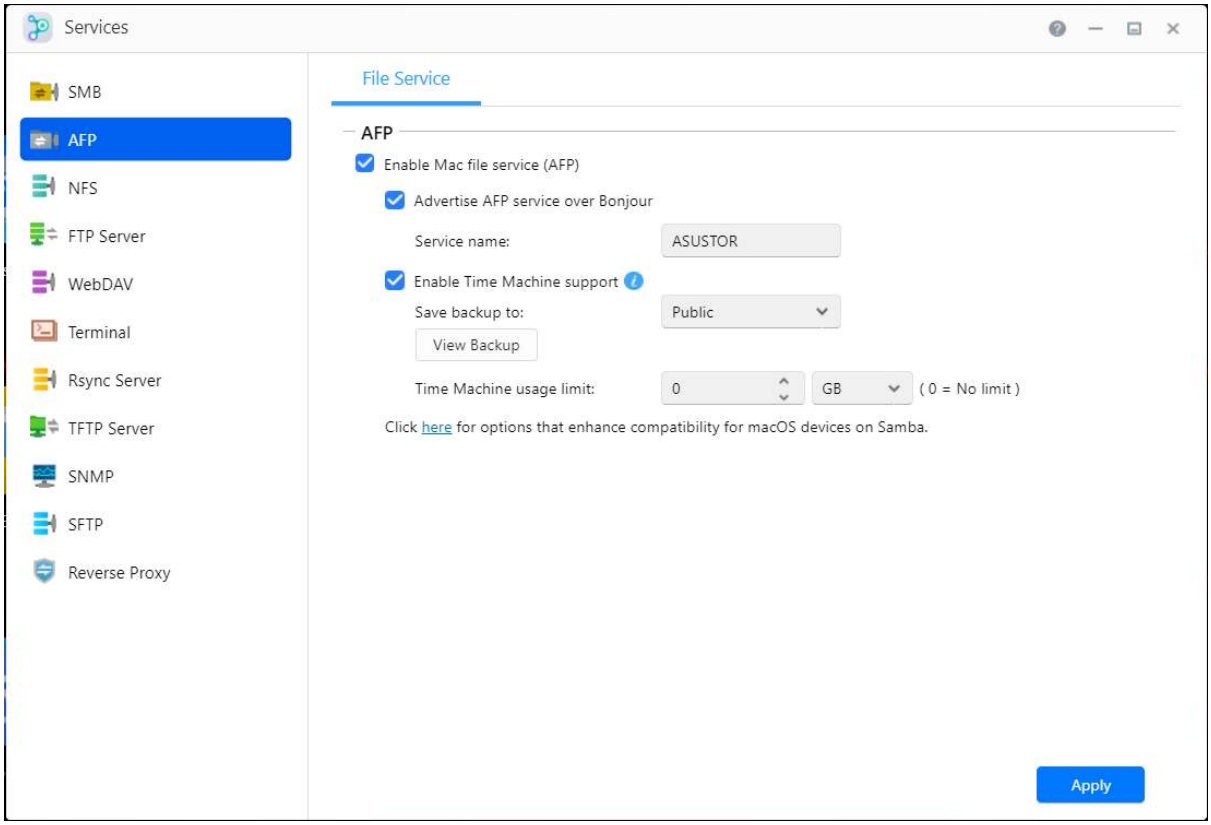
Explorer and navigate to the collapsible item named "Computer". These instructions may vary based on your view settings.

SEE MORE

NAS 102 - Introduction to File Transfer Protocols
NAS 106 – Using NAS with Microsoft Windows
NAS 206 – Using NAS with Windows Active Directory

AFP

Enables access by legacy Apple devices using Apple Filing Protocol.



Using the Apple Filing Protocol (AFP):

AFP is used for transferring files between legacy macOS devices and local area networks.

In Finder, click on Connect to Server under Go. Enter afp://nas-IP to connect. For example: afp: //192.168.1.168

Advertise AFP service over Bonjour:

Bonjour, also known as zero-configuration networking, has been widely used in Apple related products. It will scan your vicinity for other Apple devices and then let you directly connect to them without having to know their actual IP addresses.

After enabling this service, you will be able to see your NAS in the left hand panel of the Finder under "Shared". Simply click on your NAS to connect to it.

Service name is the name of the NAS in Finder.

Enable Time Machine Support:

ASUSTOR NAS devices support Time Machine and can back up almost any mac. Quotas can be set to ensure that NAS drives are not filled up. See **NAS 159 – Time Machine: Best Practice for guidance.** for further guidance when dealing with multiple mac devices.

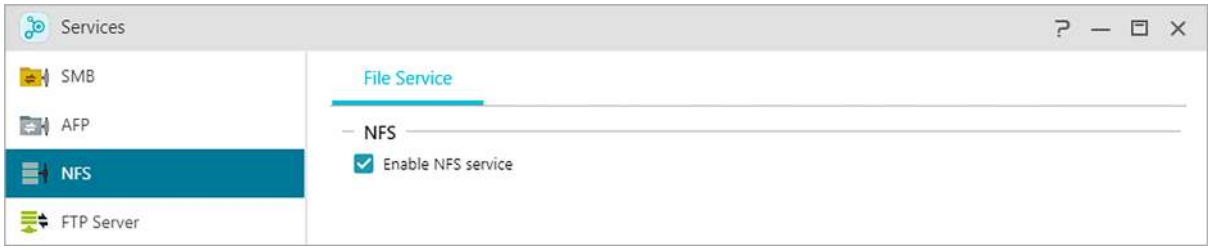
See more

NAS 102 - Introduction to File Transfer Protocols
NAS 108 - Using NAS with Apple macOS
NAS 159 - Time Machine: Best Practice

NFS

After enabling NFS, you will be able to access your NAS via UNIX or Linux operating systems.

After enabling NFS service, you can configure access rights using the Shared Folders setting found in the Access Control system app (see section Access Control). This option will be hidden if NFS service has not been enabled.

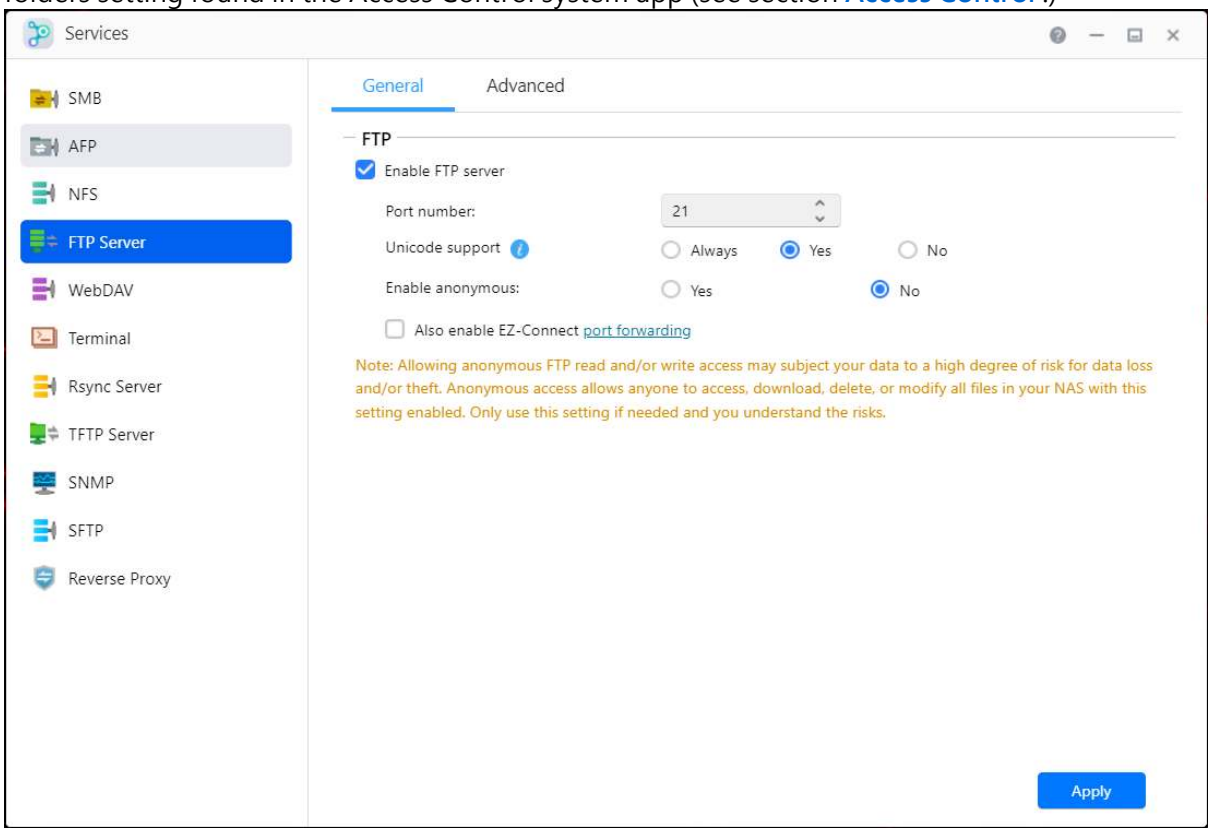


See more

NAS 102 - Introduction to File Transfer Protocols
NAS 109 - Using NAS with Linux

FTP Server

After enabling the FTP server setting, you will be able to access your NAS via any FTP client program (i.e., FileZilla). FTP server access rights are the same as those for the system (ADM). Should you wish to change or configure these access rights, you may do so using the shared folders setting found in the Access Control system app (see section Access Control .)



Unicode support:

Please enable this option if your FTP client program supports Unicode.

Enable anonymous:

Enabling this option will allow FTP client programs to access your NAS anonymously, without the need for a username or password. For security reasons, this is not recommended.

Enable SSL/TLS: Enable encryption for FTP connections.

Enable FXP:

FXP stands for File eXchange Protocol. By enabling this option, FTP service will support server-to-server file transfer function.

Maximum number of all FTP connections:

The maximum number of simultaneous FTP connections allowed.

Maximum number of connections per IP:

The maximum number of connections allowed per IP or system.

Max upload rate:

The maximum upload speed per connection. 0 represents no limitation.

Max download rate:

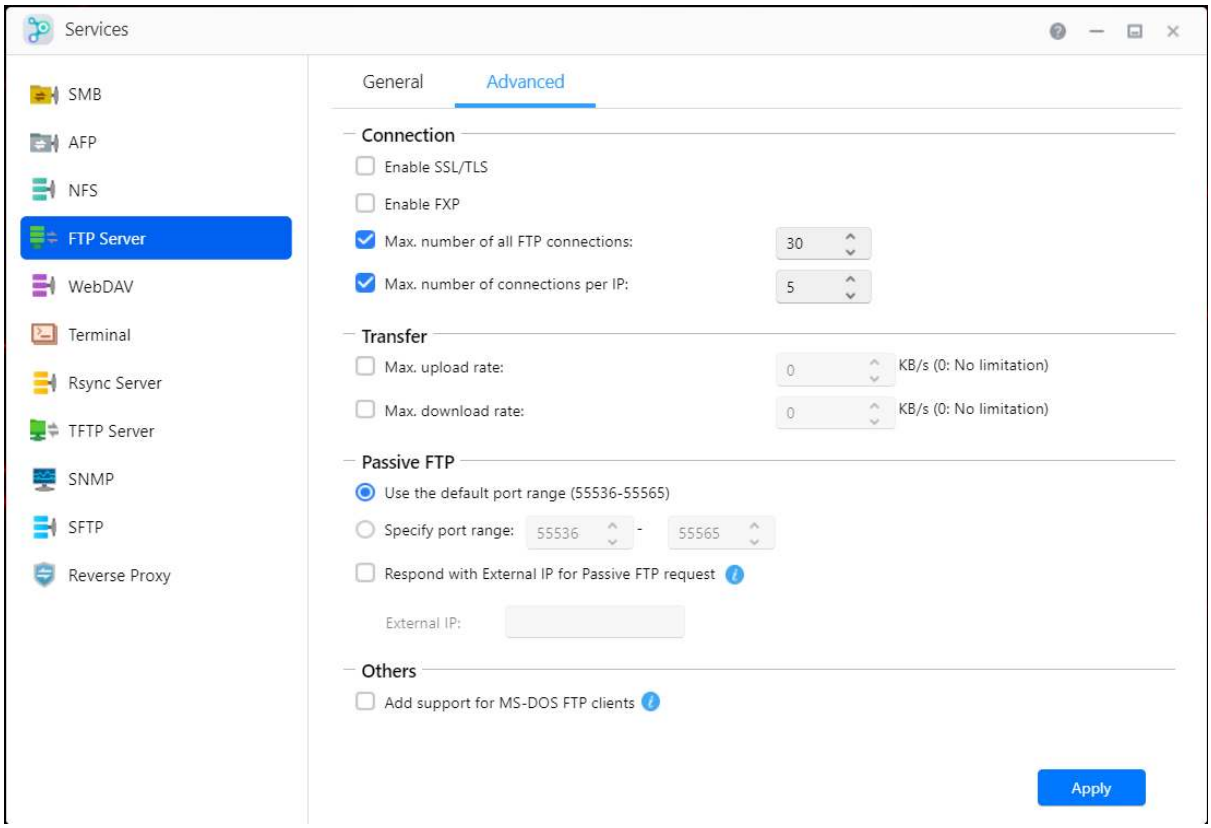
The maximum download speed per connection. 0 represents no limitation.

Passive FTP:

To minimize the security concerns of connecting from a server to a client, a type of connection mode called Passive Mode (PASV) was developed. When a client program starts to connect, it will notify the server to activate Passive Mode.

Respond with External IP:

By enabling this option, the server will report its external IP address to FTP clients. This option only works when the ASUSTOR NAS is behind a NAT, and the FTP clients belong to a different subnet than the ASUSTOR NAS does. In most cases, this option is unnecessary, but if FTP clients fail to connect to the ASUSTOR NAS, then you can enabled this option and try again.



Note: About Passive FTP

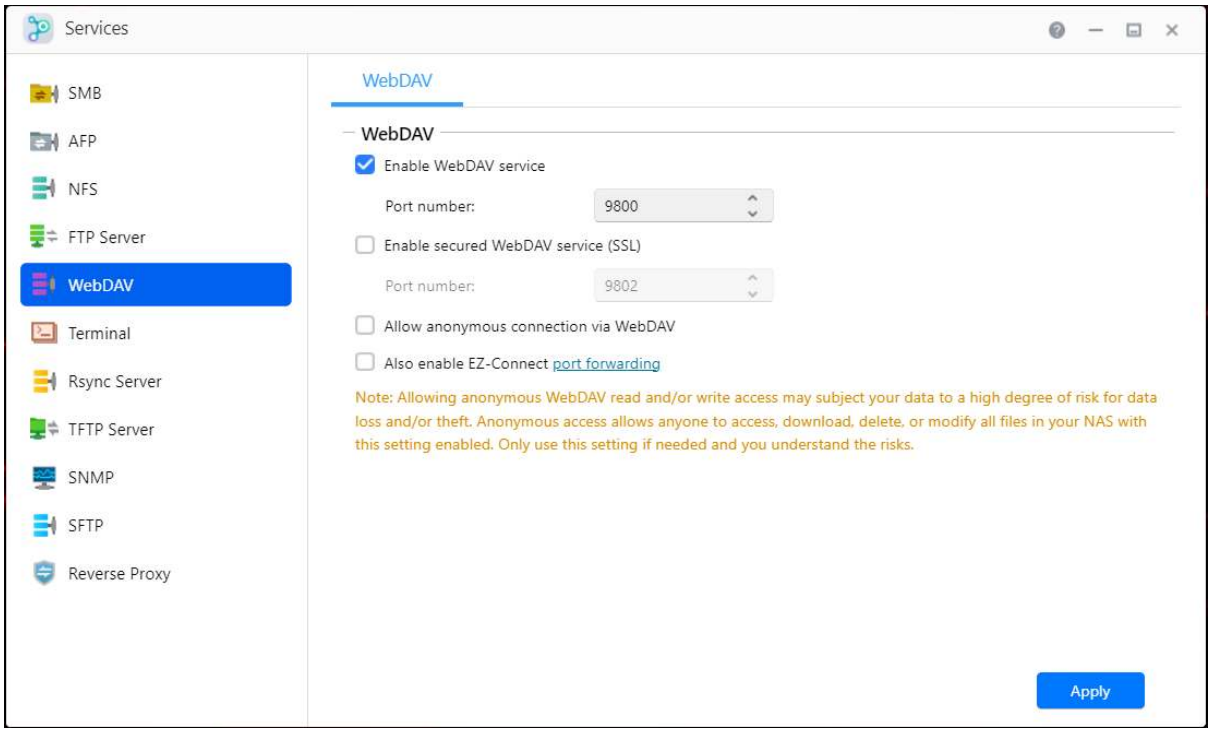
Passive mode FTP can be used to overcome the problem of active mode FTP being blocked by firewalls. Passive FTP makes the FTP client establish all connections to the FTP server, as opposed to the web host supplying the return port. Firewalls typically allow passive FTP connections without requiring additional configuration information.

See More

File Transfer Protocol - Wikipedia
NAS 102-Introduction to File Transfer Protocols

WebDAV

After enabling WebDAV you can access your NAS via HTTP or HTTPS protocol by using a Web browser or other client programs.

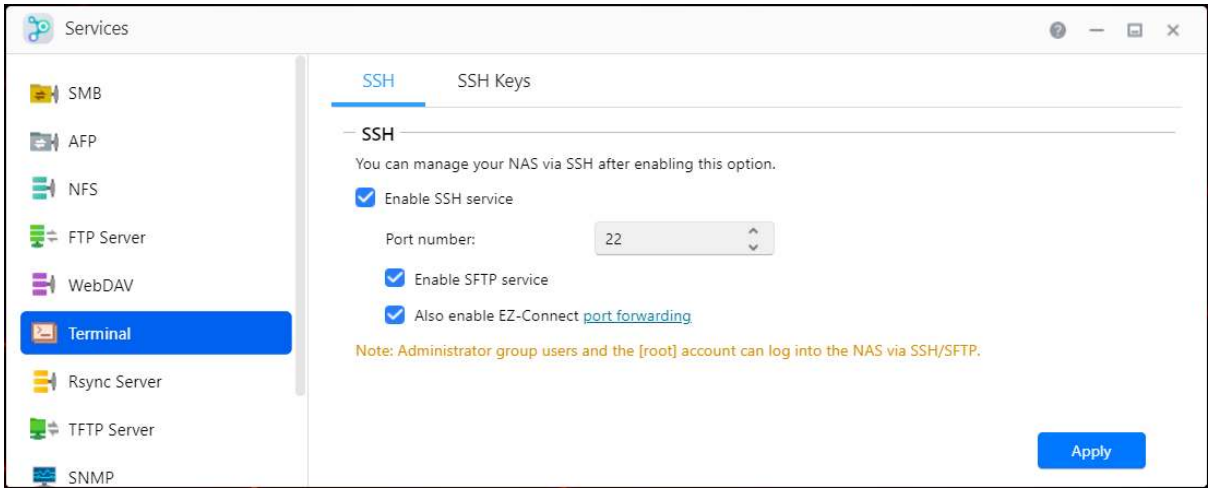


See More

NAS 102 - Introduction to File Transfer Protocols
NAS 208 – **WebDAV: A Secure File Sharing Alternative to FTP**

Terminal

You can enable SSH service if you wish to manage your NAS over Secure Shell (SSH). If you wish to transfer data to your NAS through SFTP (Secure FTP) you can enable that here as well.

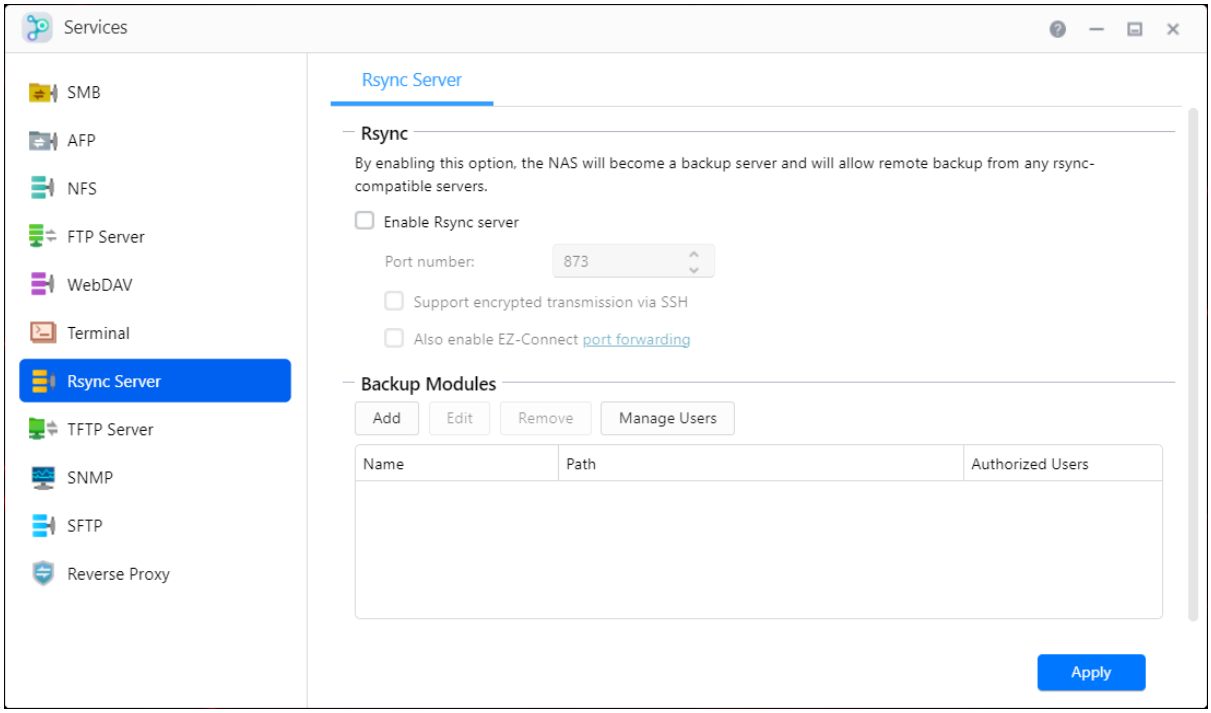


Note: For security reasons, SSH only allows the "admin" account or the "root" account to log in. The passwords for both these accounts are identical.

Rsync Server

After enabling Rsync server, your NAS will become a backup server and will allow remote backup from another ASUSTOR NAS or any other Rsync-compatible servers.

Enable Rsync server:



If you wish to permit encrypted backup for clients, please enable support for encrypted transmission via SSH. If you enable this feature the system will then automatically enable SSH service(Terminal)

Manage Rysnc User:

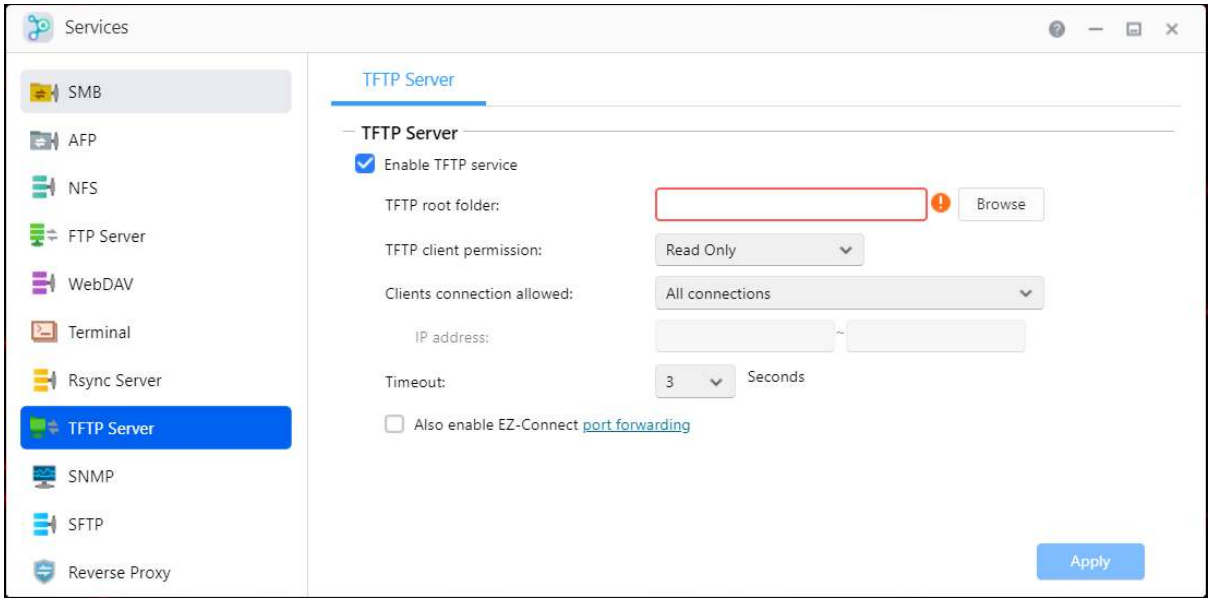
If you wish to create restrictions on the Rsync connections that can back up to your NAS, please click on Manage Users to create different Rsync user accounts.(Reminder: Rsync accounts are different and independent from system accounts.)

Add New Backup Modules:

Click on Add to create a new backup module. Each backup module will then correspond to a physical path within the system. When an Rsync client connects to your NAS, it will be able to select a backup module. Data will then be backed up to the module's corresponding physical path.

TFTP Server

TFTP (Trivial File Transfer Protocol) is a simple type of file transfer protocol that is used to transfer configurations or small files, providing no authentication.



TFTP root folder:

Specifies the folder on the ASUSTOR NAS that TFTP clients can access.

TFTP client permission:

Specifies the permissions for TFTP clients. If you select "Read Only", TFTP clients will only be able to view the contents of the TFTP root folder. If you select "Read & Write", TFTP clients will be able to modify the contents of the TFTP root folder.

Client connections allowed:

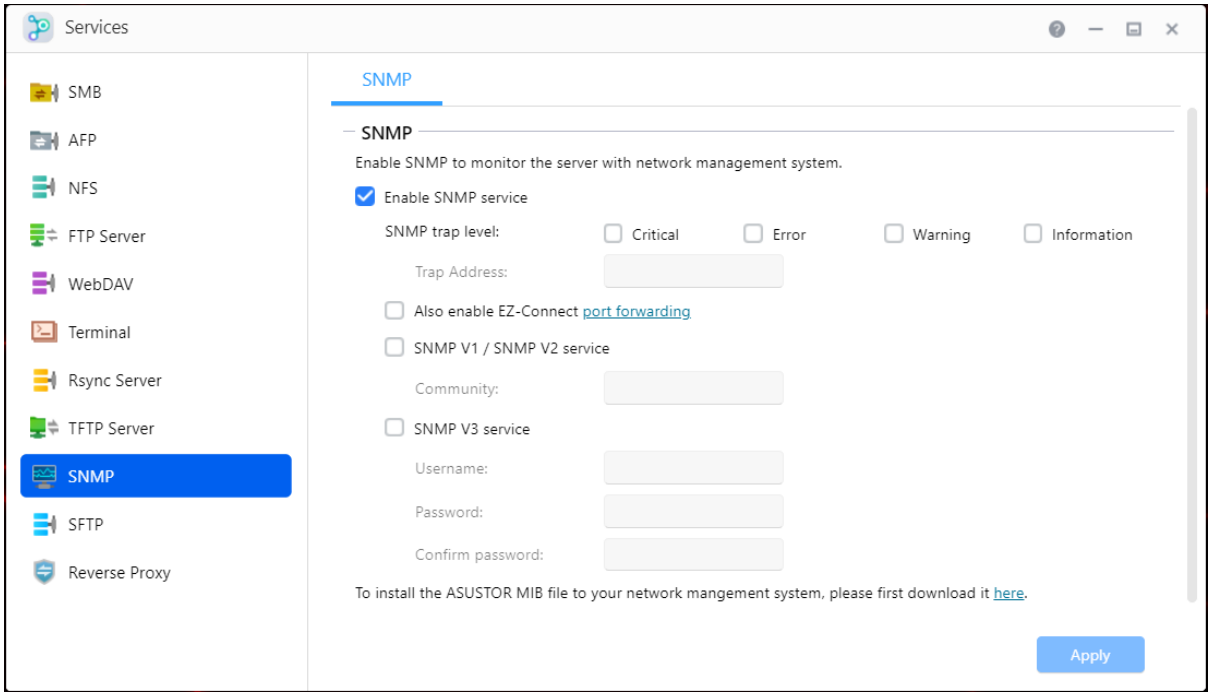
Selecting "All Connections", will allow all TFTP clients to connect to the NAS. You can also choose to limit connections to TFTP clients from a specified range of IP addresses.

Timeout:

Here you can specify the timeout time which is used to terminate idle connections, providing an additional later of security.

SNMP

Enabling SNMP allows users to use network management software to monitor the status of their ASUSTOR NAS.



SNMP trap level:

Here, you can configure SNMP trap to actively provide warning messages. Warning event types include: Critical, Error, Warning and Information.

Trap Address:

After configuring the SNMP trap level please input the IP address of the network management station (NMS) here.

SNMP V1 / SNMP V2 service:

Selecting this checkbox will enable SNMP V1 / V2 service.

Community:

Enter a community name here. Community names must include 1 to 64 displayable characters and may not include the following characters: " ' \ and blank spaces.

SNMP V3 service:

Selecting this checkbox will enable SNMP V3 service.

Username:

Please input the SNMP V3 username here. This username must include 1 to 64 displayable characters and may not include the following characters: " ' \ and blank spaces.

Password:

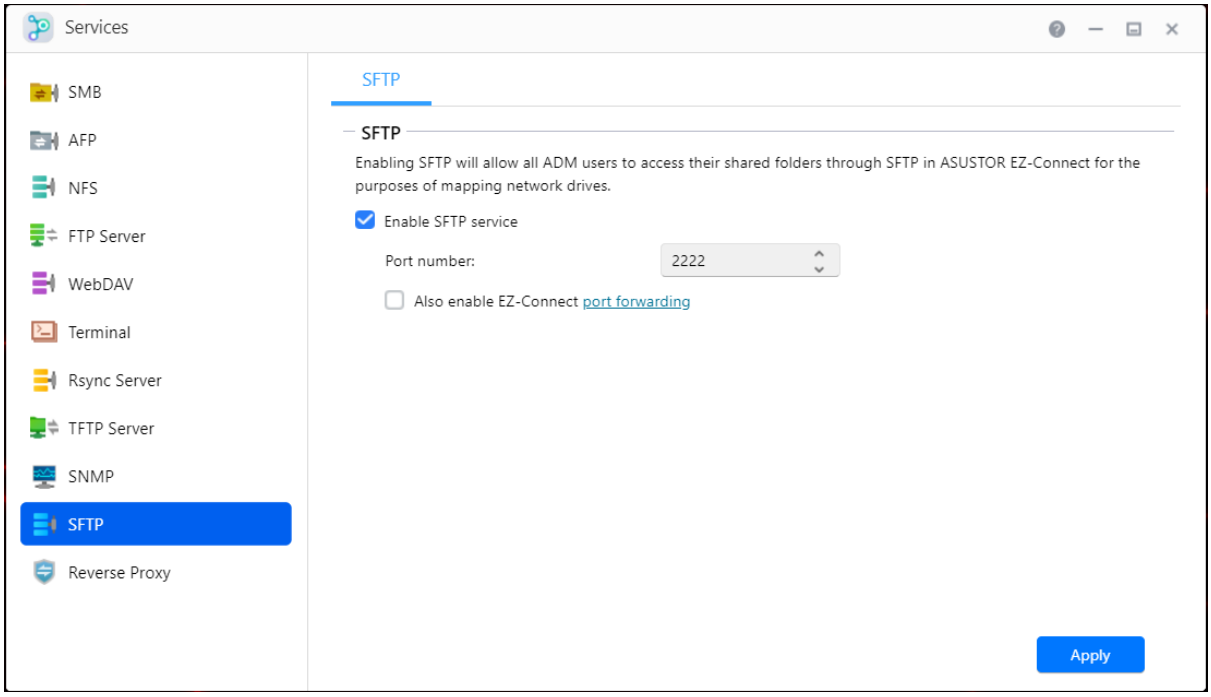
Please input the corresponding password for the SNMP V3 username in the field above. Letters in the password are case-sensitive. You may input 8 to 127 displayable characters including letters from the English alphabet, numbers and symbols. The password may not include the following characters: " ' \ and blank spaces.

See More:

NAS 271 - ASUSTOR NAS MIB Guide

SFTP

Secure File Transfer Protocol, or SFTP) is a network protocol that provides file access, file transfer, and file management over any reliable data stream.Enabling this function will allow all ADM users to access shared folders via SFTP along with providing support for connections by the ASUSTOR EZ-Connect App and other Apps.

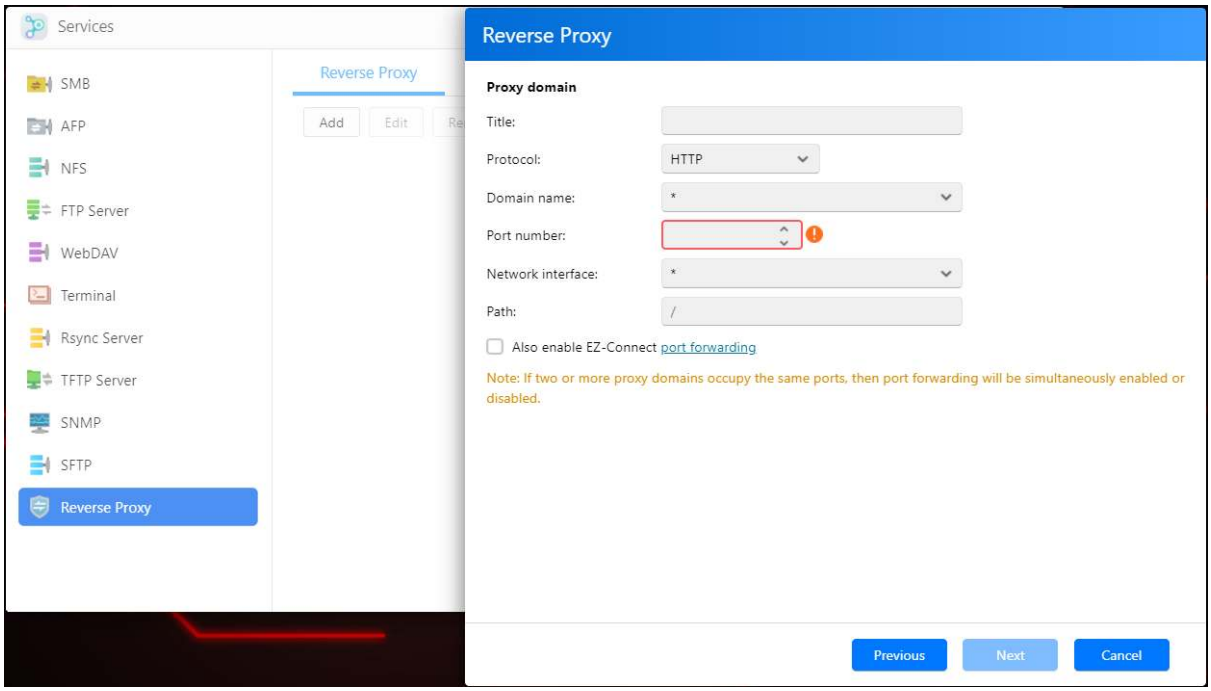


Reverse Proxy

Protect Multiple NAS Devices with HTTPS Security

Reverse proxy servers help retrieve resources on behalf of a client and secure the data transmitted. This enables other NAS devices containing sensitive information that may be vulnerable in an attack to remain offline and away from the internet to retrieve internet data with HTTPS security from the reverse proxy.

Note: Reverse proxy is currently not supported for apps requiring separate logins.



Improve App Connection Security

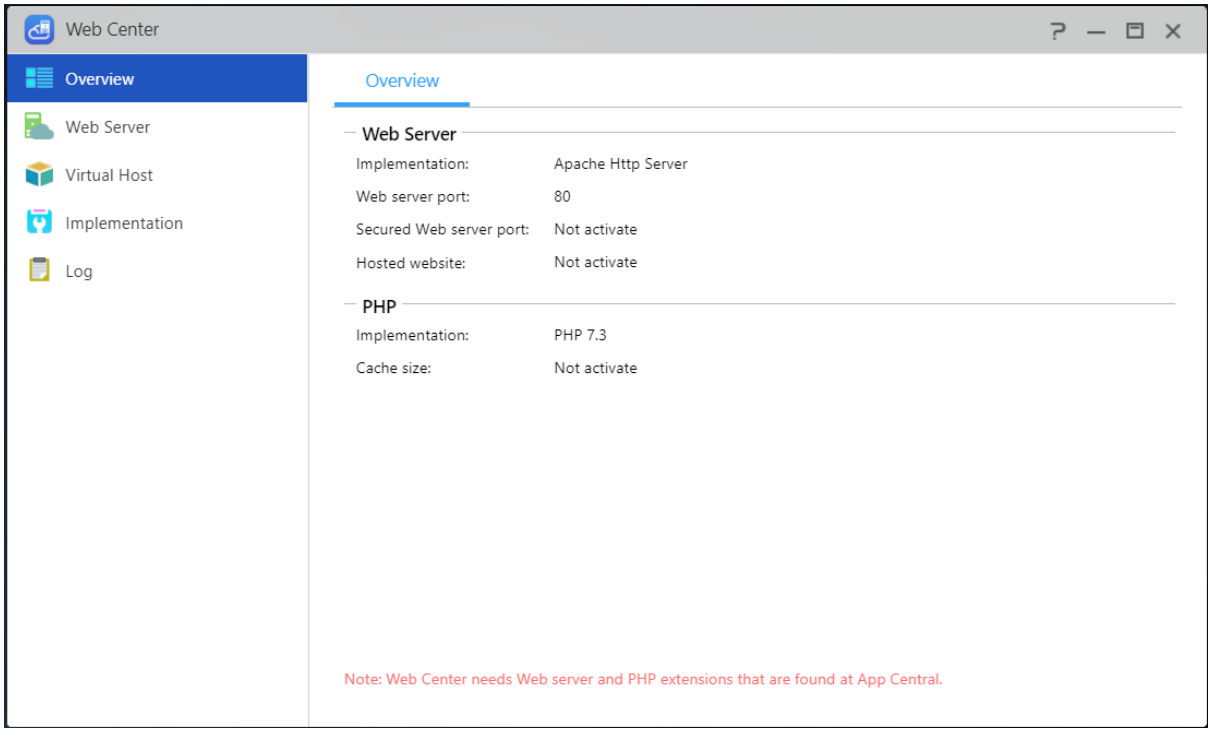
Apps that don't use HTTPS can use a reverse proxy server to enable HTTP Secure connections. Some Portainer implementations do not use HTTPS. A reverse proxy connection can direct a local Portainer HTTP connection to the reverse proxy server and retrieve data from the proxy server through a secure tunnel, increasing security.

Note: Some apps already use a reverse proxy server for connection security. Please refer to the relevant documentation for each app.

Web Center

Overview

Viewing Web Server, PHP and Virtual Host status and related information.



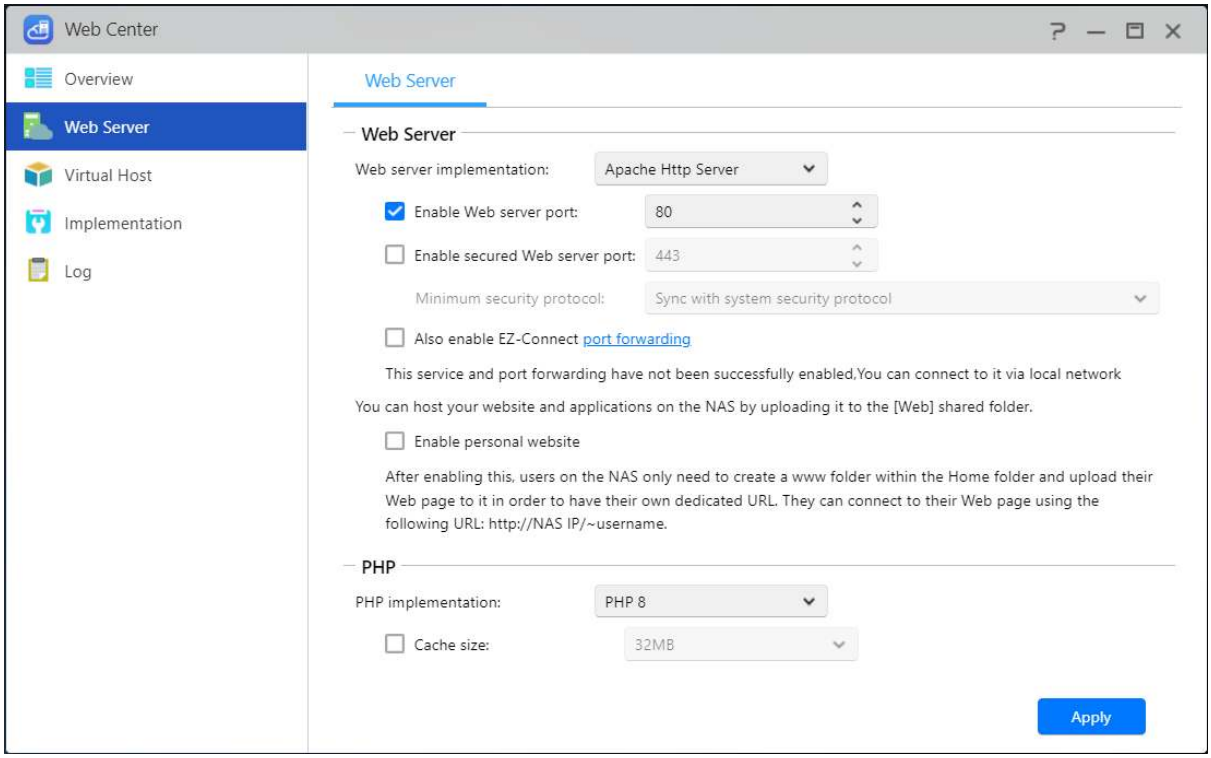
Web Server

Web servers are used to host a website. Web Center creates a shared folder named Web that serves as the root directory for the web server and does not interfere with other data stored on the NAS. Various web server software packages can be installed like Apache, Nginx and PHP and is easily customizable.

Enable personal website:

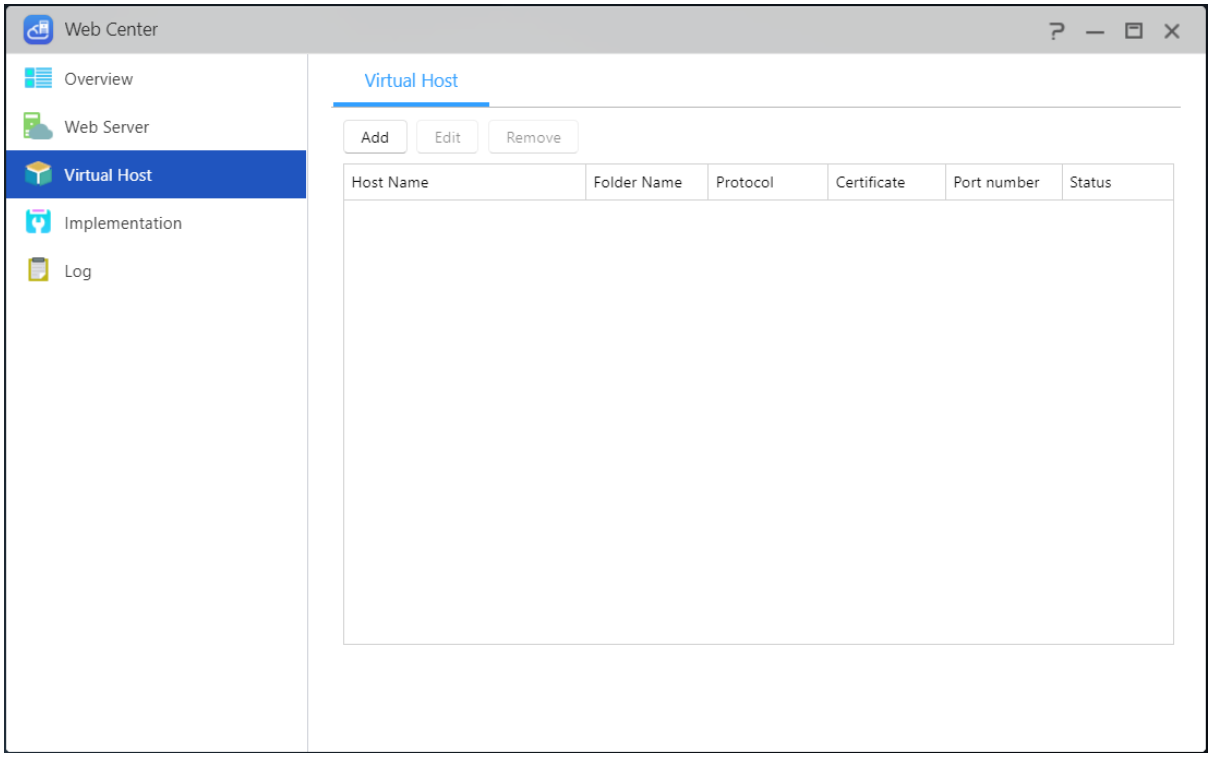
After enabling this, each NAS user can have their own dedicated personal website. Before using this, you must first create a www folder within the Home folder and then upload the associated files for your personal website to the www folder. Afterwards, you will be able to connect to the site using the NAS IP (or DDNS URL) followed by adding ~username. For example: http://192.168.1.100/~admin or cloudid.myasustor.com/~admin.

Enable PHP cache: Enabling PHP cache could enhance the PHP performance. However, it may not take effect under some circumstances.



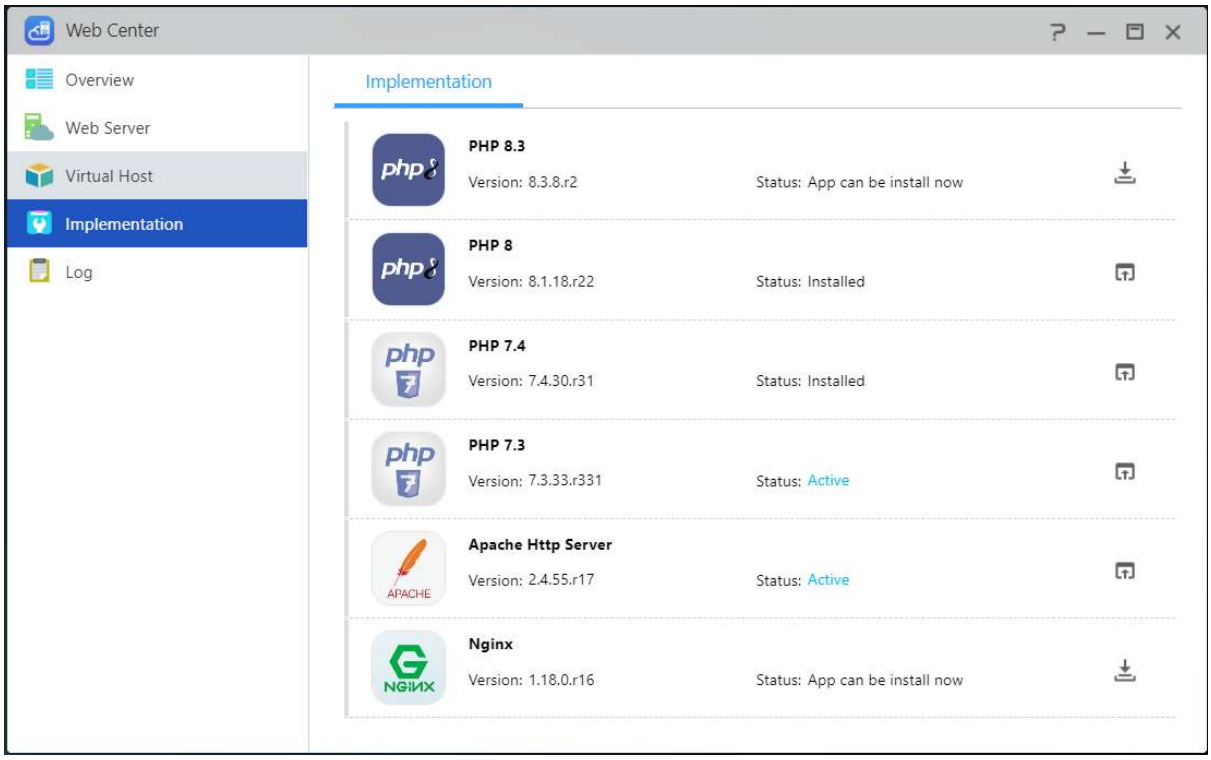
Virtual Host

You can use this feature to simultaneously host several websites on your NAS.



Implementation

Displays web server versions and status as well as update notifications. Updates are also found at App Central.

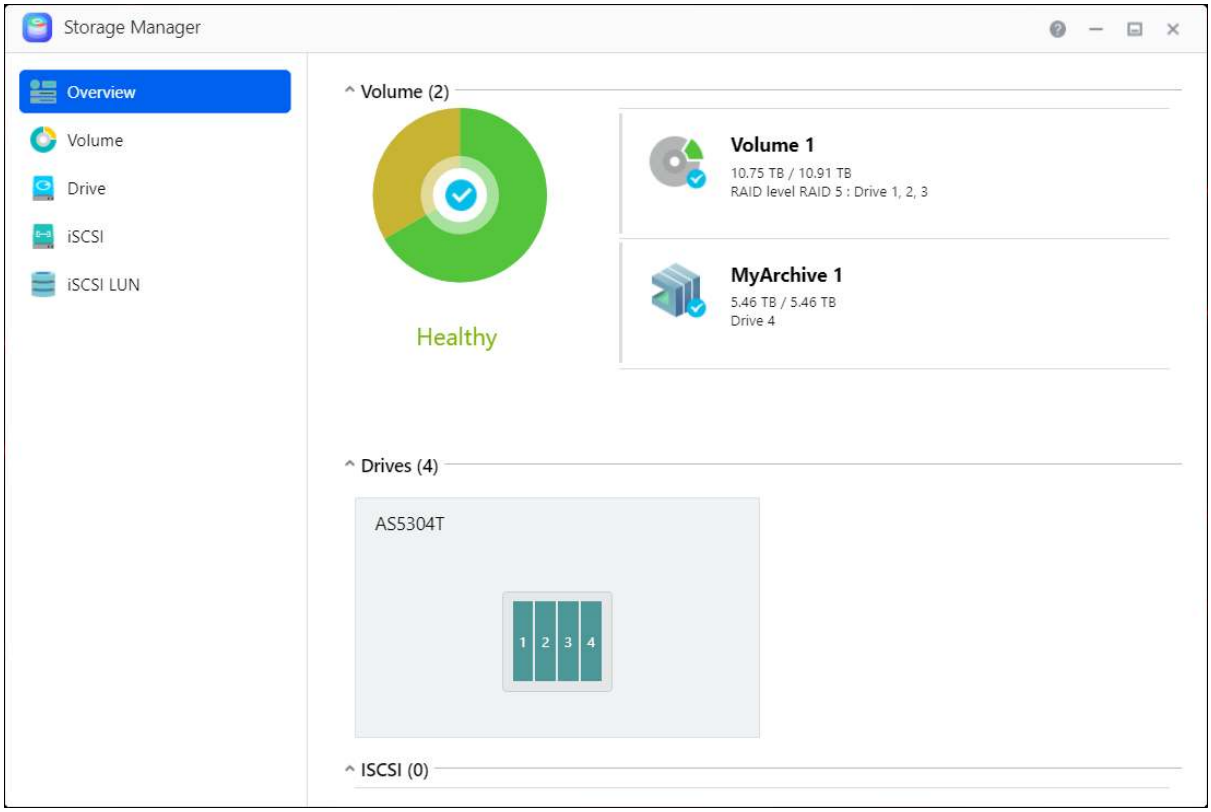


Storage Manager

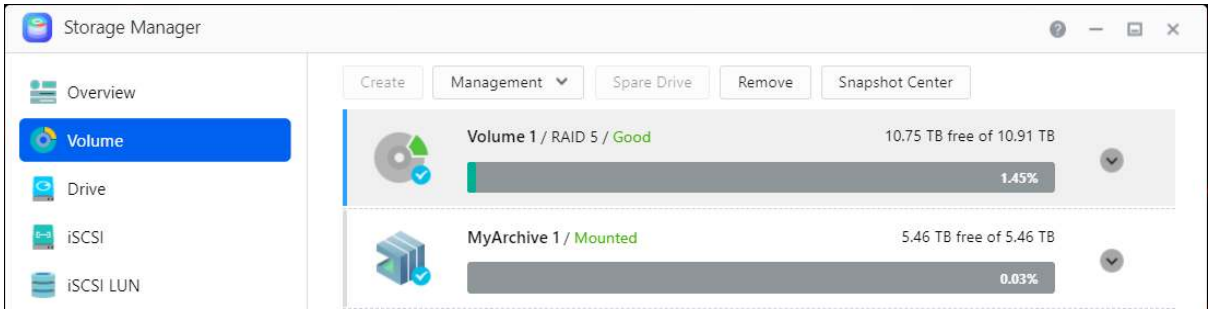
Overview

Here you can see the storage status.

Note: This function may differ depending on the NAS model in use.



Volume



Storage space on your NAS consists of logical volumes which are made up of a single disk or multiple disks combined together. Here you can set up new storage space for your NAS and, according to your data protection needs, select the most suitable RAID level. In order to maintain data integrity, you may only use internal disks when creating storage space for your NAS. ADM does not support the use of external disks for storage space.

Reminder: The RAID levels that you may employ will depend on your NAS product model and the number of disks that you are using.

(1) Create: When setting up new storage space, ADM offers the following two options:

Quick Setup:

You need only specify the requirements for the storage space (i.e., you wish to have a higher level of data protection). Based on this and the number of disks you have, ADM will automatically create a storage volume and select an appropriate RAID level for it.

Advanced Setup:

Based on the current number of disks, you can manually select a RAID level or set up a spare disk.

Reminder: In order to optimize disk space utilization, it is recommended that you use disks of the same size when creating storage space.

MyArchive：

MyArchive is a function designed especially for data management and sharing, giving you added flexibility when using multiple hard disks for data backup or exchange. When MyArchive hard disks have been inserted into the MyArchive disk bay, you will immediately be able to access the data on the hard disk.

Note: This function may differ depending on the NAS model in use.

MyArchive Hard Disk:

Users will need to first convert hard disks into MyArchive hard disks before being able to use the MyArchive function.

File System: Supported file systems are as follows:

- EXT4,Btrfs: for use with Linux
- NTFS: for use with Windows
- HFS+: for use with macOS
- exFAT: for use with Linux, macOS, Windows.

Reminder: Btrfs for MyArchive supports snapshots and version history to help protect against accidental deletions or modifications. MyArchive drives run independently of internal NAS

volumes, ensuring that snapshots are supported even when internal NAS volumes do not support snapshots.

Alias name:

Here you can define tags for MyArchive disks. This allows users to quickly determine the contents of MyArchive disks from within ADM File Explorer when multiple disks are mounted simultaneously.

MyArchive Encryption:

Here you can choose whether or not you want to encrypt this MyArchive and whether or not you want to auto-mount it at system startup. Should you choose to encrypt this MyArchive, after the system restarts, you will have to manually enter the password for the MyArchive in order to access it. Encrypted MyArchives are normally used for the storage of critical or confidential data. Should you lose your NAS you still needn't worry about your data leaking out and falling into the wrong hands.

Reminder: The MyArchive encryption function only supports the EXT4 /Btrfs file system.

Automatically mount MyArchive 1 before starting a backup, and eject when complete

When enabling this option, ADM will automatically mount a connected MyArchive drive when a backup begins and automatically eject a MyArchive drive upon completion.

See More:

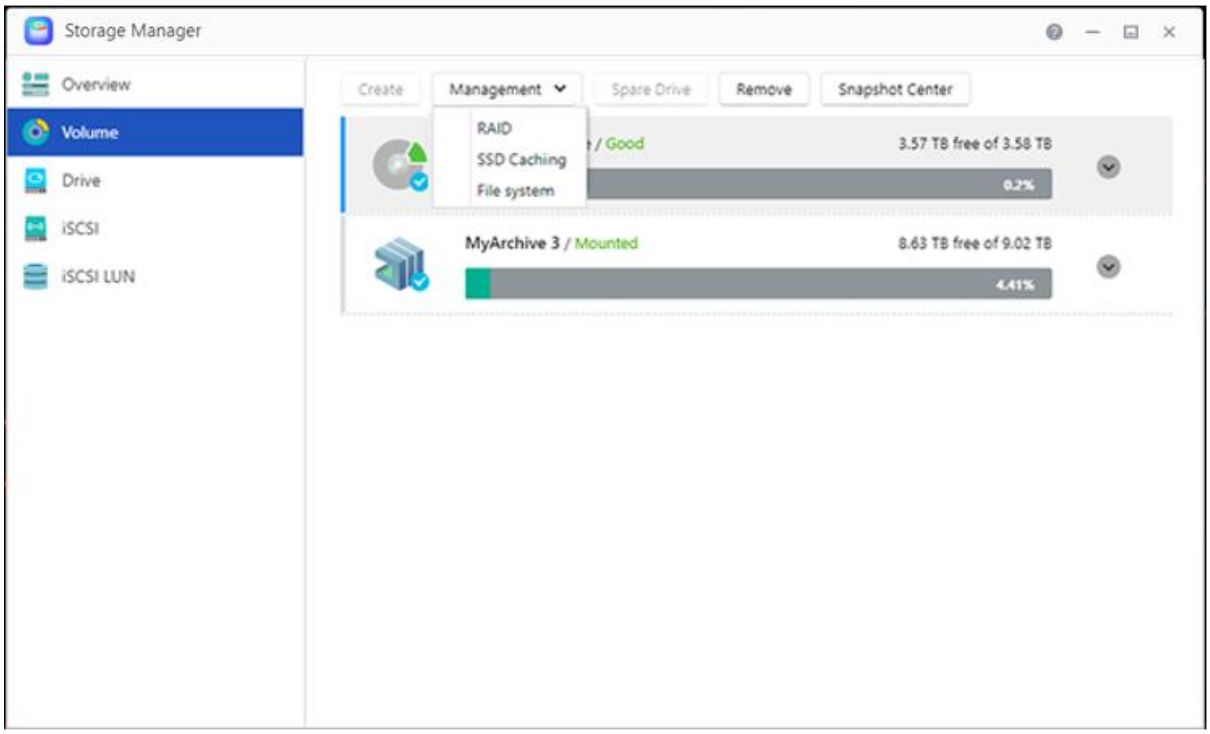
NAS 255 – Using MyArchive
Video - MyArchive

Related:

Accessories: Hard Disk Tray

(2) Management:

Here you can do RAID management (RAID Scrubbing, RAID updrade, online capacity expansion) and create SSD caching or file system Scrubbing.



About RAID

In order to provide optimal storage space utilization and data protection, ADM supports multiple RAID levels allowing you to select the appropriate level for your needs. The following volume types levels are all supported by ADM:

Non-RAID Volume Types

Single:

Only uses a single disk in the creation of storage space. This configuration does not offer any type of data protection.

JBOD:

An acronym for "just a bunch of disks", JBOD uses a combination of two or more disks to create storage space. The total storage capacity is the capacities of all the disks added together. The advantage of this configuration is that it allows you to use different sized disks together and provides a large amount of storage space. The downside is that it does not offer any sort of data protection.

RAID Volume Types

RAID 0:

Uses a combination of two or more disks to create storage space. The total storage capacity is the capacities of all the disks added together. The advantage of this configuration is that it allows you to use different sized disks together and provides a large amount of storage space. Also, data in RAID 0 volumes is accessed in parallel which provides improved performance. The downside is that RAID 0 does not offer any sort of data protection.

RAID 1:

In RAID 1 your data is written identically on two disks, thereby producing a "mirrored set". Exactly the same data is stored on the two disks at all times. RAID 1 protects your data from loss should one of your disks fail. RAID 1's advantage is that it offers protection for your data by providing data redundancy. The downside of this configuration is that when combining two disks of differing sizes, the total storage space will be equal to the size of the smaller disk. Therefore, you will be unable to use a portion of the larger disk.

Total available storage space = (size of smaller disk) * (1)

RAID 5:

Combines three or more disks to create a storage space that is able to support one failed disk. Should one of your disks fail, your data will still be protected from loss. In the event of disk failure, simply replace the failed disk with a new one. The new disk will automatically be accommodated into the RAID 5 configuration. The advantage of using RAID 5 is that is that it provides data protection through data redundancy. The downside to using RAID 5 is that when combining disks of differing sizes, the total storage space will be calculated based on the size of the smallest disk.

Total available storage space = (size of smallest disk) * (total number of disks – 1)

RAID 6:

: Combines four of more disks to create a storage space that is able to support two failed disks. Should two of your disks fail, your data will still be protected from loss. In the event of disk failure, simply replace the failed disks with new ones. The new disks will automatically be accommodated into the RAID 6 configuration. The advantage of using RAID 6 is that it is able to provide superior data protection through data redundancy. The downside to using RAID 6 is that when combining disks of differing sizes, the total storage space will be calculated based on the size of the smallest disk.

Total available storage space = (size of smallest disk) * (total number of disks – 2)

RAID 10 (1+0):

Combines four or more disk to create a storage space that is able to support multiple failed disks (as long as the failed disks do not belong to the same "mirrored set"). RAID 10 provides the

data protection of RAID 1 along with the access efficiency of RAID 0. With respect to data protection, RAID 10 uses the RAID 1 method of having the exact same data written identically on two disks, producing "mirrored sets". These "mirrored sets" are then combined together in a RAID 0 configuration. RAID 10 requires an even number of four or more disks. When combining disks of differing sizes, the total storage space will be calculated based on the size of the smallest disk.

Total available storage space = (size of smallest disk) * (total number of disks / 2)

See More

NAS 251 – Introduction to RAID
NAS 352 – Online RAID Level Migration and Capacity Expansion

About RAID Scrubbing

RAID Scrubbing: RAID Scrubbing detects the integrity and consistency of RAID 5 and RAID 6 drive data. Regular use of this feature can help you confirm the integrity of your data and fix inconsistencies. If a problem that cannot be repaired is found, your NAS will immediately warn you so that you can respond to unexpected issues early.If the system is shut down, RAID Scrubbing will be disabled.

About SSD Trim

Enable SSD Trim allows the SSDs installed on the NAS to maintain stable read/write performance while simultaneously controlling the frequency of overwriting to specific blocks, extending the life of SSDs.

About SSD Cache

Traditional hard drives are not as fast as SSDs, but their capacity and durability are not as good as traditional hard drives. The best way to combine the best of both worlds is with SSD caching. The SSD cache feature saves frequently accessed file data on a hard disk and stores it on an SSD, thereby optimizing the response time and transfer rates of users when accessing data. ASUSTOR NAS* supports read-only access and read-write cache mode. After following the installation wizard, you will be able to easily access your storage spaces and achieve the best balance of capacity and performance.

* Supported Models: AS31/32/50/51/52/53/61/62/63/64/65/66/70/71 series

Note:

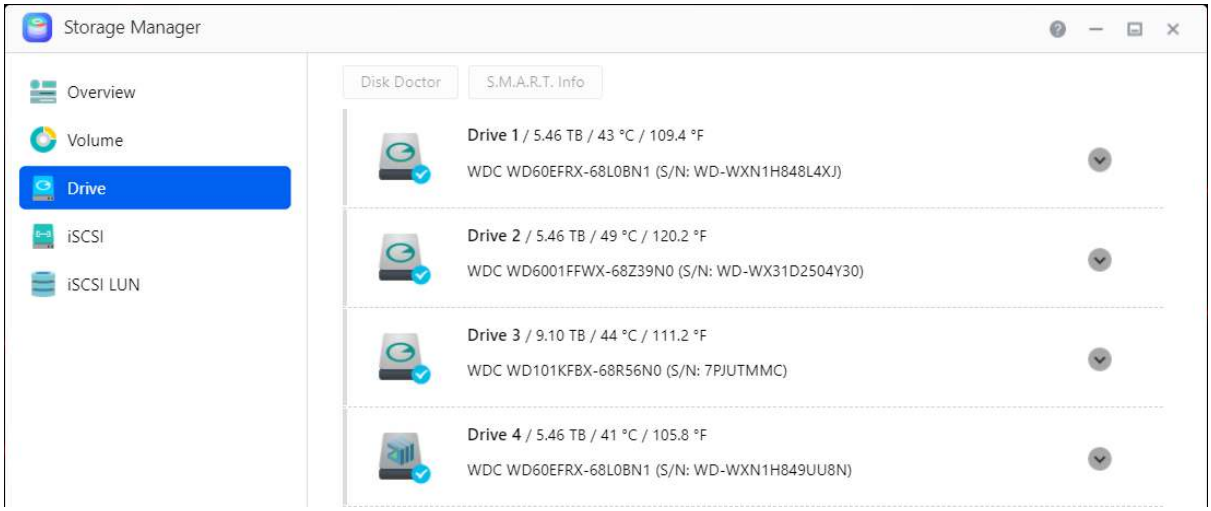
1. For models with M.2 slots, you are now able to choose M.2 SSD for caching or storage. To maintain optimal performance and quality, M.2 drives may only be paired with other M.2 drives in a RAID array.
2. Btrfs and Volume snapshot is only supported on: AS31, 32, 40, 50, 51, 52, 53, 61, 62, 63, 64, 70, Lockerstor and Lockerstor Pro.

See More:

NAS 202 - Using SSD Caching on an ASUSTOR NAS

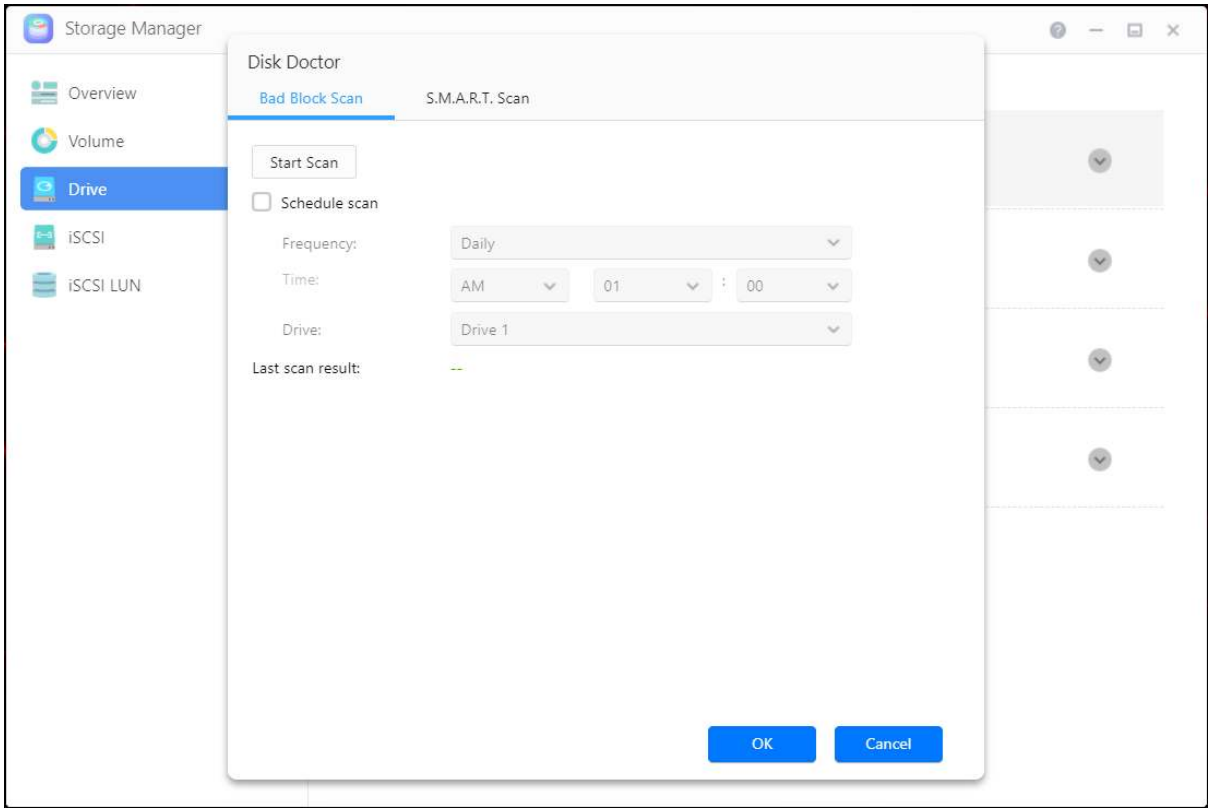
Drive

Here you can check on the status of all your disks. You can also inspect their S.M.A.R.T. information and conduct tests on your disks.



Disk Doctor:

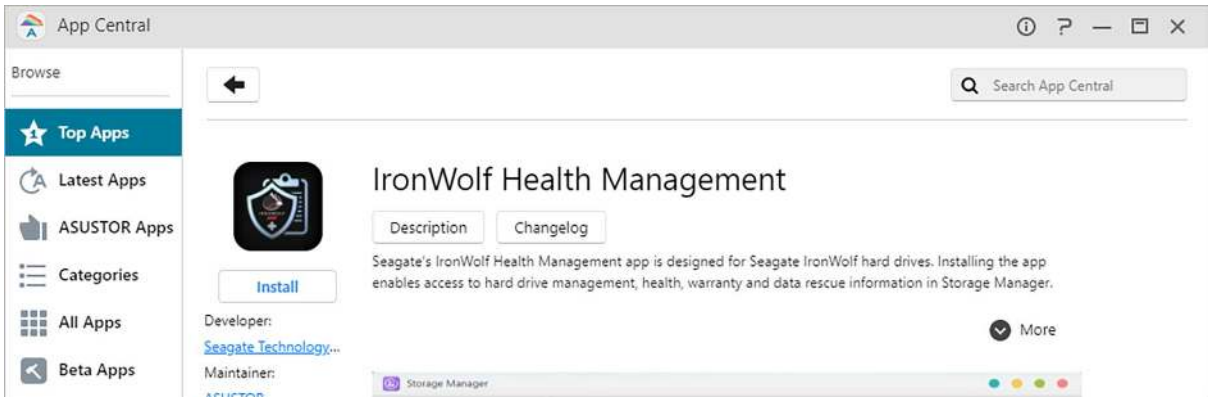
Here you can check your disks for bad sectors or conduct S.M.A.R.T. tests.



IronWolf Health Management:

The Seagate IronWolf Health Management function can provide more detailed detection information for IronWolf series hard disks. Before the possibility of a hard disk error occurring, a notification or warning message will be issued.

Reminder：You need to search and install IronWolf Health Management in App Central before enabling this feature.



- If you are using a **Seagate IronWolf** or **IronWolf Pro** series hard disk with a capacity of over or equal to 4TB, you only need to navigate to [Storage Manager] → [Disk] → [Disk Doctor] and the [**IronWolf Health Management**] window will appear. You can use this function to schedule or immediately carry out a scan.

- After using IronWolf Health Management to scan your hard disks, the results will either be shown as "healthy" or a numerical output code. Please see the chart below to see the suggestions represented by the codes.

Output Codes from IronWolf Health Management	IronWolf Health Test Result	Suggestion
100	**Notification**	Abnormally high operating temperature has been detected. Please ensure rear ventilation ports are not blocked, and try to lower the ambient temperature. Alternatively, go to Settings > Hardware > Fan Control to increase fan speed. If issue persists, please contact the ASUSTOR Support Team.
101	**Notification**	Connection issue on your ASUSTOR NAS and hard drive interface has been detected. Please ensure the hard drive is properly installed in the chassis or drive tray, and that the tray is properly installed in your ASUSTOR NAS. If issue persists, please contact the ASUSTOR Support Team.
102	**Notification**	Excessive physical shock to the hard drive has been detected. Please ensure your hard drive and ASUSTOR NAS are placed on a stable surface. If issue persists, please contact the ASUSTOR Support Team.
105	**Notification**	Excessive vibration has been detected. Please ensure your ASUSTOR NAS is placed on a stable surface. If issue persists, please contact the ASUSTOR Support Team.
106	**Notification**	Excessive host resets have been detected. Please ensure the hard drive is properly installed in the chassis or drive tray, and perform a power cycle. If issue persists, please contact the ASUSTOR Support Team.

>=200	**Warning**	IHM has spotted some errors and a full SMART scan has been automatically triggered for your convenience. If the scan fails, please contact Seagate

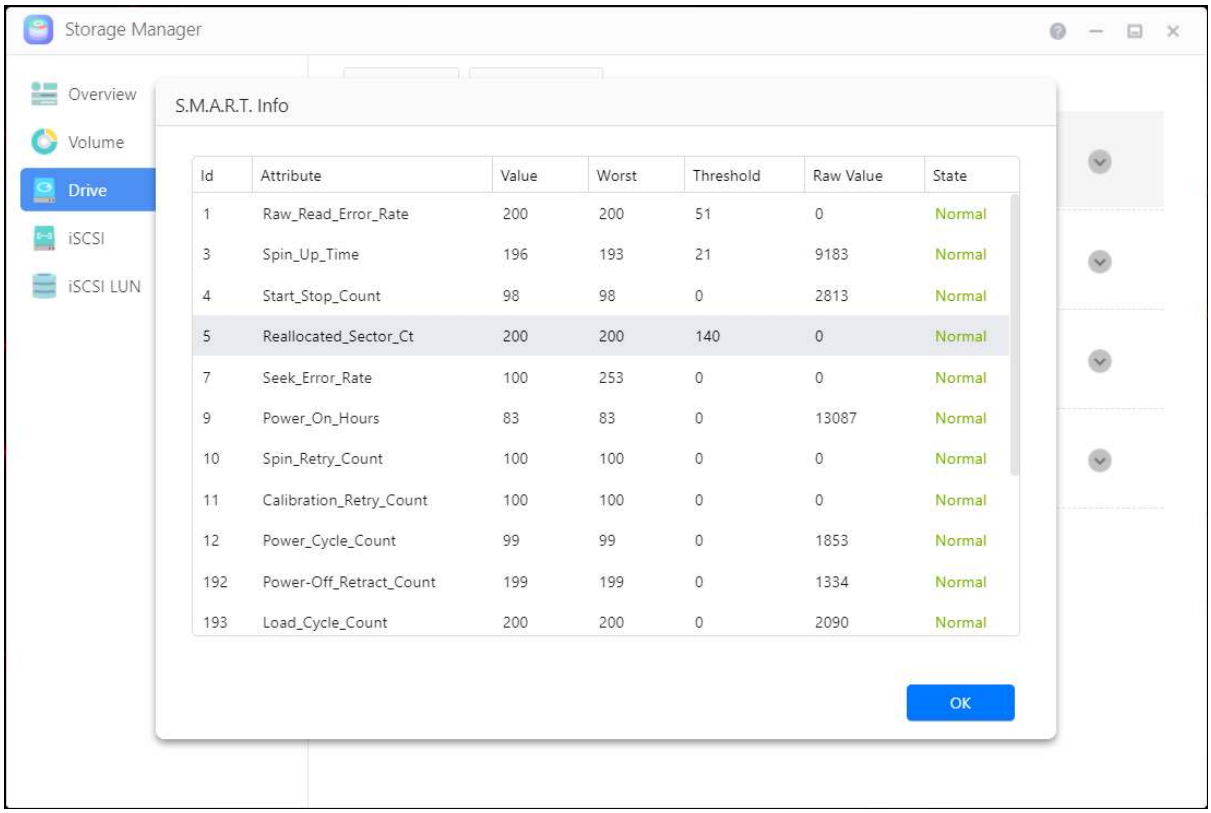
Apacer S.M.A.R.T Tool：

The Apacer S.M.A.R.T Tool function can provide more detailed detection information for Apacer series SSDs, and send reminders or warning messages before the hard disk may fail.

Reminder: You need to search and install Apacer S.M.A.R.T Tool in App Central before enabling this feature.

S.M.A.R.T. Info:

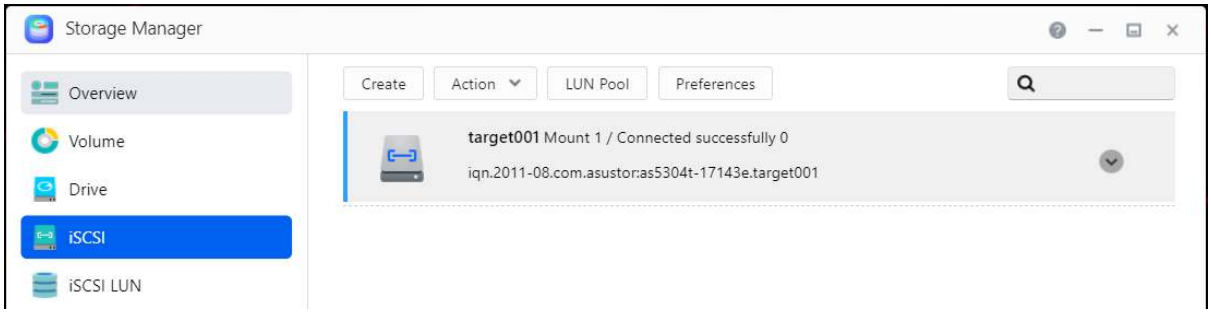
S.M.A.R.T. is an acronym for Self-Monitoring Analysis and Report Technology. It is a type of self-monitoring mechanism for disks that detects and reports on various indicators of reliability, with the hope of anticipating failures.



Id	Attribute	Value	Worst	Threshold	Raw Value	State
1	Raw_Read_Error_Rate	200	200	51	0	Normal
3	Spin_Up_Time	196	193	21	9183	Normal
4	Start_Stop_Count	98	98	0	2813	Normal
5	Reallocated_Sector_Ct	200	200	140	0	Normal
7	Seek_Error_Rate	100	253	0	0	Normal
9	Power_On_Hours	83	83	0	13087	Normal
10	Spin_Retry_Count	100	100	0	0	Normal
11	Calibration_Retry_Count	100	100	0	0	Normal
12	Power_Cycle_Count	99	99	0	1853	Normal
192	Power-Off_Retract_Count	199	199	0	1334	Normal
193	Load_Cycle_Count	200	200	0	2090	Normal

iSCSI

iSCSI is a type of network storage technology that offers high expandability and low implementation costs. Through existing network infrastructure and iSCSI you can use your NAS to expand existing storage space or have it act as a backup destination. iSCSI consists of two ends, a target and an initiator. The initiator is used to search for iSCSI hosts and to set up targets.



IQN：

IQN (iSCSI Qualified Name) is the unique name for each iSCSI target. This name should not be the same as any of the other target IQNs on other hosts.

CRC / Checksum: Enable to check errors during data transmission.

CHAP Authentication:

CHAP authentication can be used to verify a user's identity. If you choose to use CHAP authentication, a CHAP password must first be entered from the initiator for verification before it can connect to the target.

Note: When enabling mutual CHAP authentication, the authentication password used by the server and client cannot be the same.

Mutual CHAP Authentication:

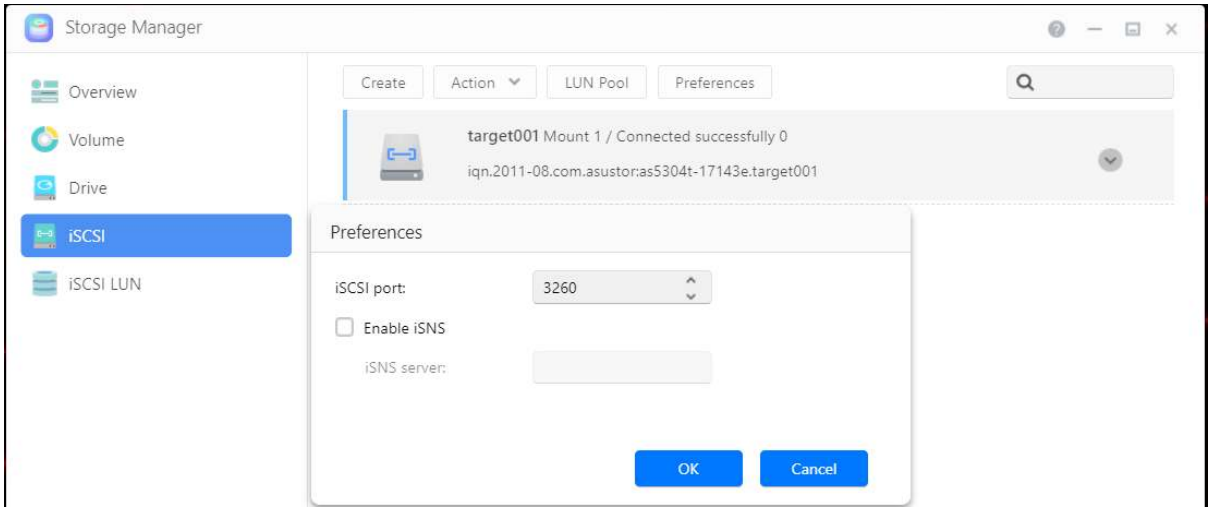
Mutual CHAP authentication requires both the target and the initiator to have usernames and passwords. When establishing a connection, the target and the initiator will have to authenticate each other using their respective credentials.

LUN Pool:

Here you can check on the status of all iSCSI LUNs and assign corresponding iSCSI targets.

iSNS Server:

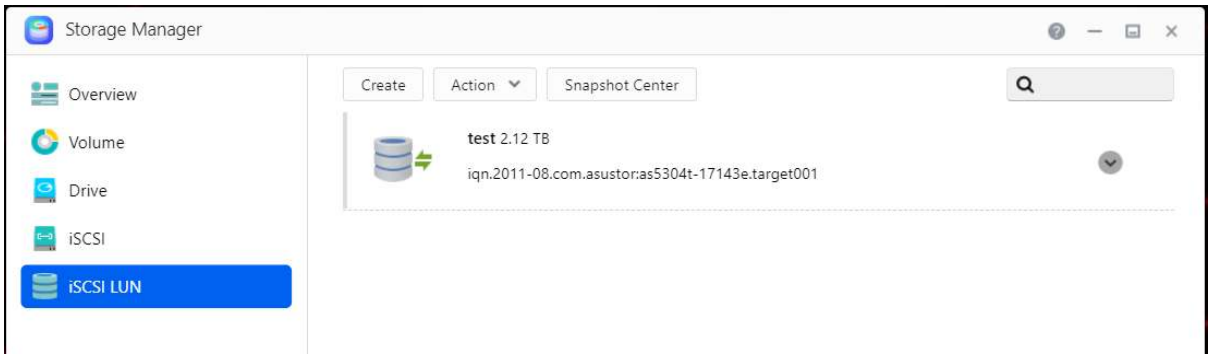
iSNS (Internet Storage Name Service) iSCSI management. Here, you can register iSCSI targets with the iSNS Server, for convenient centralized management.



See More: NAS 308 – Introduction to iSCSI

iSCSI LUN

This tab allows you to create/remove, mount/unmount iSCSI LUNs, and create/manage LUN snapshots.

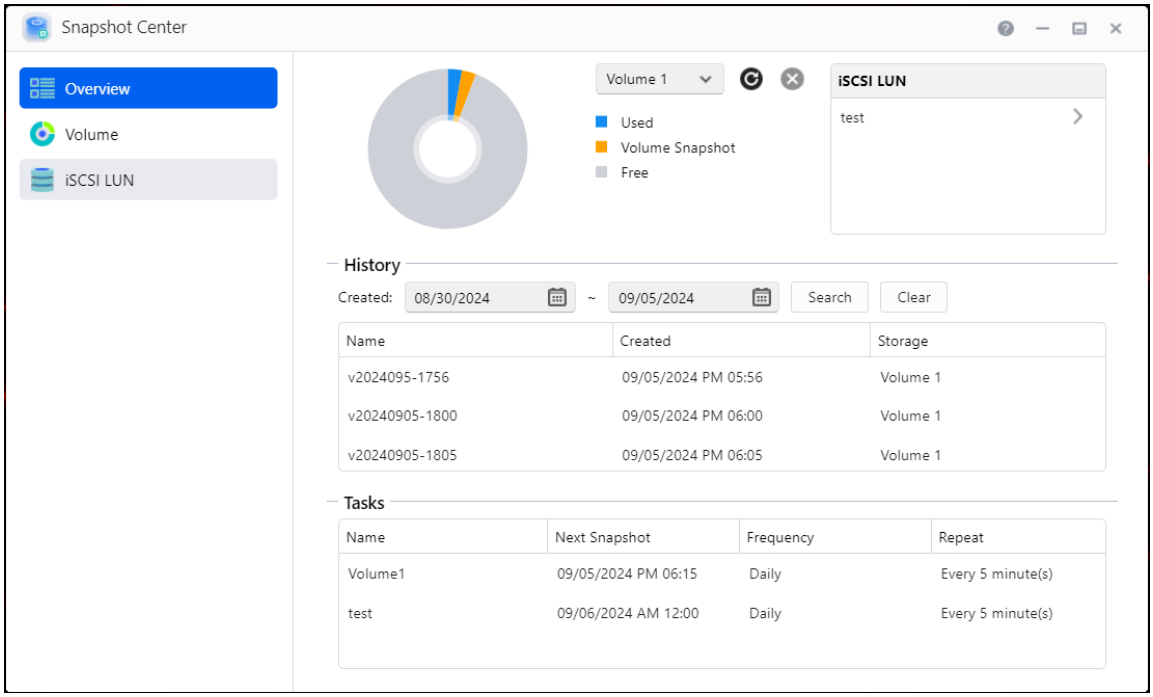


Snapshot Center

Overview

Overview for Btrfs Volume and iSCSI LUN snapshots.

Note: Models that don't support Btrfs will not display Volume snapshots information.



History:

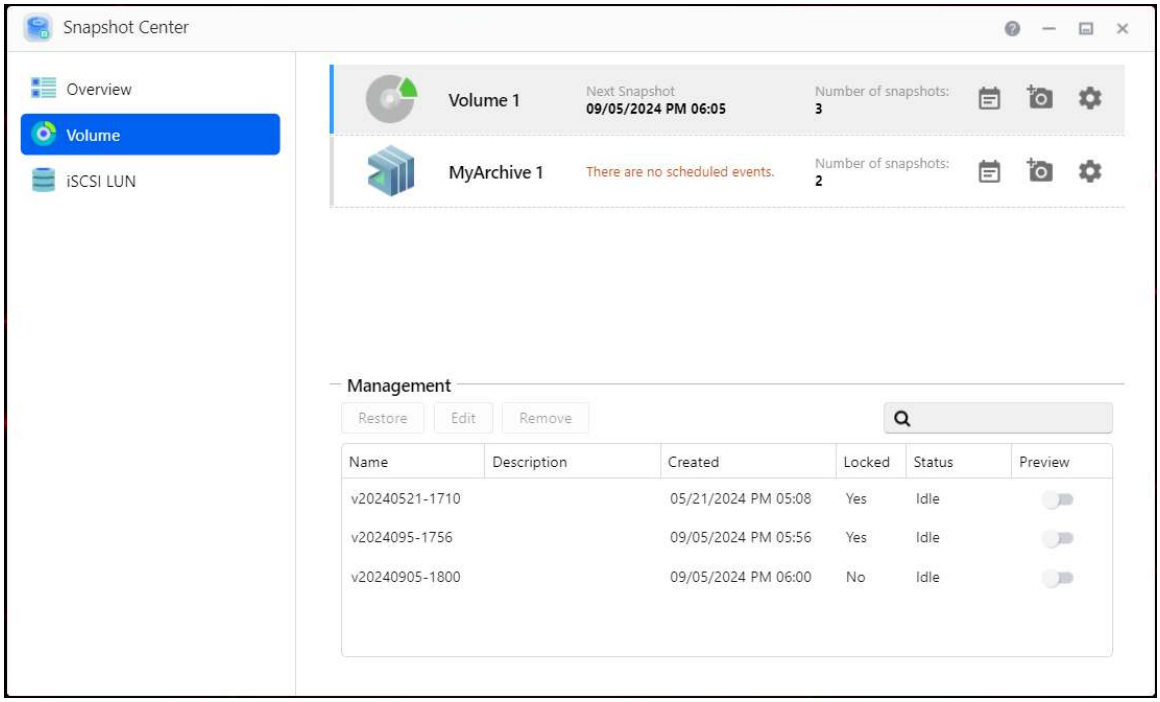
Search snapshots by its created date.

Scheduled Tasks:

List the scheduled tasks information.

Volume

Display Btrfs volume snapshots information.



Manual creation:

Click the icon to create a snapshot.

Scheduling:

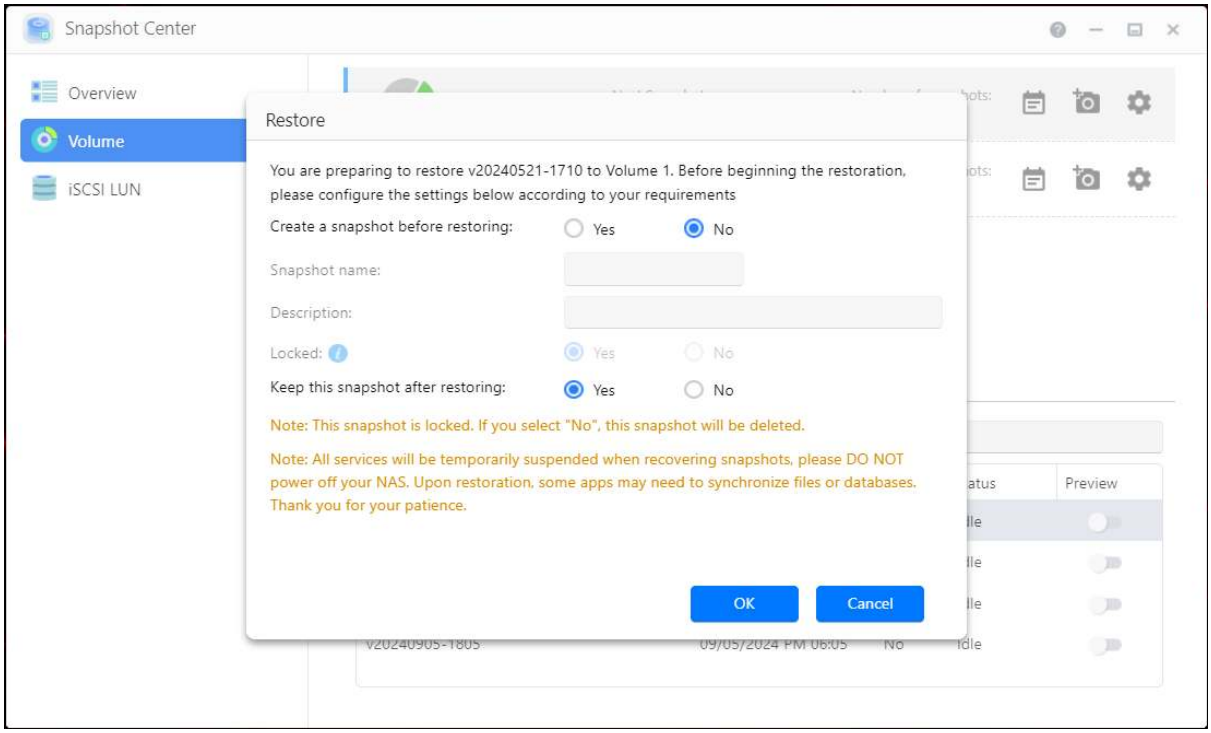
Click the icon to schedule snapshots to run regularly. Scheduled snapshots will be named using the date and time created.

- Once: Users can create a snapshot at specific date and time.
- Daily: Users can set a minimum of 5 minutes or up to 12 hours to create a snapshot.
- Weekly: One or more days of the week can be set to create snapshots with options for daily included.

Snapshots can be locked and retention rules can be set. Snapshot Center limits saved snapshots to 256. Upon reaching the limit, schedules can be terminated or Snapshot Center will automatically remove the oldest unlocked snapshot. When a snapshot is locked, it will not be removed automatically.

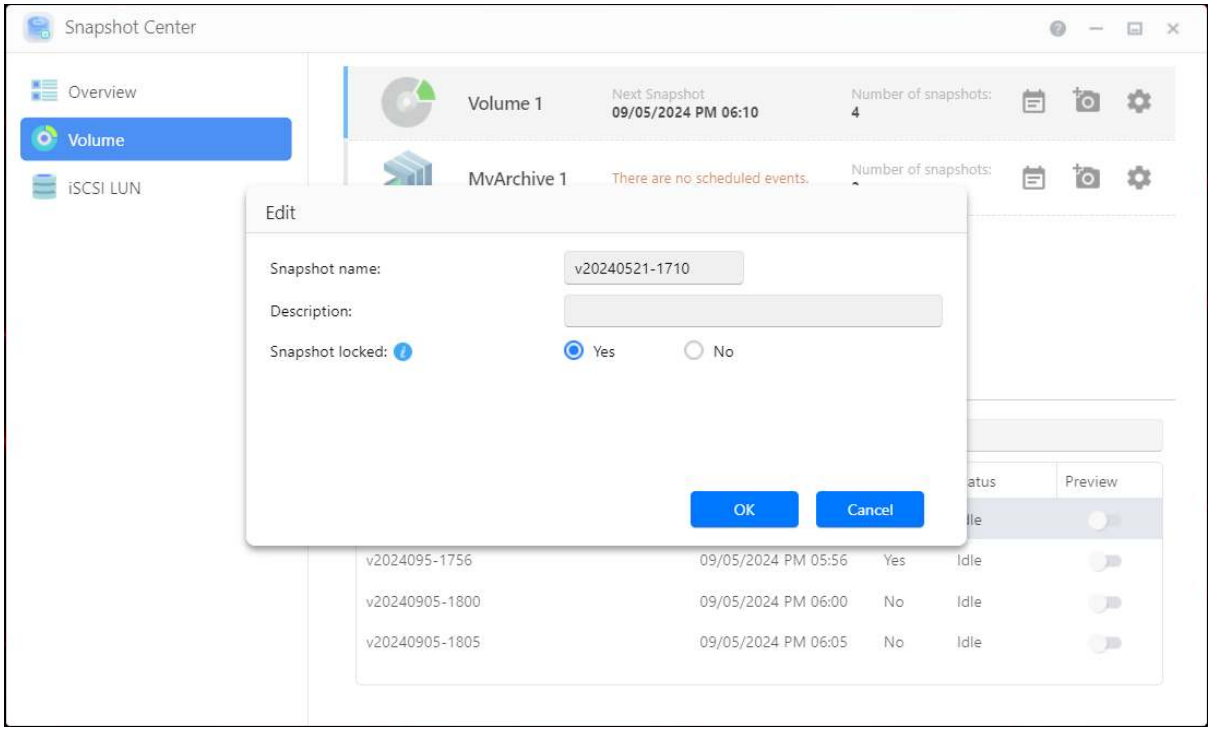
Restore:

Before the snapshot is restored, users can create a new snapshot before the restore and choose whether to keep the snapshot after the restore.



Edit:

Edit the information of the snapshot.



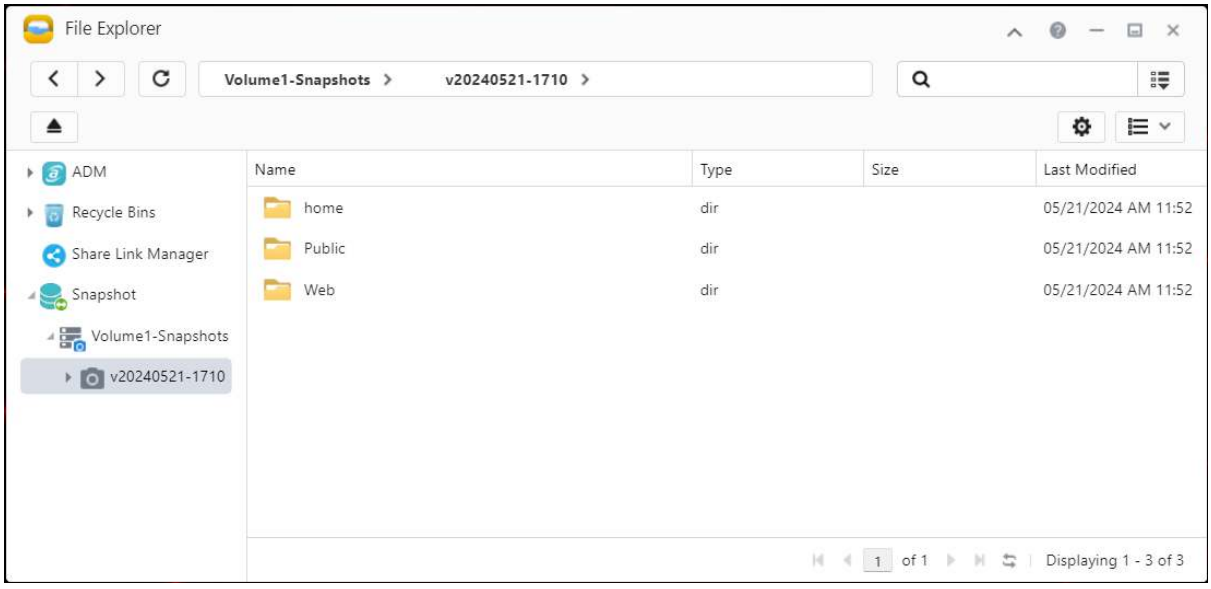
Remove:

Remove selected snapshot. With the Shift key, you can select multiple snapshots to remove.

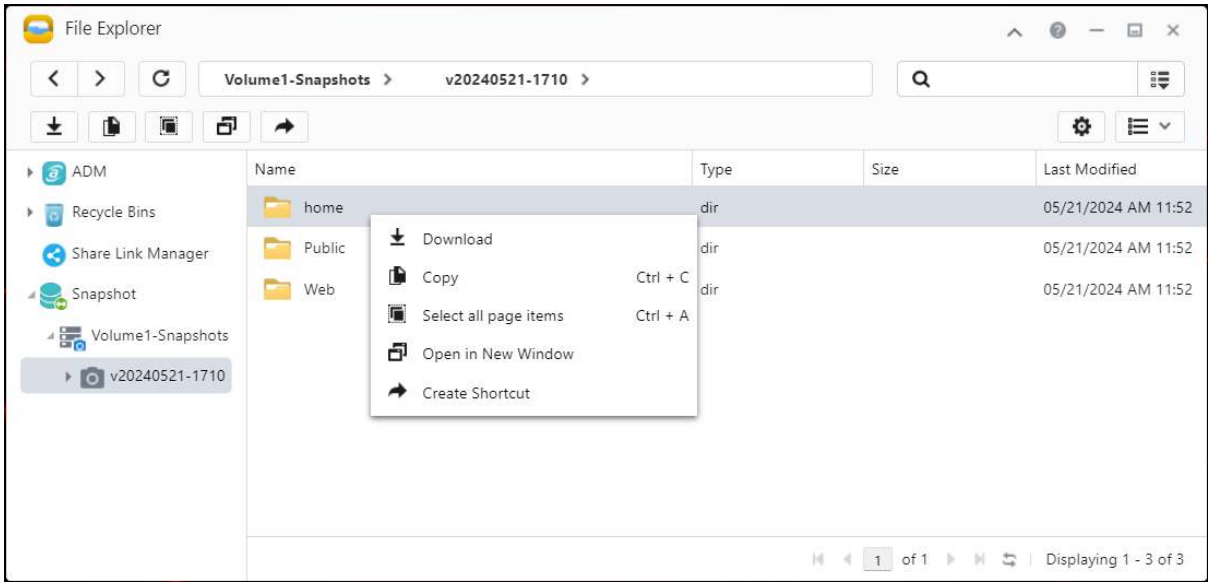
Note: ADM will stop creating snapshots if a new snapshot exceeds the maximum amount of snapshots while all previous snapshots are locked. Users need to manually remove the locked snapshots and then can create snapshots again.

Preview:

The volume snapshots can activate to preview in ADM File Explorer.

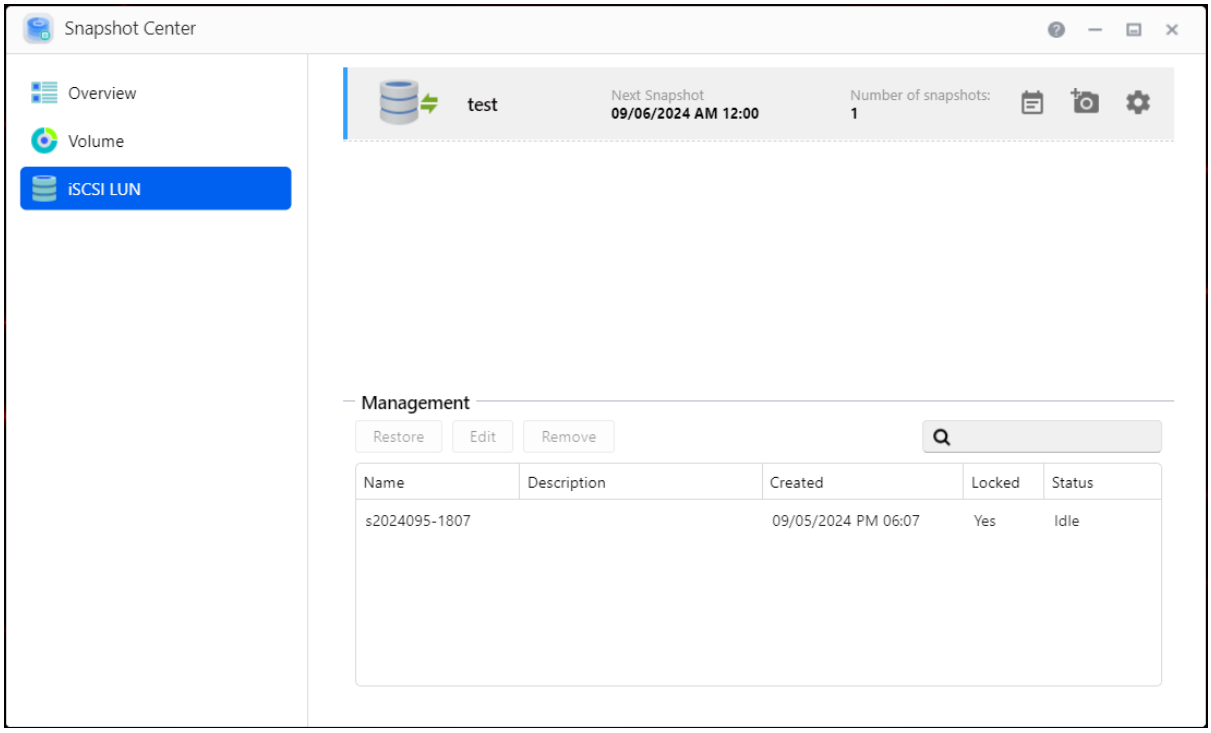


Preview files from snapshots in File Explorer, users can copy or download files contained within snapshots to restore the event of corruption or other forms of data loss.



iSCSI LUN

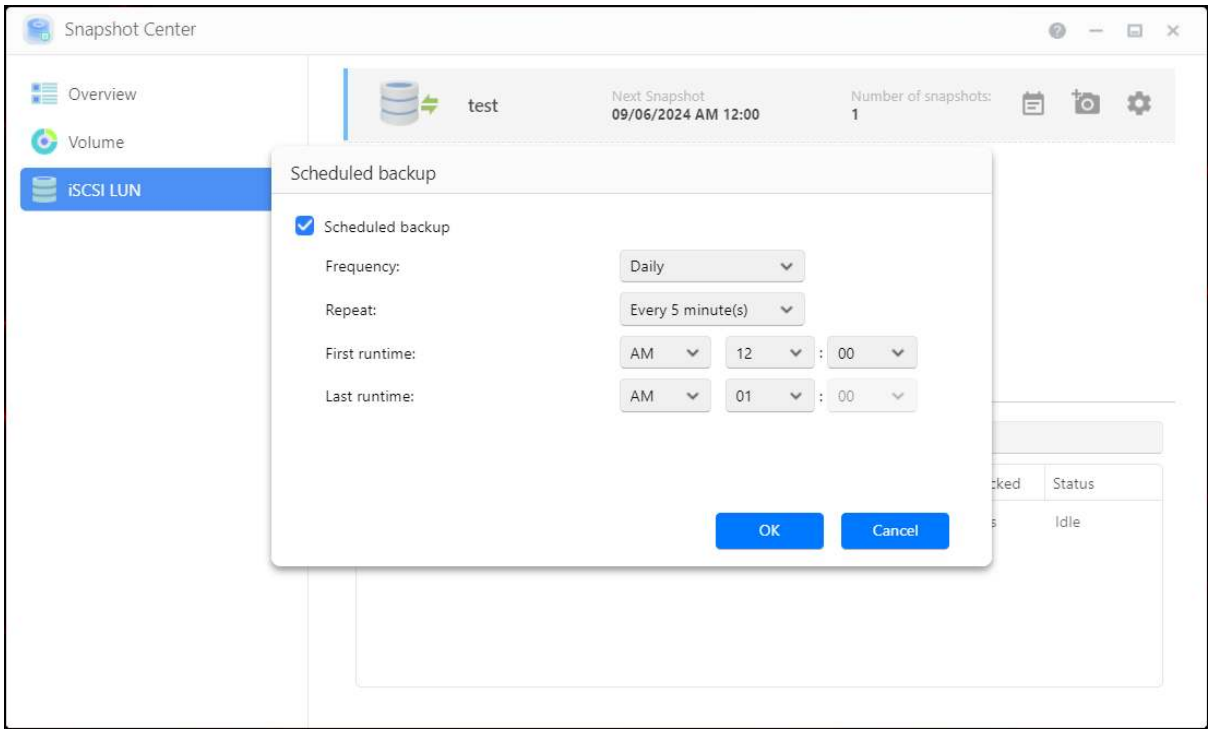
Display iSCSI LUN snapshots information.



Manual creation:

Click the icon to create a snapshot.

Scheduling:

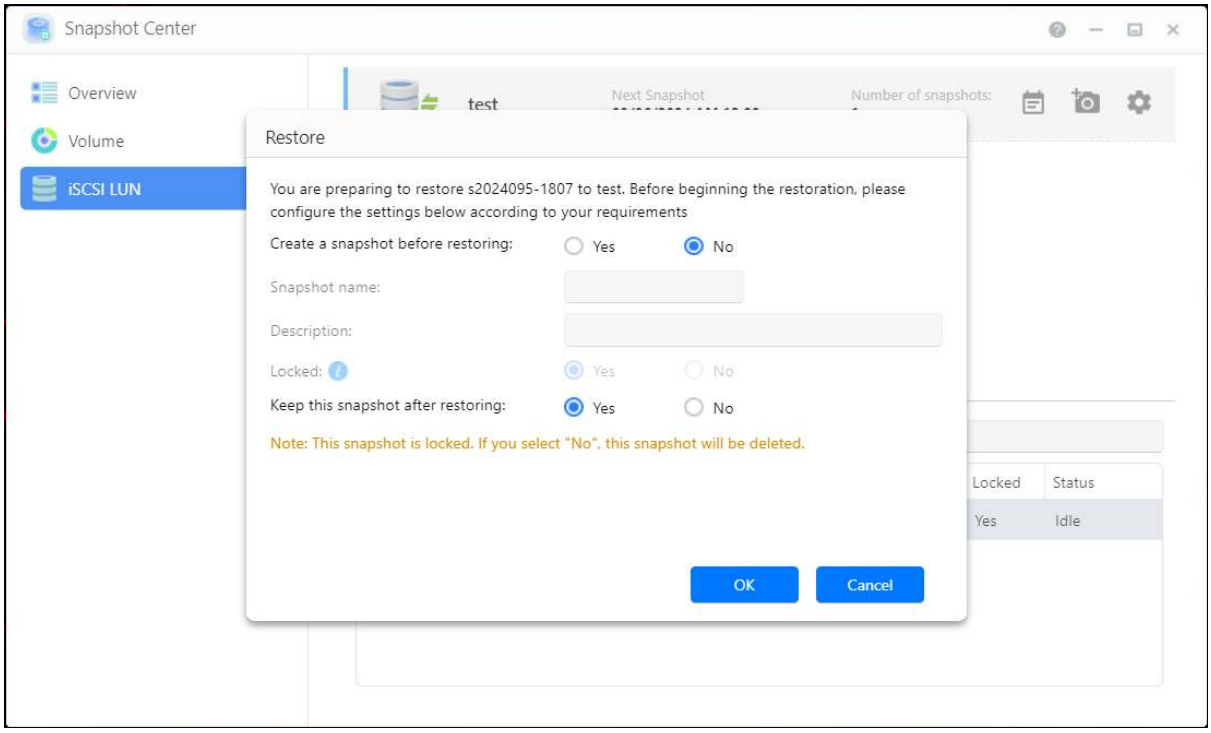


Click the icon to schedule snapshots to run regularly. Scheduled snapshots will be named using the date and time created.

- Once: Users can create a snapshot at specific date and time.
- Daily: Users can set a minimum of 5 minutes or up to 12 hours to create a snapshot.
- Weekly: One or more days of the week can be set to create snapshots with options for daily included.

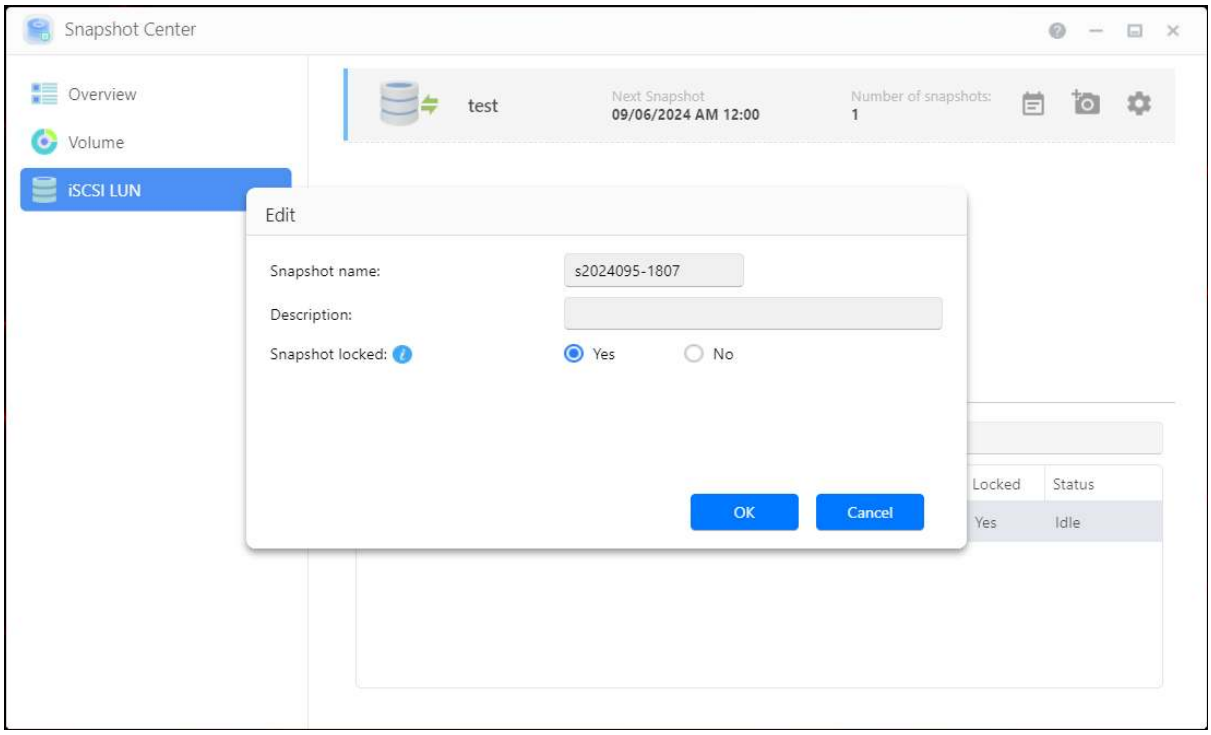
Restore:

Select one iSCSI LUN snapshot to restore.



Edit:

Edit the information of the snapshot.



Remove:

Remove selected snapshot. With the Shift key, you can select multiple snapshots to remove.

Note: ADM will stop creating snapshots if a new snapshot exceeds the maximum amount of snapshots while all previous snapshots are locked. Users need to manually remove the locked snapshots and then can create snapshots again.

EZ Sync Manager

Introducing ASUSTOR EZ Sync

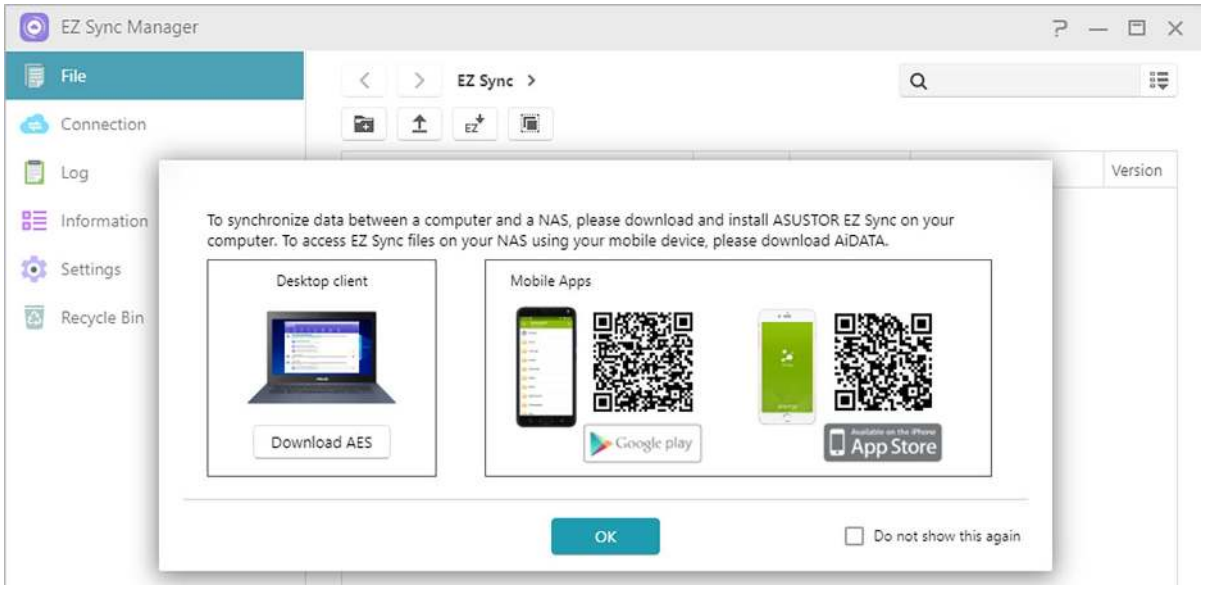
ASUSTOR EZ Sync is a new feature on ADM3.2. It is for synchronizing data between computers and your NAS. Turning your NAS into a personal cloud space like Dropbox™ with ample capacity at your fingertips with historical version management. If a file is unintentionally overwritten with the wrong information, it can be restored using a previously saved backup copy. ASUSTOR EZ Sync includes two parts, EZ Sync Manager which is preinstalled on every NAS and ASUSTOR EZ Sync which can be installed on your PC.

Note: It is recommended to turn on the EZ Connect option while using ASUSTOR EZ Sync.

EZ Sync Manager for ADM

ASUSTOR EZ Sync (AES) – PC sync tool

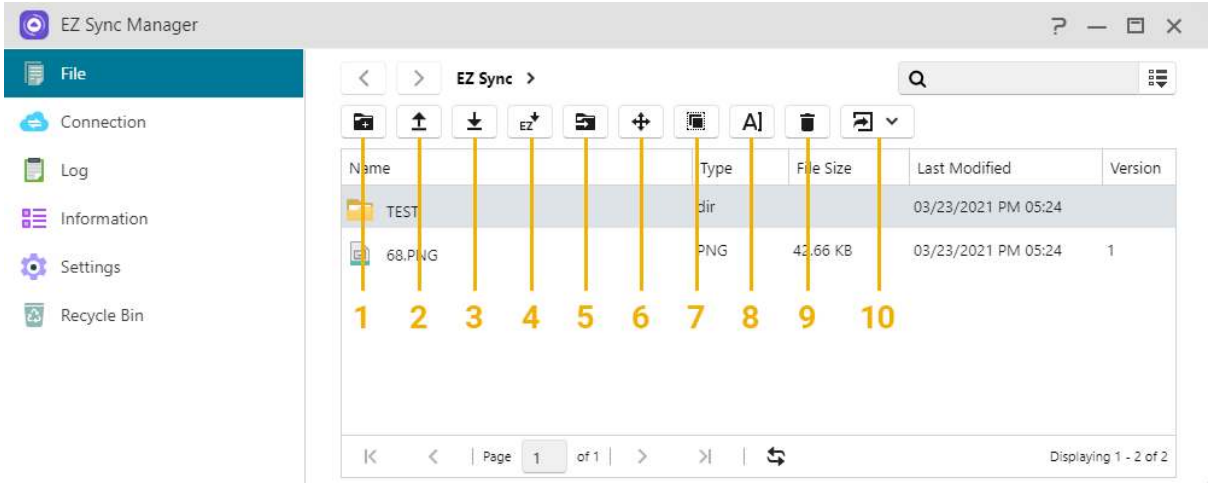
How to obtain: Please download from EZ Sync Manager or from the ASUSTOR official website.



Note: ASUSTOR EZ Sync currently only supports Windows.

Introducing EZ Sync Manager

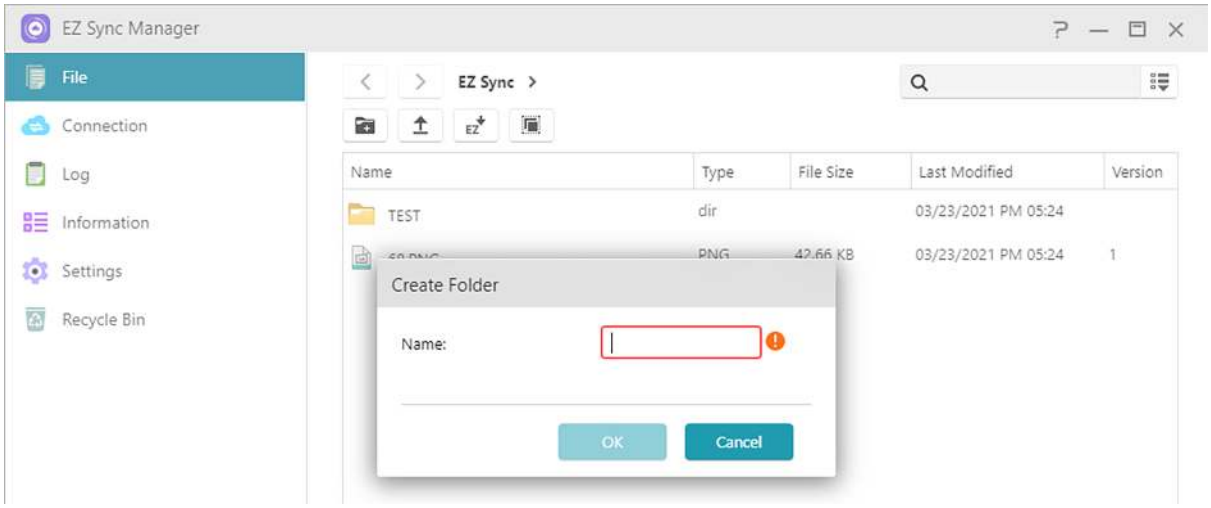
File:



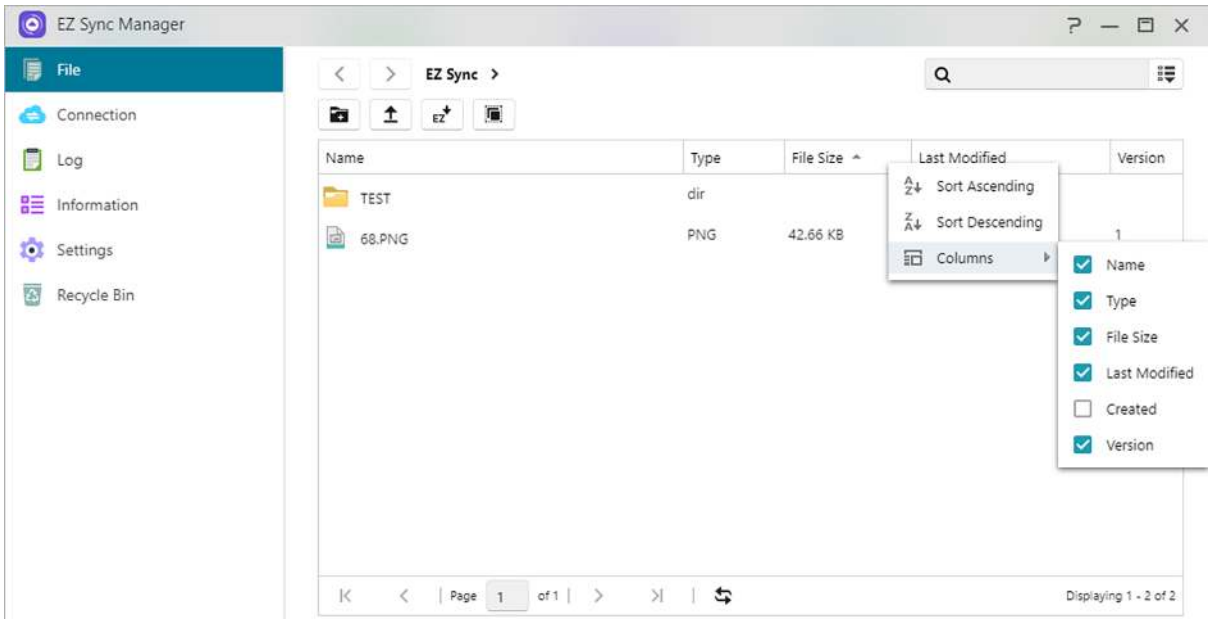
- Note: The above is the toolbar that will pop up after clicking the File

1. Create Folder	2. Upload	3. Download	4 Import to EZ Sync
5. Export to Shared Folder	6. File History	7. Move	8. Rename
9. Delete	10. Share	11. Refresh	

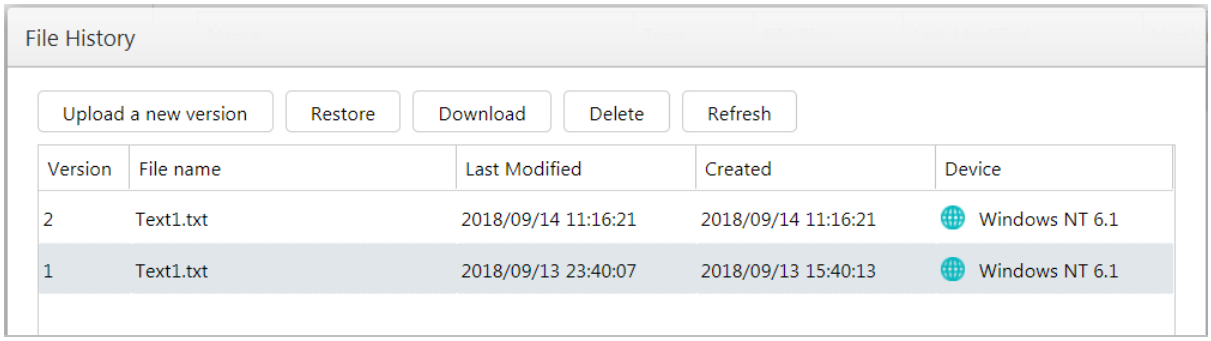
- To set different sync folders on your computer separate from the default folder, please create a new folder in EZ Sync Manage.



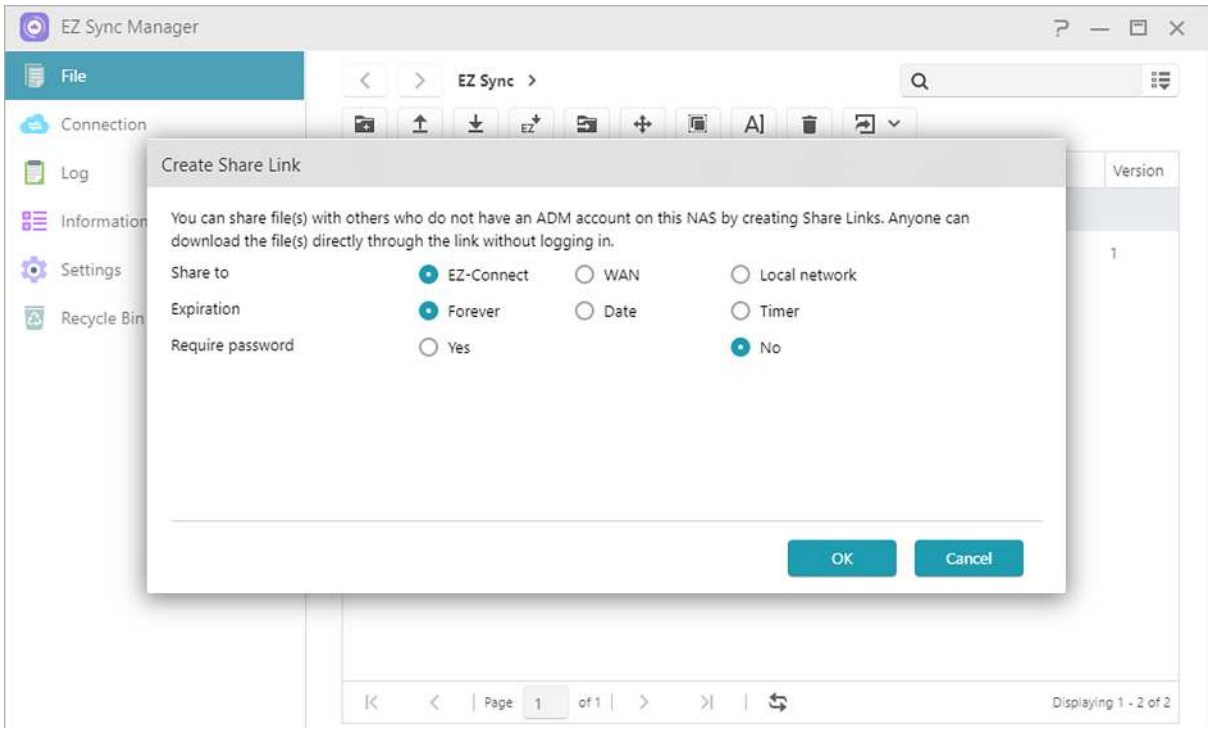
- Sorting is easy in EZ Sync Manager. Columns can be enabled and disabled and files can be sorted under these categories.



- "File History" Allows you to restore files to their original versions or update to a newer version.

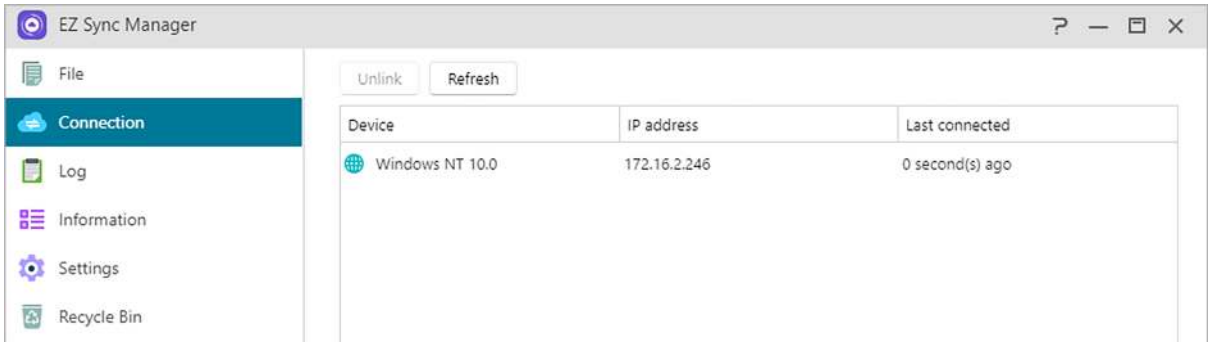


- Pressing Share allows you to create a Share Link. After pressing OK, the Share Link can be copied and mailed as shown below.



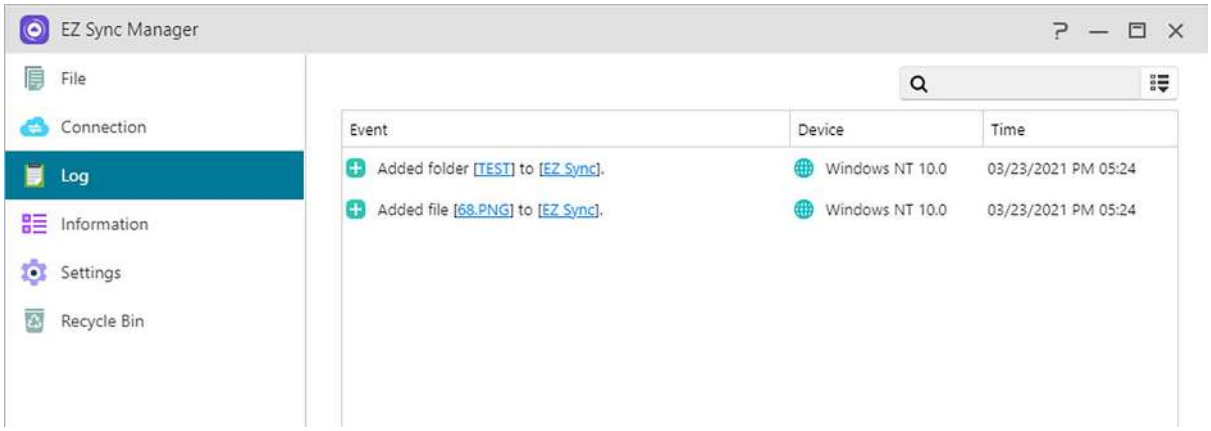
Connection

This option allows the user to view connected computers, IP addresses and the last time a computer made a connection to EZ Sync.



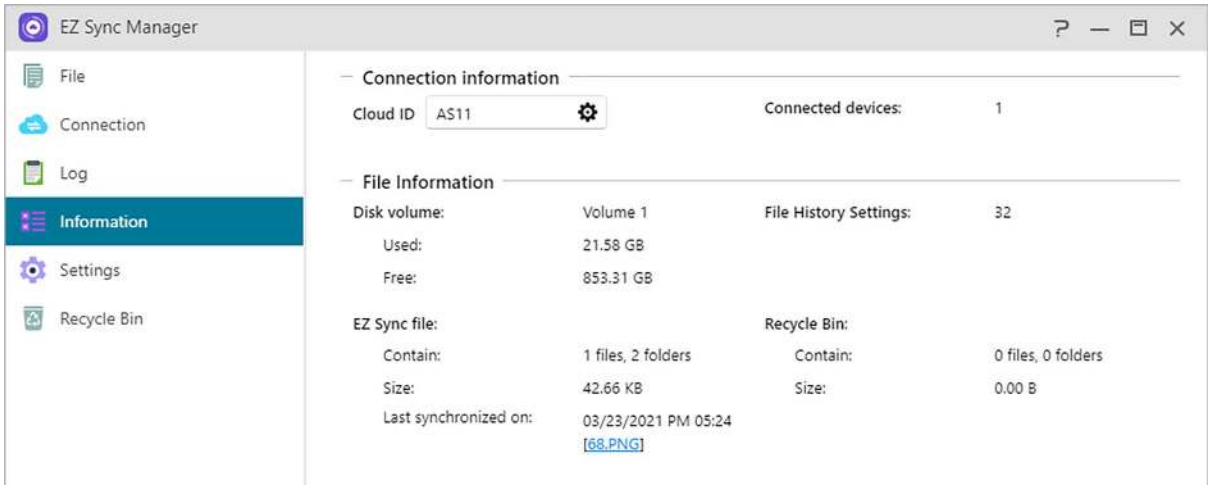
Log

View logs here!



Information

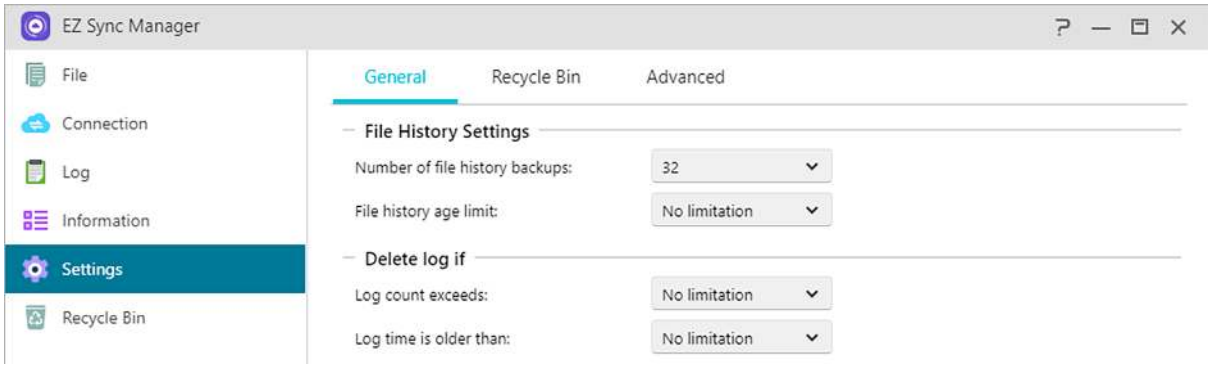
View NAS connection information, usage status, and more.



Settings

General:

File History can save up to 64 versions of a file, and will automatically delete the oldest version when the amount set has been exceeded.

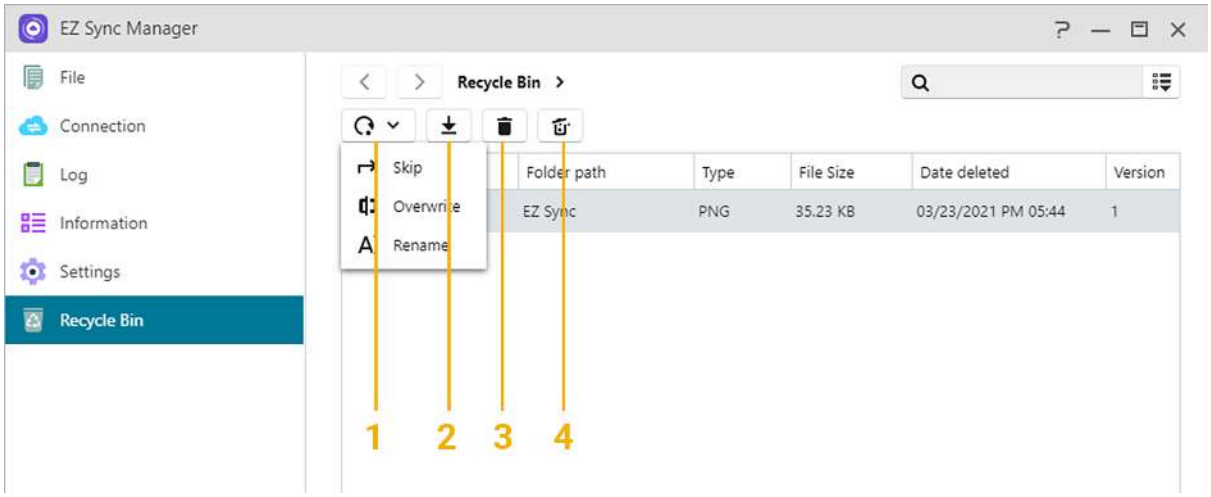


Recycle Bin Rules: Enable or disable Recycle Bin and set automatic deletion rules.

Advanced:

Choose which volume data will be synchronized.

Recycle Bin



1. Restore: Restores file(s) to their original location.

2. Download: Transfer file to computer.

3. Delete: Deletes file(s) permanently.

4. Empty: Deletes all files permanently.

Access Control

Local Users

Here you can manage (add, edit or remove) the local users in the system and assign their access rights to shared folders.

Within ADM, a single user's access rights with regards to shared folders will depend on the user's existing access rights and on the access rights of the group that the user belongs to. Both sets of access rights will be checked against each other in order to determine priority (please see). For convenience, the system provides a preview mode which allows you to first preview any changes that you make to access rights

(1) Add：You can decide to add users in a single or batches according to the number of users.

Import users:

You can batch create user accounts by importing a users list file.

Method 1. Use a Text Editor:

1. Open a new file with a text editor.
2. Enter a user's information in the following order and separate them by semicolon (;)

- Username
- Password
- Description
- Email
- Quota (GB) (this setting will be applied to all existing volumes)
- Group (if you want to add the user to multiple groups, use comma to separate the group names)

3. Go to the next line and repeat step 2 until you have input all the users. Each line indicates one user's information.
4. Save the file in UTF-8 encoding.

Method 2. Use Microsoft Excel:

1. Open a new file with Excel.
2. Enter users' information in the following order and separate them by column in a single row:

- Username
- Password
- Description
- Email

- Quota (GB) (this setting will be applied to all existing volumes)
- Group (if you want to add the user to multiple groups, use comma to separate the group names)

3. Go to the next row and repeat step 2 until you have input all the users. Each row indicates one user's information.
4. Save the file in UTF-8 encoding and in csv format.

Note:
- All fields are optional except username and password.
- Uploaded file cannot exceed 1MB
- Uploaded file content cannot be null
- The maximum row numbers in the uploaded file cannot exceed 4000

(2) Edit:

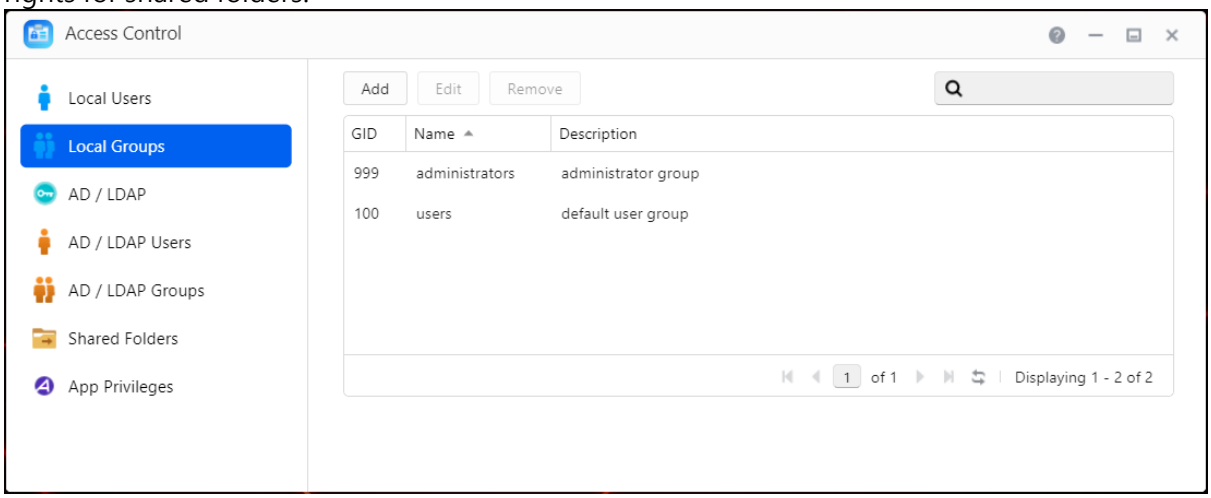
- Information: You can set account-related information (for example, enable two-step verification).
- Groups: Here you can select the group that the user wants to join, and the access permissions of different groups can be set by yourself.
- Folder - Acccess Rights: Here you can set access permissions for different folders for this user.

About Local Users

After initialization, the system will automatically create user accounts for "admin" and "guest". "admin" is the default administrator account and possesses a majority of the access rights. If you wish, you can change the access rights and password for this account. "guest" is the default guest account which is only suitable for use with CIFS/SAMBA and AFP. This account does not possess login and authentication rights, so you cannot change its password.

Local Groups

Here you can manage (add, edit or remove) the local groups in the system and assign access rights for shared folders.



Reminder: If you have a relatively large number of users on the system, you can conveniently assign access rights by user group instead of assigning access rights for each user one by one.

Within ADM, a single user's access rights with regards to shared folders will depend on the user's existing access rights and on the access rights of the group that the user belongs to. Both sets of access rights will be checked against each other in order to determine (please see). For convenience, the system provides a preview mode which allows you to first preview any changes that you make to access rights.

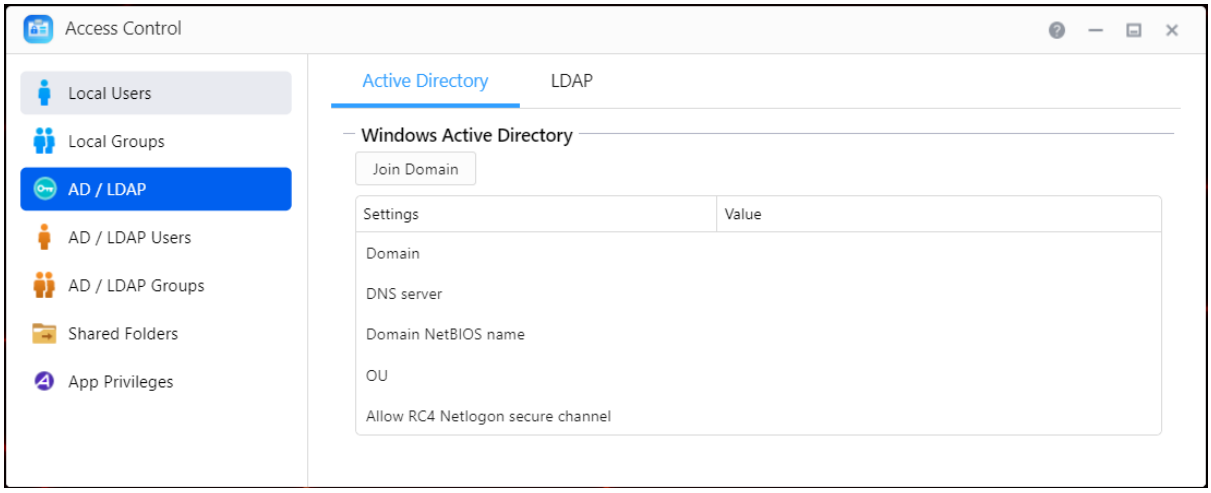
About Local Groups

After initialization, the system will automatically create two user groups, "administrators" and "users". "administrators" is the default administrator group. If a user is added to this group, they will possess a majority of the administrator access rights. The "admin" account belongs to the "administrators" group by default and cannot be removed from it.

AD/ LDAP

AD：The full name is Windows Active Directory, which is a directory service launched by Microsoft that allows IT managers to efficiently and centrally manage all resources in the domain, and is widely adopted by major enterprises.

LDAP：LDAP, also known as Lightweight Directory Access Protocol is mainly used for unified management of accounts and passwords. Using LDAP can more efficiently manage user authentication or computer resource permissions across the enterprise. Users can easily add an ASUSTOR NAS to their existing LDAP server, providing easier ways to help manage productivity.



Active Directory

You can click Join Domain here to join Windows Active Directory.

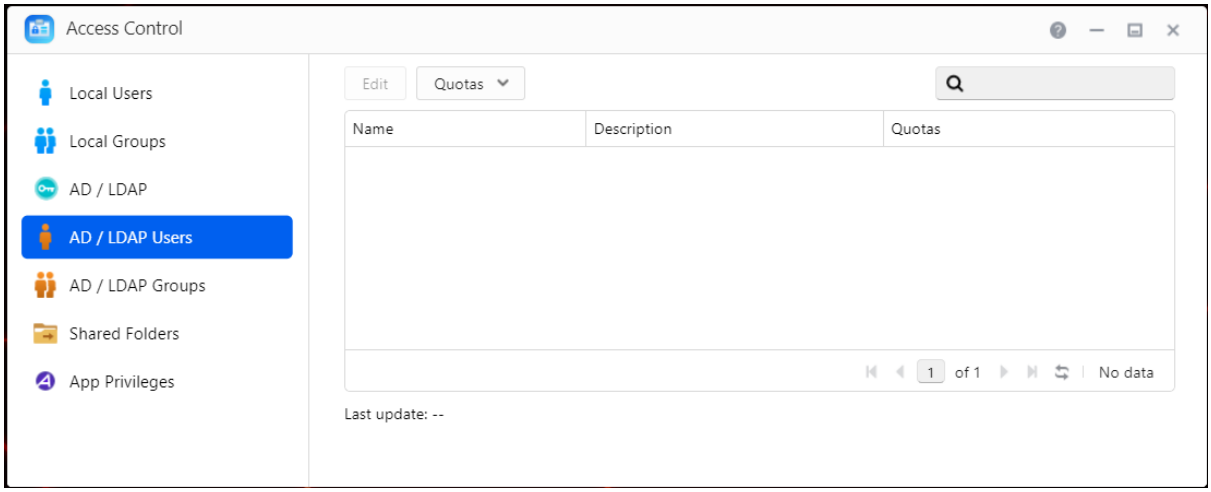
LDAP

You can enable the LDAP client here.

AD/ LDAP Users

Here you can view all AD/LDAP user accounts and manage their access rights to shared folders once your NAS has been successfully added to an AD/LDAP domain.

ASUSTOR NAS can support more than 200,000 AD users and groups. When joining an AD domain for the first time, depending on the number of users and groups, it may take a while for all of them to become visible.

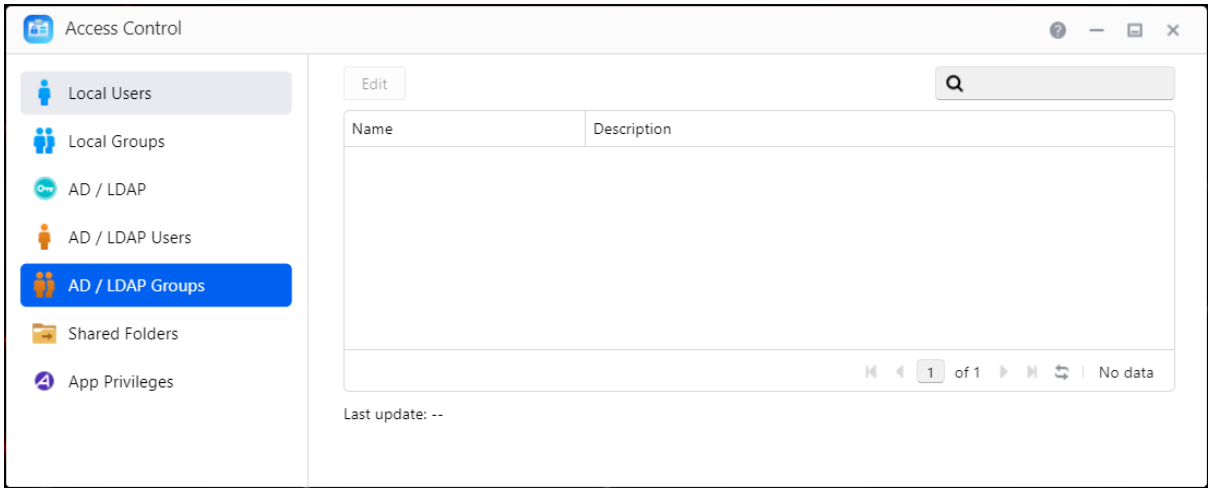


See More:

NAS 206 - Using NAS with Windows Active Directory

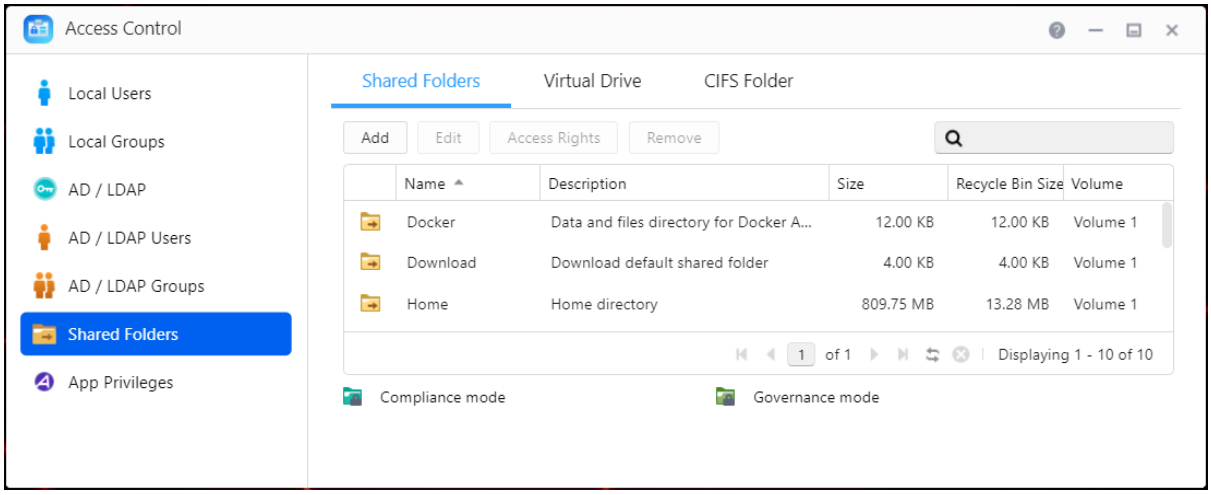
AD/ LDAP Groups

Here you can view all AD/LDAP user groups and manage their access rights to shared folders once your NAS has been successfully added to an AD/LDAP domain.



Shared Folders

Here you can manage your shared folders and set up their access rights in relation to users and user groups. Shared folders allow your NAS to become a file server. They are fundamental in sharing files with the outside world. Consequently, correctly setting up their access rights is very important in the management of your data.



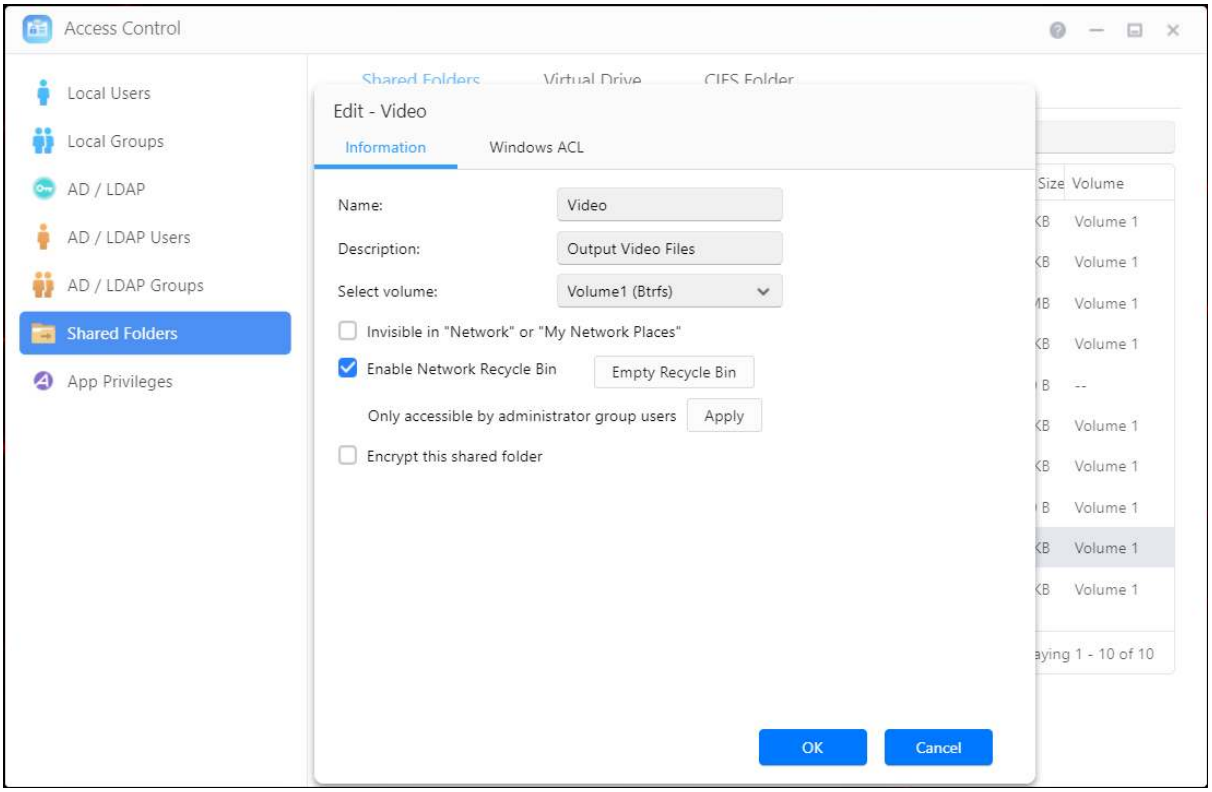
(1) Shared Folders:

Add: You can create a shared folder here and set the volume in which the folder is stored.

Edit:

Invisible in "Network" or "My Network Places" : This setting only applies if you are using Microsoft Windows. When you enable this setting, your NAS will cease to automatically

appear in "Network" or in "My Network Places". Please note that enabling this setting will not affect the connection to your NAS in any way.

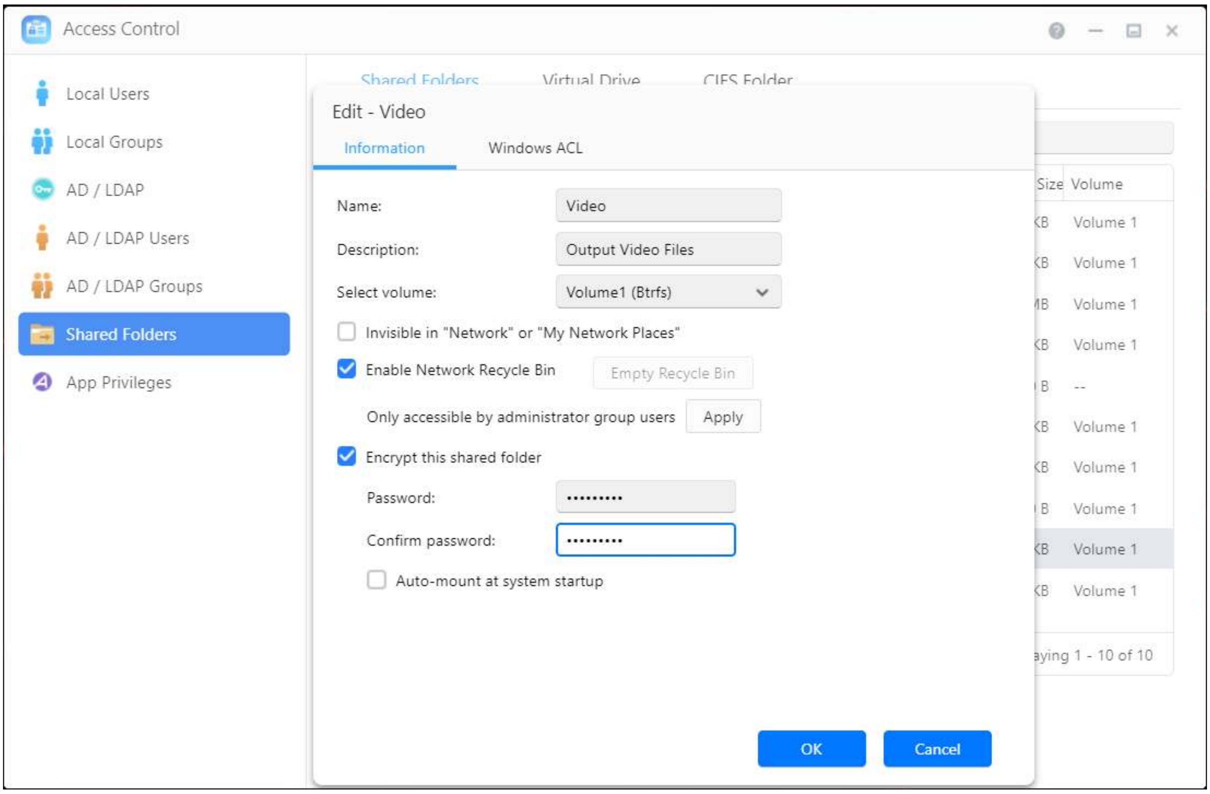


Empty Recycle Bin:

Click this button to empty all contents in this shared folder's Recycle Bin immediately.

Encrypt this shared folder:

Here you can choose whether or not you want to encrypt your shared folder and whether or not you want to auto-mount it at system startup. Should you choose to encrypt your folder, after the system restarts, you will have to manually enter the password or import the encryption key for the folder in order to access it. Encrypted folders are normally used for the storage of critical or confidential data. Should you lose your NAS you still needn't worry about your data leaking out and falling into the wrong hands.



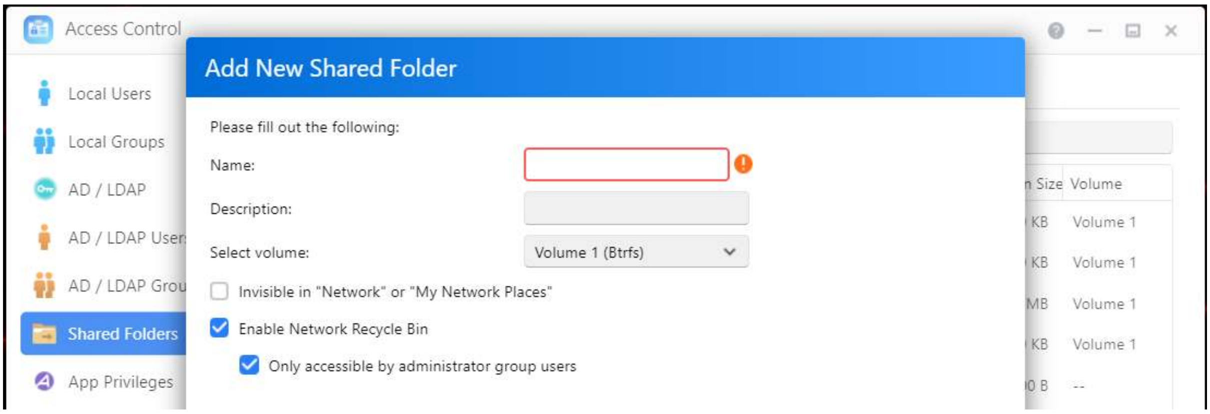
Warning：When choosing to use encrypted shared folders, please make it a point to remember your password. Should you forget your password, the data in the shared folder will become unrecoverable。

Export/import encrypted key:

Selecting "Export encrypted key" will download the encrypted key to your computer. When you need to mount an encrypted folder, you can select "Enter Password" or "Import encrypted key" to mount the shared folder and begin accessing it.

NFS Privileges:

Here you can set NFS privileges for individual folders after first enabling NFS service.

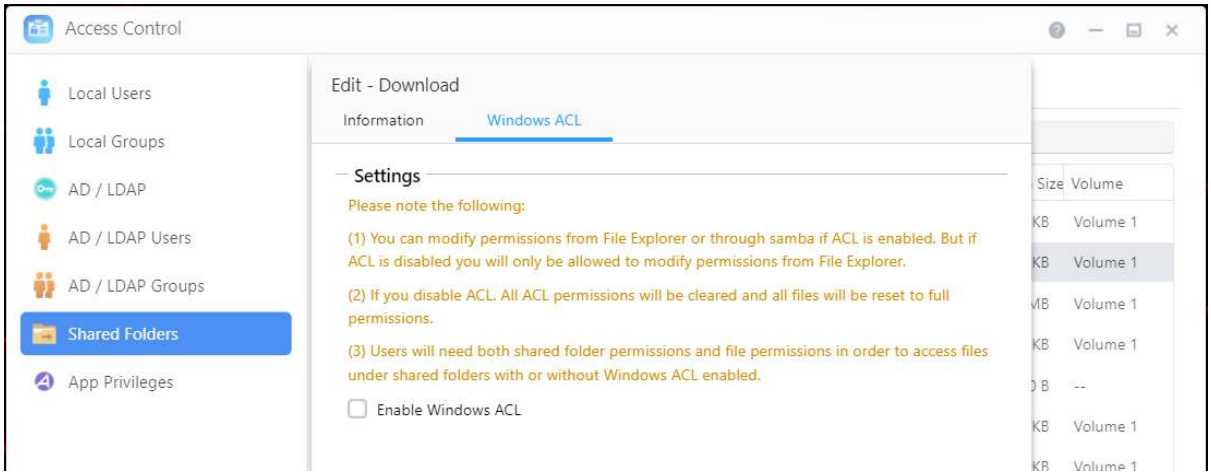


About Shared Folders [Public]

After initialization, the system will automatically create a shared folder "public". By default, all users can access the files in this folder. Additionally, the system will automatically create a personal folder for each user (using the user's account name) that by default, can only be accessed by the mentioned user.

Windows ACL:

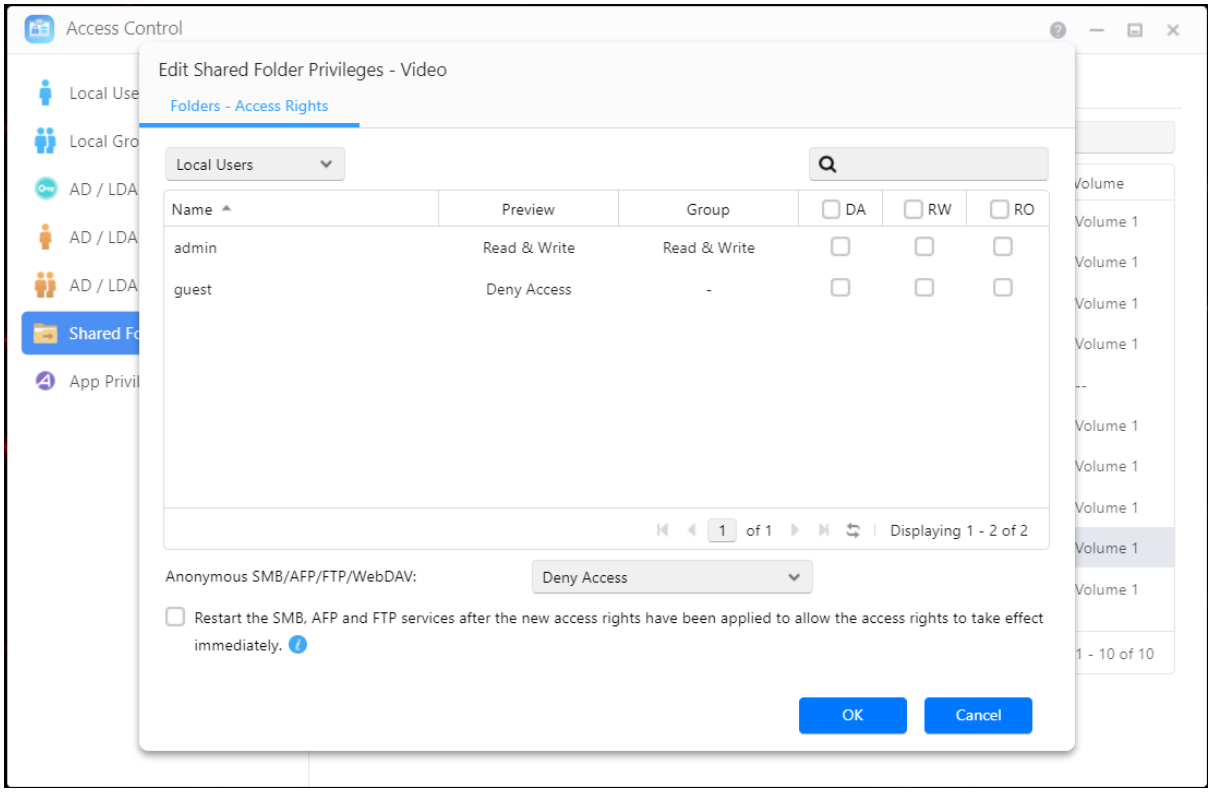
- Here you can choose to enable or disable Windows ACL for specified shared folders.



- After enabling Windows ACL for a shared folder, the shared folder and all subfolders and files contained within it can be assigned user or group permissions.
- The following shared folders do not support Windows ACL permissions: Home, User Homes, PhotoGallery, Web, Surveillance, MyArchive, Network Recycle Bin, virtual devices, external devices (USB hard drives, optical drives).
- After enabling Windows ACL you will be able to use ADM's File Explorer or Microsoft Windows Explorer to configure permissions. After disabling Windows ACL you will only be able to configure permissions from within ADM's File Explorer.
- If you enable Windows ACL and then later decide to disable it, all file and folders will be re-assigned with Read & Write permissions for all users.
- No matter if you are using Windows ACL or not, users will still require shared folder and file permissions in order to access files.

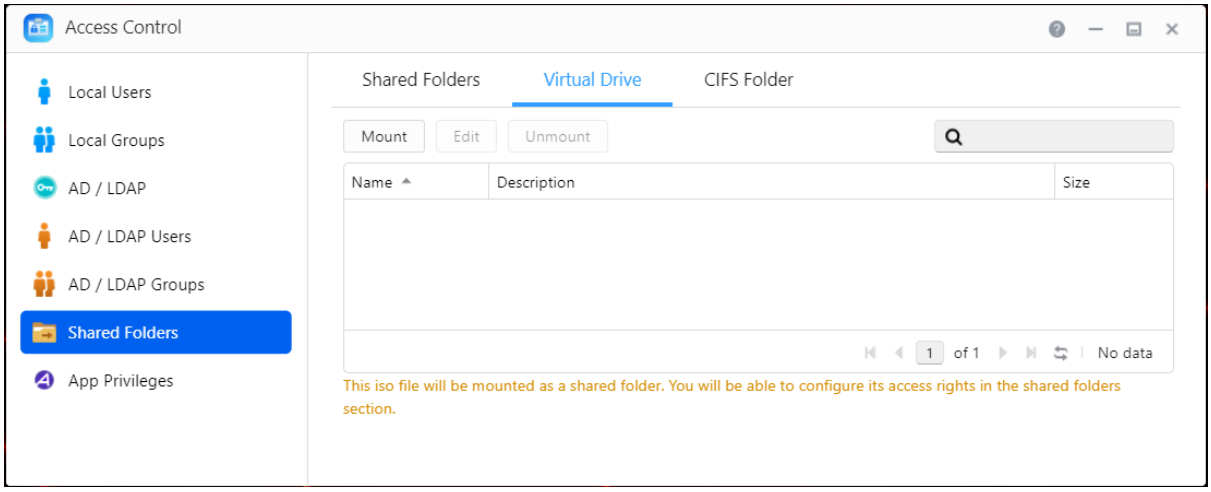
Folder – Access Rights:

- Shared folders access rights are the first level of access rights that will be examined. You can edit them here.



(2) Virtual Drive:

You can mount an ISO image file (.iso file) as a virtual drive and directly browse the content of the ISO image file. ADM's virtual drive function also provides simplified access control settings allowing you to either configure access for all users or limit access to only administrators.

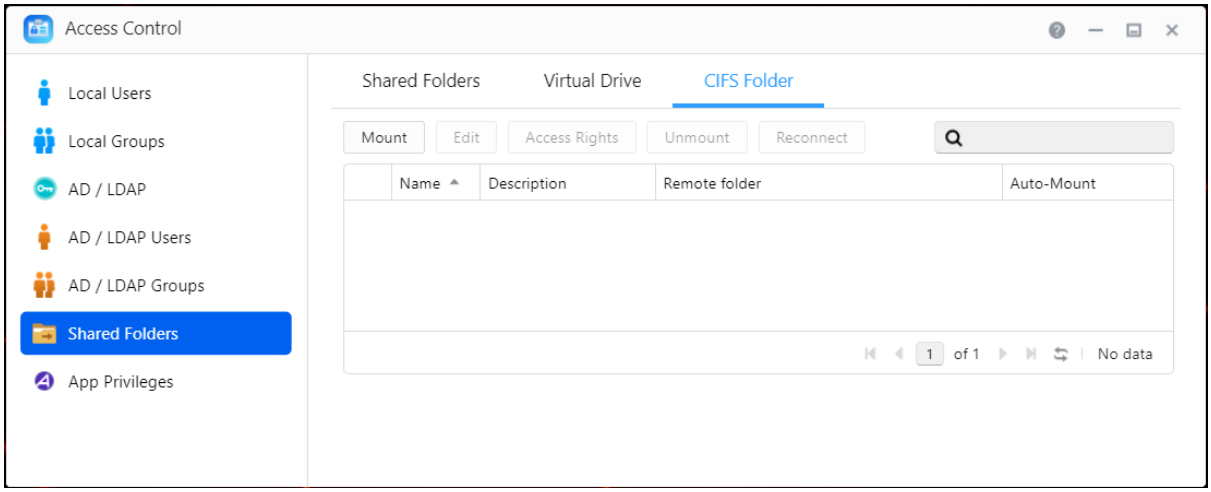


- Additional information: ISO Mounting

You no longer need to burn ISO files onto CDs in order to read them. Now you can select ISO files from your NAS and directly mount them to shared folders ("read only" access rights). You can then use your computer to access and read them. Later, when you are finished with the files, simply unmounts them.

(3) CIFS Folder:

Here, you can mount remote folders as shared CIFS folders and configure their usage permissions according to users or user groups.



- Auto-mount at system startup:

You can select whether to auto-mount on system startup. If you have not enabled this item, the CIFS folder will be automatically removed the next time the system starts up.

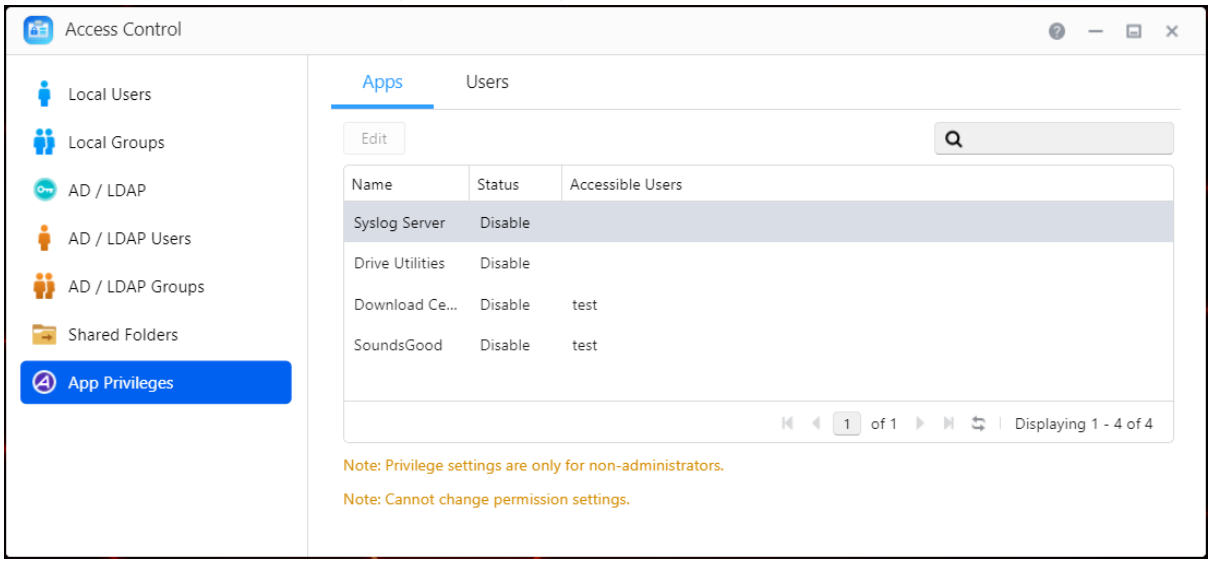
- Invisible in “Network” or “My Network Places”:

This setting only applies if you are using Microsoft Windows. When you enable this setting, your NAS will cease to automatically appear in “Network” or in “My Network Places”. Please note that enabling this setting will not affect the connection to your NAS in any way.

App Privileges

Here you can configure the users’ or user groups’ access rights to apps. For example, if a particular user's account is denied access to the Surveillance Center app, once he/she logs in, he/she will not be able to see the Surveillance Center app icon on their ADM home screen. The

user will have no way of opening or accessing the app.



- Note: Web applications may be public in nature (i.e., WordPress) or have their own account management systems (i.e., Joomla). Therefore, there is no way to restrict access to them through ADM.

Permission Mapping Table

X / Y	Deny	Read & Write	Read Only	No Settings
Deny	Deny	Deny	Deny	Deny
Read & Write	Deny	Read & Write	Read & Write	Read & Write
Read Only	Deny	Read & Write	Read Only	Read Only
No Settings	Deny	Read & Write	Read Only	Deny

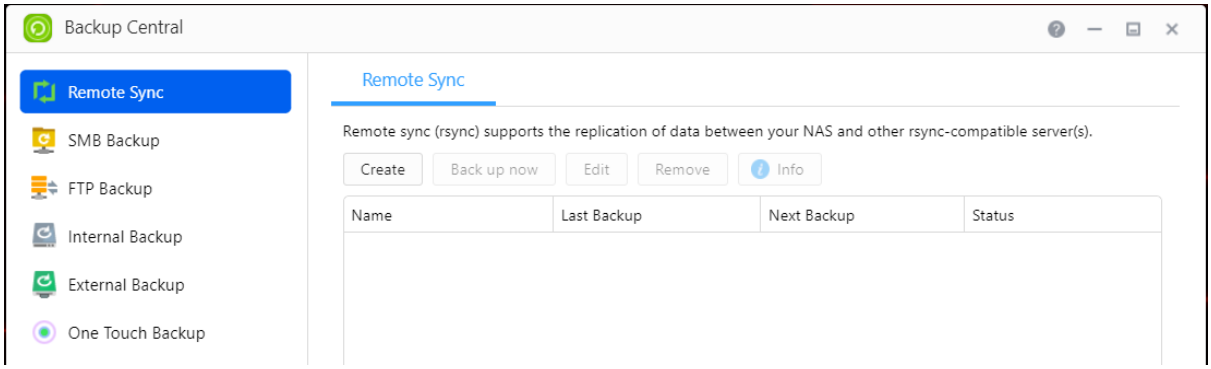
X: User access rights for shared folders

Y: Group access rights for shared folders

Priority of access rights: Deny Access > Read & Write > Read Only > No Settings

Backup Central

Remote Sync



Remote Sync (Rsync) can allow your NAS to be used as a backup destination or backup source. When using your NAS as a backup source, you can choose to back up the data from your NAS onto another remote ASUSTOR NAS or Rsync compatible server. When your NAS acts as a backup destination, you can back up the data from another remote ASUSTOR NAS or Rsync compatible server onto your NAS.

During the setting process, according to your personal needs, you may need to set the following options:

Use encrypted transmission:

If you choose to use encrypted transmission, you will have to enter the other host's SSH connection information in addition to your Rsync account information.

Use 1 on 1 folder synchronization:

If you decide to use 1 on 1 folder synchronization, all the data in the designated destination folder will be synchronized with the data in your source folder (you may only select one folder). The contents of both folders will be exactly the same. If you decide not to use this feature, all your chosen source folders (you may select multiple folders) will be copied one by one to the destination folder.

Archive mode (incremental backup):

After enabling this feature, successive backup jobs (after your first backup job) will only copy the data that has changed since your last backup job (block level). For example, if you have made some small changes to a 10 MB file, incremental backup will only copy the portions that you have made changes to. This can significantly reduce bandwidth usage.

Compress data during the transfer:

During backup you can compress the data that is being transferred thereby lowering bandwidth usage.

Keep file metadata:

When you enable this option, certain file properties (permissions, extensions, attributes, owner, groups, etc.) will be sent along with the file to the destination.

Support sparse files replication:

You will only need to enable this option when the data that you wish to back up contains sparse files. Normally, you will not have to enable this option.

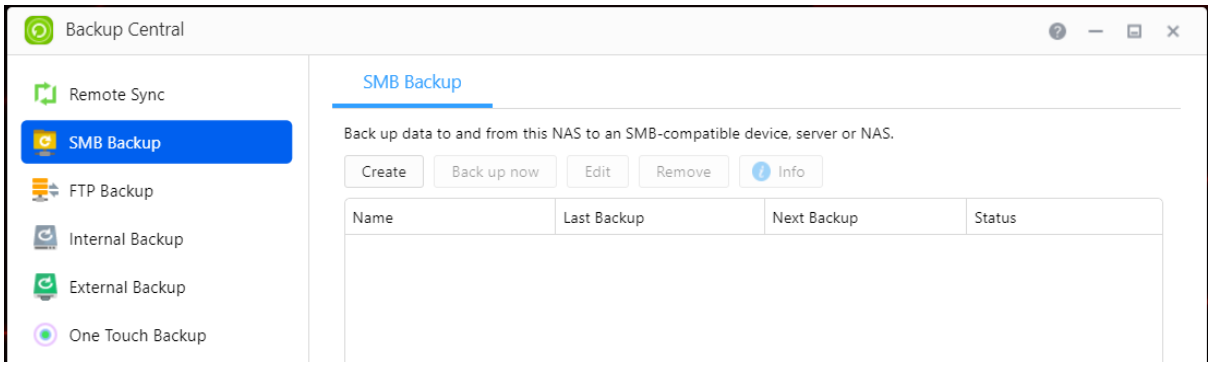
Mission Mode:

Sometimes backup jobs may be stopped because of various connection problems with a busy server on the other end. ASUSTOR's Mission Mode option allows you to configure the number of connection attempts and time interval for connection attempts, ensuring for the successful completion of your backup job. This also gives IT administrators a significant amount of flexibility when configuring backup jobs.

Reminder: If you wish to use Remote Sync while using your NAS in conjunction with another remote ASUSTOR NAS, please remember to enable the Rsync server feature on the remote NAS (Services -> Rsync Server). For more information please see Rsync Server.

SMB Backup

SMB Backup in Backup and Restore uses SMB to back up data to and from your NAS. When using your NAS as a backup source, you can choose to back up data from your NAS onto another ASUSTOR NAS or SMB compatible server in a local network. When your NAS acts as a backup destination, you can pull data from another ASUSTOR NAS or SMB compatible server onto your NAS.



When using SMB Backup, ensure that SMB is enabled on both the source and destination to ensure backups complete successfully. Please refer to [Services] [SMB].

Use 1 on 1 folder synchronization:

If you decide to use 1 on 1 folder synchronization, all the data in the designated destination folder will be synchronized with the data in your source folder (you may only select one folder). The contents of both folders will be exactly the same. If you decide not to use this feature, all your chosen source folders (you may select multiple folders) will be copied one by one to the destination folder. 。

Keep extra files at the destination: Once the copying and synchronization of files is completed, the data at the source and destination should be exactly the same. However, sometimes there are extra files present at the destination. These files are only present at the destination but not at the source. By enabling this option, these extra files will be kept at the destination and will remain untouched.

Skip existing file if not modified:

When enabling this option, existing files that have not been modified will be skipped to save time backing up.

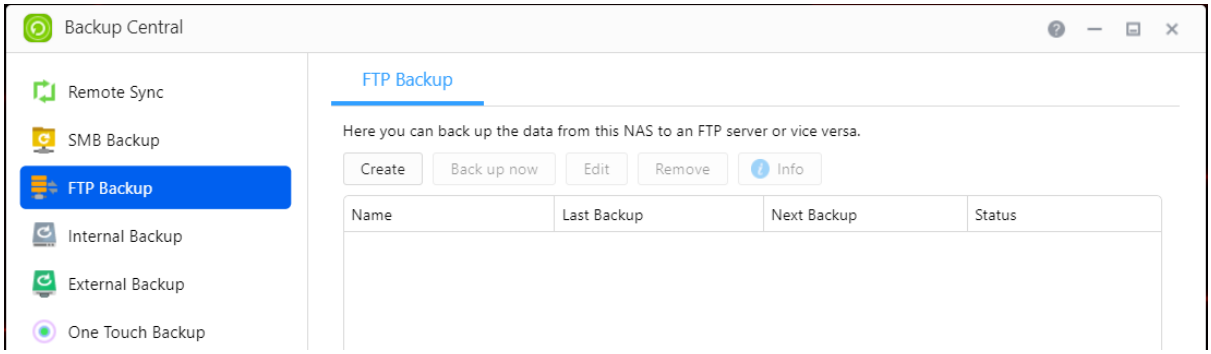
Mission Mode:

Sometimes backup jobs may be stopped because of various connection problems with a busy server on the other end. ASUSTOR' s Mission Mode option allows you to configure the number of connection attempts and time interval for connection attempts, ensuring for the successful completion of your backup job. This also gives IT administrators a significant amount of flexibility when configuring backup jobs.

See More: NAS 258 - Using SMB Backup

FTP Backup

FTP backup can allow for your NAS to be used as a backup destination or backup source. When using your NAS as a backup source, you can choose to back up the data from your NAS onto another remote ASUSTOR NAS or FTP server. When your NAS acts as a backup destination, you can back up the data from another remote ASUSTOR NAS or FTP server onto your NAS.



During the setting process, according to your personal needs, you may need to set the following options:

Mission Mode:

Sometimes backup jobs may be stopped because of various connection problems with a busy server on the other end. ASUSTOR's Mission Mode option allows you to configure the number of connection attempts and time interval for connection attempts, ensuring for the successful completion of your backup job。

Reminder:

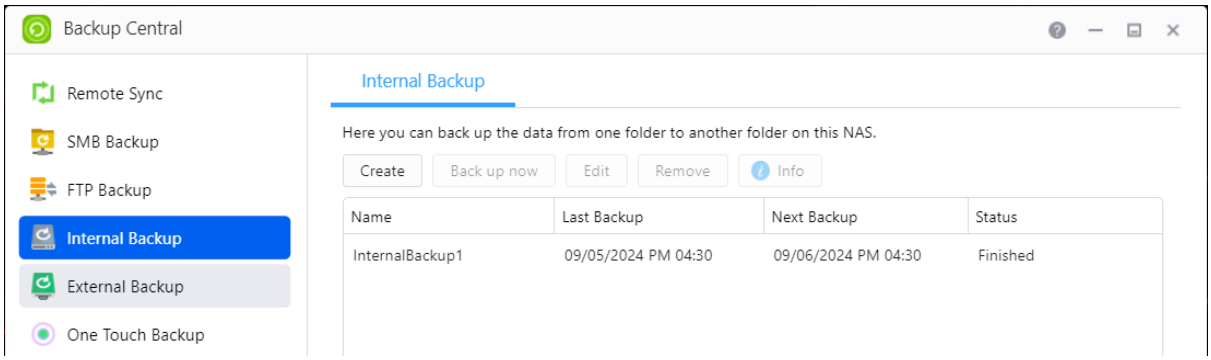
If you wish to use FTP backup while using your NAS in conjunction with another remote ASUSTOR NAS, please remember to enable the FTP server feature on the remote NAS (Services -> FTP Server). For more information please see FTP Server.

See More:

NAS 257 - FTP Backup

Internal Backup

Internal Backup allows you to backup data from NAS to local shared folders. Using Internal Backup with MyArchive disks creates a perfect off-site backup solution.



During the setting process, according to your personal needs, you may need to set the following options:

Use 1 on 1 folder synchronization:

If you decide to use 1 on 1 folder synchronization, all the data in the designated destination folder will be synchronized with the data in your source folder (you may only select one folder). The contents of both folders will be exactly the same. If you decide not to use this feature, all your chosen source folders (you may select multiple folders) will be copied one by one to the destination folder.

Support sparse files replication:

You will only need to enable this option when the data that you wish to back up contains sparse files. Normally, you will not have to enable this option.

Supports symbolic link replication:

You will only need to enable this option when the data that you wish to back up contains symbolic link files. Normally, you will not have to enable this option.

A symbolic link (also symlink or soft link) is a term for any file that contains a reference to another file or directory in the form of an absolute or relative path and that affects pathname resolution.

Preferred file permission for all users at the destination:

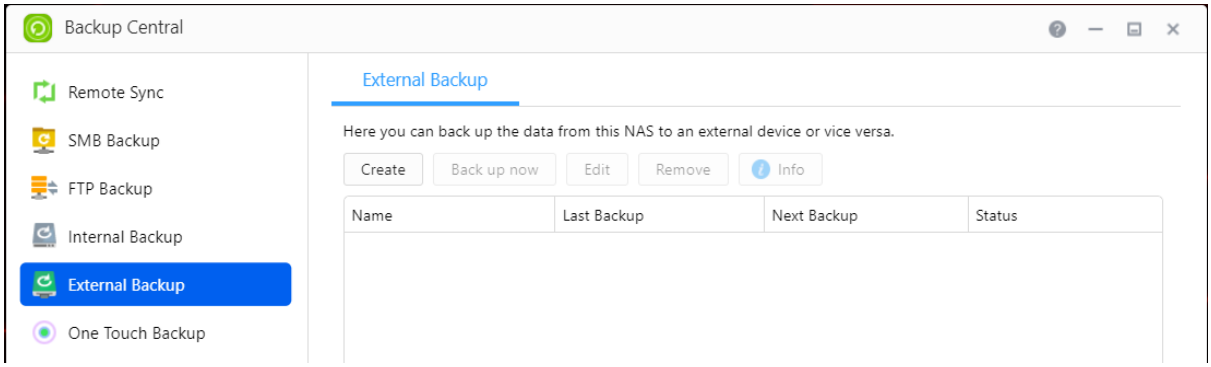
If the ACL status of the source and destination are not the same, this permission setting will be applied to the files at the destination.

Keep owner:

By default, the owner of the files at the destination will be the user who created the backup job. Enabling this option can allow you to maintain the original ownership of the files at the destination.

External Backup

Here you can choose to backup data from USB or eSATA external hard disks to your NAS or backup data from your NAS to these external hard disks. In addition to supporting two-way backup, this feature also supports scheduled backups, making sure that your data is always backed up.



During the setting process, according to your personal needs, you may need to set the following options:

Mission Mode:

Sometimes backup jobs may be stopped because of various connection problems with a busy server on the other end. ASUSTOR's Mission Mode option for external backup allows you to configure the time interval for connection attempts, ensuring for the successful completion of your backup job. This also gives IT administrators a significant amount of flexibility when configuring backup jobs.

Archive mode (incremental backup):

After enabling this feature, successive backup jobs (after your first backup job) will only copy the data that has changed since your last backup job (block level). For example, if you have made some small changes to a 10 MB file, incremental backup will only copy the portions that you have made changes to. This can significantly reduce bandwidth usage.

Support sparse files replication:

You will only need to enable this option when the data that you wish to back up contains sparse files. Normally, you will not have to enable this option.

Supports symbolic link replication:

You will only need to enable this option when the data that you wish to back up contains symbolic link files. Normally, you will not have to enable this option.

A symbolic link (also symlink or soft link) is a term for any file that contains a reference to another file or directory in the form of an absolute or relative path and that affects pathname resolution.

One Touch Backup

One Touch Backup allows you to preset the function of the USB backup button found on the front of your NAS. Here you can designate your preferred backup direction and directory. After setting up One Touch Backup and plugging in an external USB drive to your NAS, you will only have to push the USB backup button to execute your backup job. Once the USB backup button is held down for 1.5 seconds, One Touch Backup will be triggered. During the backup process, the USB backup LED indicator light will blink continuously. After the backup process has finished, the light will cease to blink and will then return to its previous state. If you wish to disable One Touch Backup, you can adjust the settings accordingly.

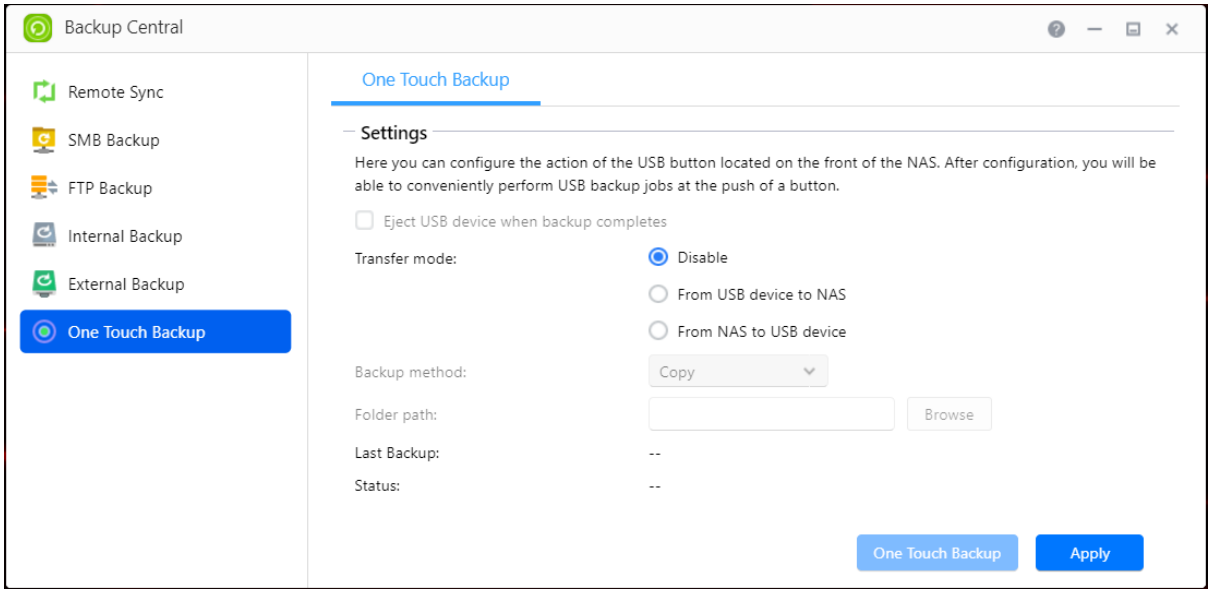
Note: This function may differ depending on the NAS model in use.

Transfer Modes:

- From USB device to NAS: The system will back up the entire contents of the USB drive, based on the existing directory structure, to the NAS folder path that you set.
- From NAS to USB device: The system will take the contents of the specified NAS directory and, based on the existing directory structure, back it up to the USB drive's root directory.

Backup Methods:

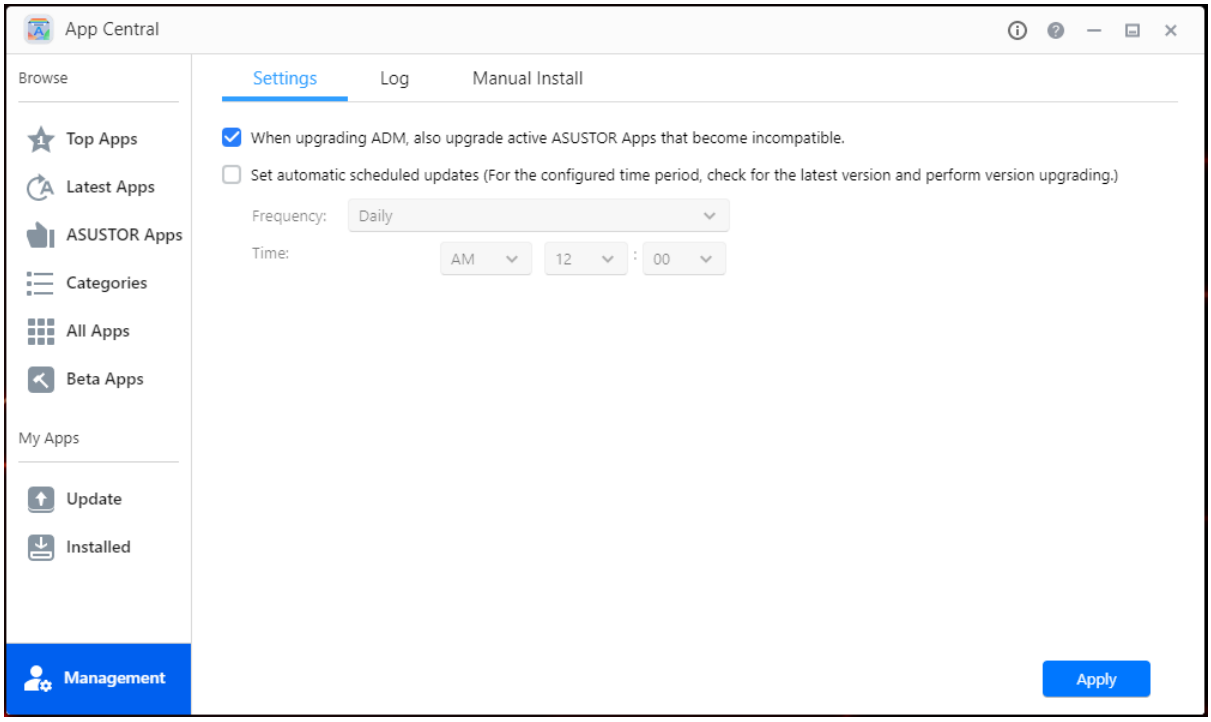
- Copy: If you select this method, your system will copy your data from the back up source to the destination, be it the USB device or your NAS. Files or folders of the same name will be replaced and extra files at the destination will be kept. This method is suitable for one time backups.
- Synchronization: If you select this method, all the data in the designated destination folder will be synchronized with the data in your source folder. The contents of both folders will be exactly the same. Extra files at the destination will be automatically deleted. This method is suitable for ensuring your most recent data is backed up and for scheduled weekly backups. For example, you may choose to have regularly scheduled backups of your NAS's data so you always keep a USB drive plugged into your NAS for this purpose.
- Save in new folder: After selecting this method, you will then have to specify a naming format for the new folder. Every time you run a backup job the system will create a new folder according to this format and then proceed to back up your data into the folder. This method is suitable for those who wish to keep complete copies of each backup job, or those who just wish to back up their regular data from external devices onto their NAS. For example, you may back up the data from your work computer onto your USB drive and then proceed to back up the data from your USB drive onto your NAS at home.



App Central

You can use App Central to download apps that are suitable for use with your NAS. App Central provides you with a rich variety of applications, allowing you to install software that is uniquely suited to your needs. Whether your interests lie in digital entertainment, e-commerce, blogging or website construction, App Central has it all.

Note: This function may differ depending on the NAS model in use.



- All newly installed apps will be immediately enabled after installation has finished.
- Set automatic scheduled updates: After enabling this option, all associated ASUSTOR Apps will be automatically upgraded when ADM is upgraded. This will allow your ASUSTOR NAS Apps to operate under optimal conditions.
- Should you choose to remove an app, all settings and information relating to the app will be removed as well. If you wish to reinstall the app at a later date, the system will not be able to return the app to its previous state with all of its previous settings and information still intact.

Additional information:

App Central may contain applications developed by ASUSTOR, open source software and software by third-party developers. For applications that have been officially verified, ASUSTOR provides a limited warranty with regards to its installation and execution. If you have any questions regarding a particular application, please contact the developer directly.

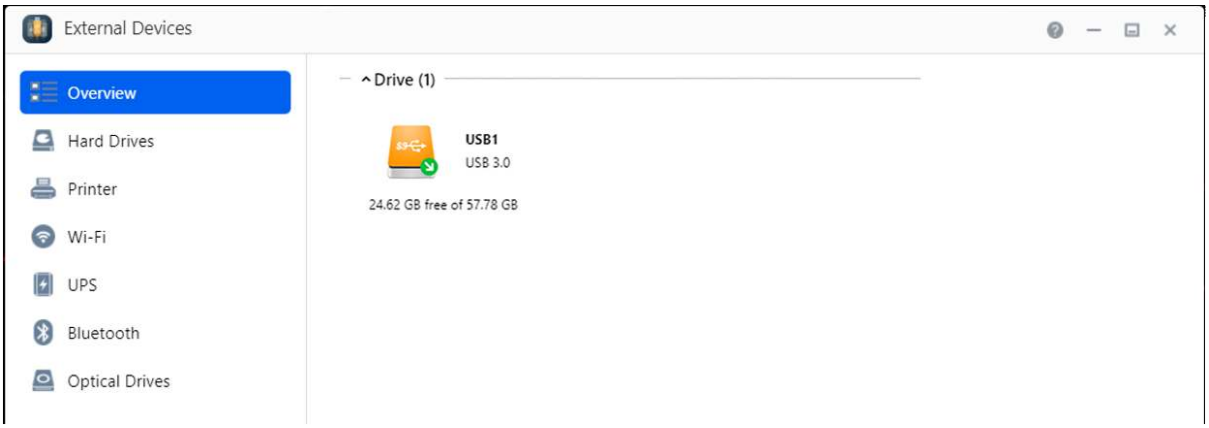
ASUSTOR cannot guarantee the stability of your system if you choose to install applications that have not been officially verified. Should you choose to do this, you will have to assume responsibility for all risks. Before you start using App Central you must first read and agree to the Terms of Use.

When upgrading ADM, also upgrade active ASUSTOR Apps that become incompatible: When upgrading ADM, it is recommended that you also simultaneously upgrade all ASUSTOR Apps as well in order to maintain compatibility with the latest version of ADM. This will allow your ASUSTOR NAS to operate under optimal conditions.

External Devices

Overview

You can view the connected external devices and their information here.



Hard Drives

Here you can view and format all USB or eSATA external hard disks that are connected to your NAS. Supported file systems are as follows:

Reminder: If your device cannot be detected, please try connecting again using another cable or port.

FAT32:

for use with Windows and macOS

NTFS:

for use with Windows

HFS+:

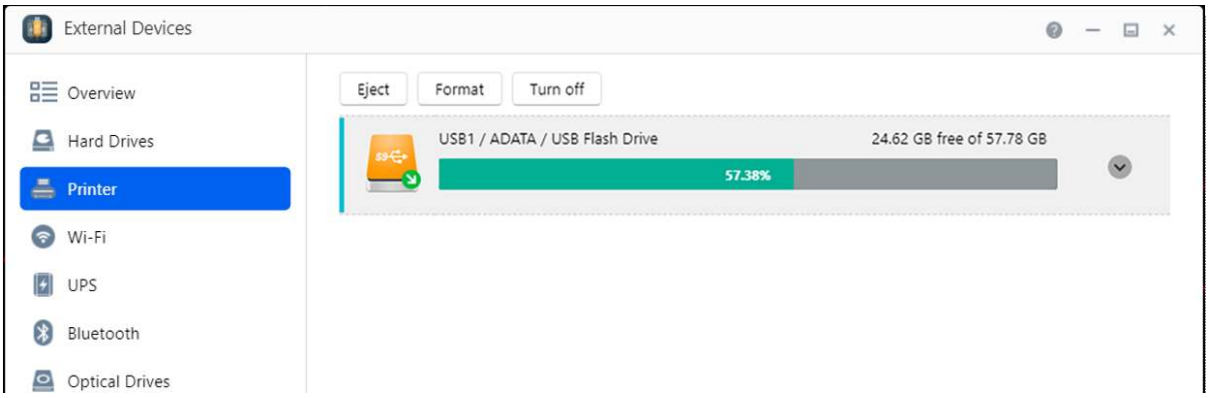
for use with macOS

EXT4:

for use with Linux

exFAT:

for use with Linux, macOS, Windows.



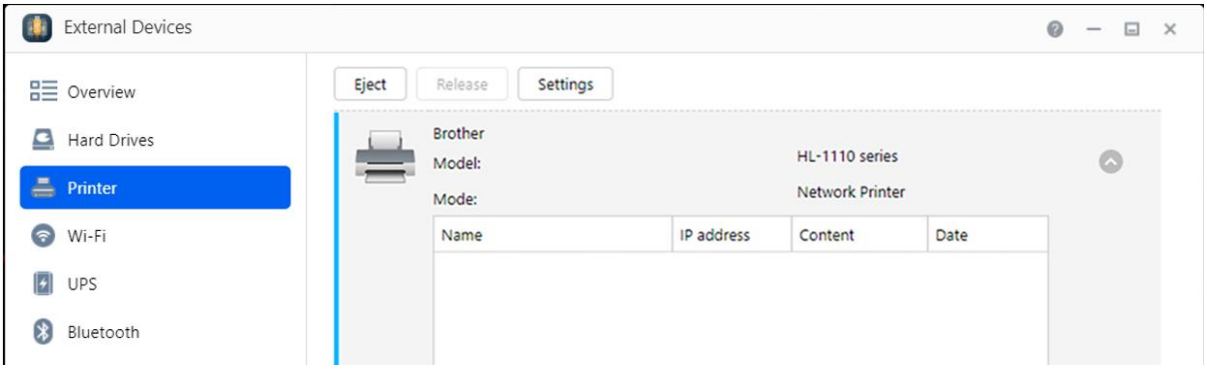
See More:

Compatibility – Hard Disk

Printer

Here you can view all the USB printers that are connected to your NAS and their respective printing logs. Additionally, ASUSTOR NAS also supports Apple AirPrint.

Reminder: ASUSTOR NAS supports up to three USB printers.



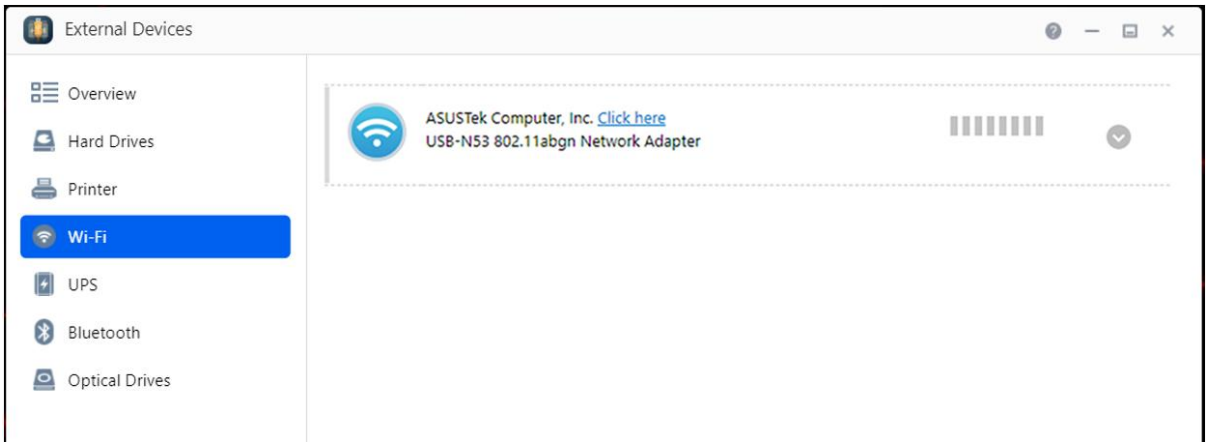
See More:

Compatibility – USB Printer

Wi-Fi

After connecting your USB Wi-Fi adapter to your NAS, you can view its detailed information here.

If you wish to use Wi-Fi with your NAS, please take a look at the compatibility list on the ASUSTOR website before purchasing a Wi-Fi adapter. Wi-Fi signal strength and stability will vary according to the hardware that you are using (e.g., Wi-Fi network card and wireless access point) and any physical barriers that are present. Therefore, ASUSTOR has no way of guaranteeing Wi-Fi signal strength or stability. For best results, a wired Ethernet connection is recommended.



See More:

UPS

A UPS can provide backup power to your NAS in the event of a power outage. Using a UPS can protect your data and NAS from sudden shutdown or service interruptions.

Network UPS:

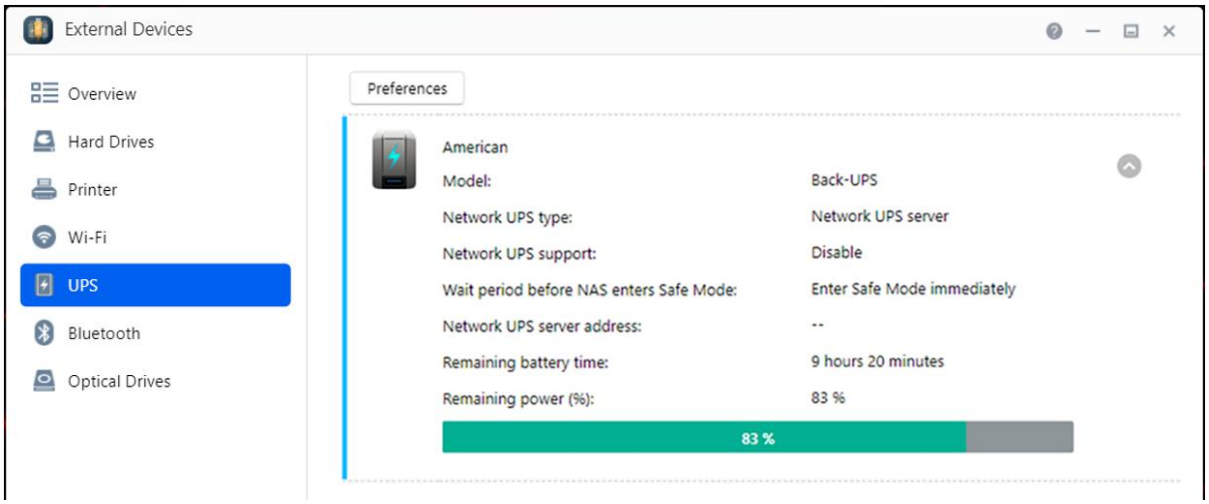
Here you can setup your NAS to be the network UPS server (Master mode) and set its IP address, when the UPS's USB cable is connected to your NAS. Other devices that are in the same local area network will be then set to slave mode. In the event of a power outage, the master and slave devices will immediately detect this stoppage in power and then determine whether or not to commence shutdown procedures based on the time period that has been set.

Shut down:

When the NAS receives notification of a power outage from the UPS, it will begin normal shutdown procedures.

Safe mode:

When the NAS receives notification of a power outage from the UPS, it will stop all services in accordance with normal procedures and unmount all storage volumes. If you have enabled the "In the event of a power outage, enable the NAS to return to its previous state once power has been restored" setting (configurable via Settings → Hardware → Power), once the NAS has been shut down under safe mode, it will automatically turn on once power has been restored. (This function is available for use with AS-6/7 series devices).



Reminder: When the NAS is configured as the network UPS server (Master mode), the default username is "admin" and the password is "1111" when connecting to the network UPS server.

See More:

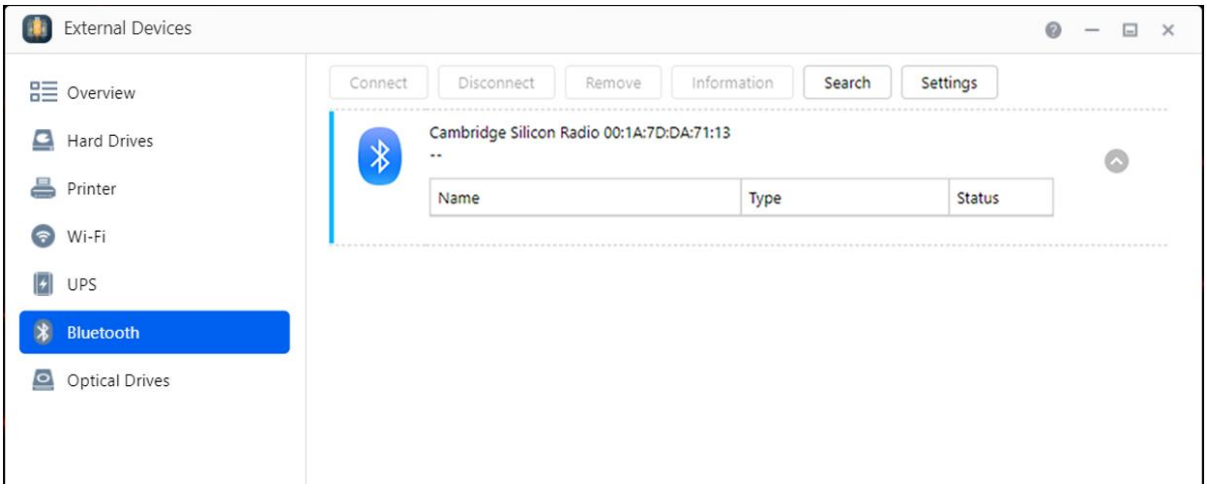
Compatibility - UPS

Bluetooth Devices

After you have connected your Bluetooth device to the NAS, you will be able to view its detailed information here.

If you wish to use Bluetooth devices with the NAS, please check ASUSTOR's online compatibility list before purchasing. The signal strength and stability will vary according to the hardware that you are using and any physical barriers that are present. Therefore, ASUSTOR has no way of guaranteeing Bluetooth signal strength or stability. It is recommended that you connect your Bluetooth device within the maximum effective range (around 10 meters).

You can directly stream music from the NAS using SoundsGood via Bluetooth speakers.

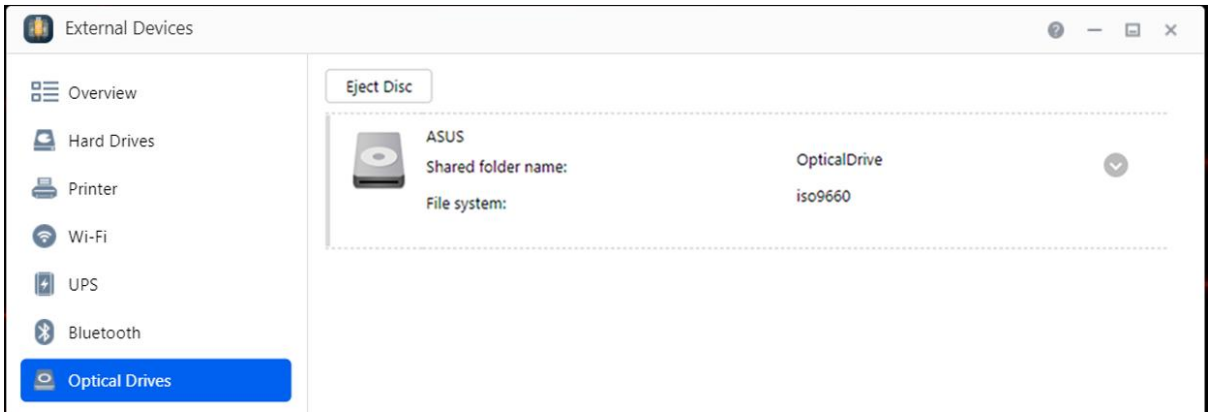


See More:

Compatibility – Bluetooth

External Optical Drive

After connecting an external optical drive (CD, DVD, Blu-ray) to your NAS via USB, you can use File Explorer to directly access any files that you have backed up to optical media and even transfer files from your optical media to your NAS via drag and drop for future access.



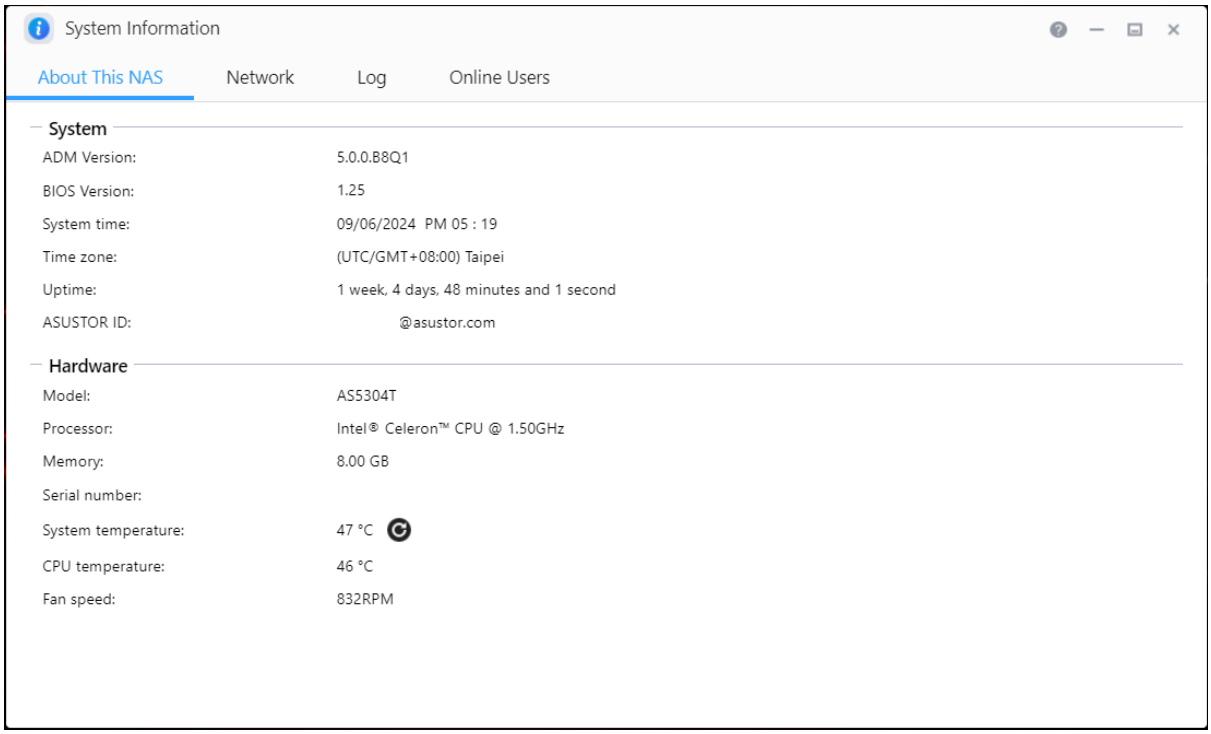
See More:

Compatibility – External Optical Drive

System Information

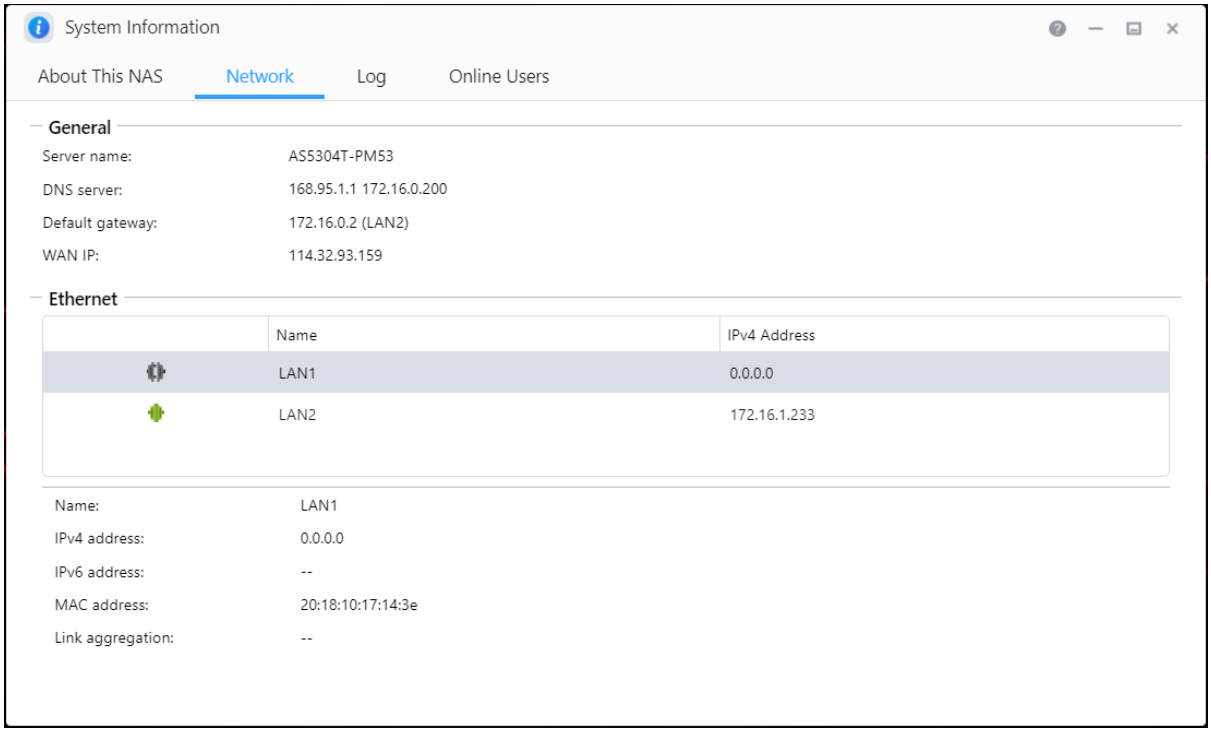
About This NAS

Here you can view general information about your NAS such as the hardware model number, software version, BIOS version and present state of the system.



Network

Here you can review information about your network settings (i.e., IP address and MAC address).



Log

Here you can review logs of all system events. These logs include the system log, connection log and file access log. ASUSTOR NAS also supports Syslog. This can allow you to employ centralized management by sending your system event information to a Syslog server.

System log:

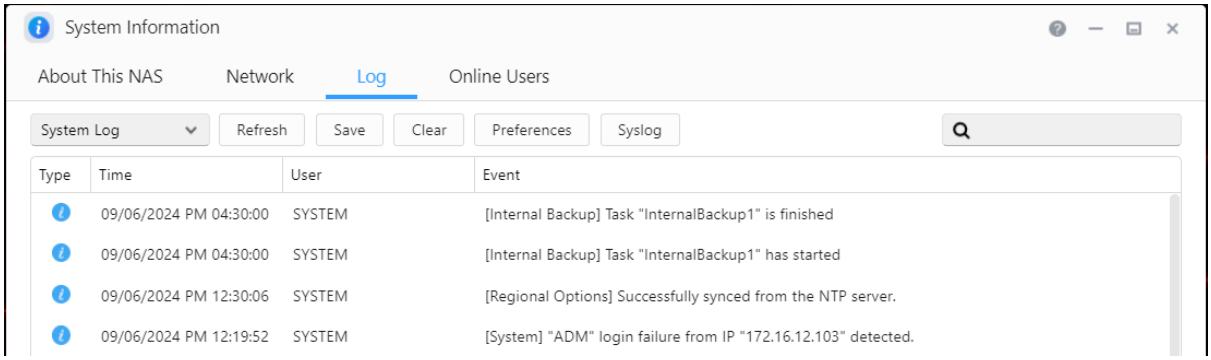
All log entries about system events

Connection log:

All log entries about system connections.

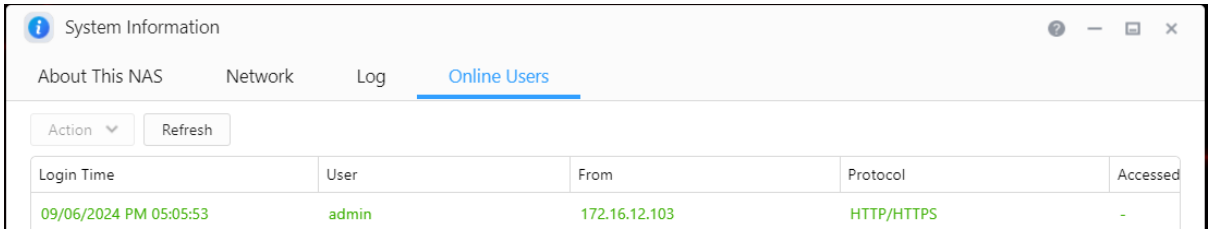
File access log：

All log entries about file access.



Online Users

Here you can view the users that are currently logged in to ADM or any users that are using other transfer protocols to connect to your NAS.

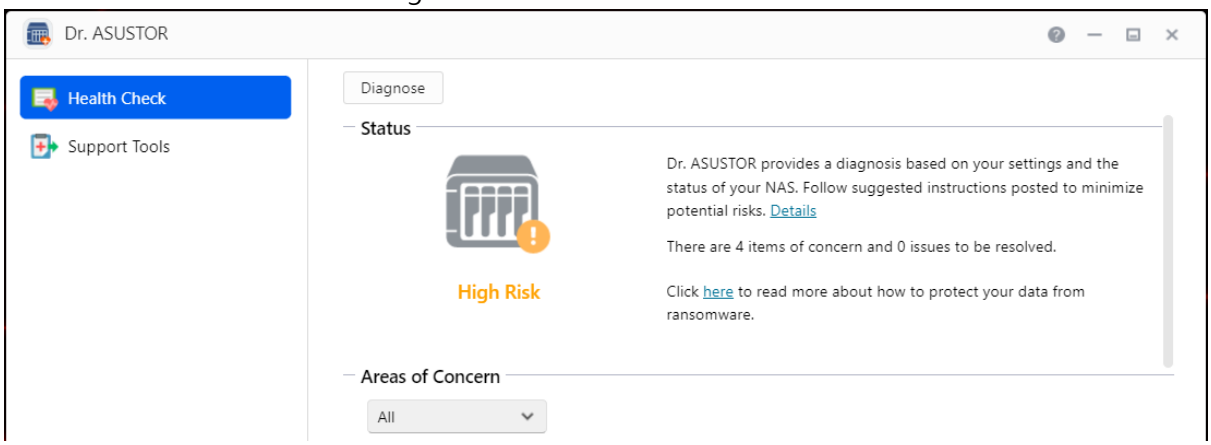


ADM is able to display any users who connect to your NAS using the following methods:

- ADM system login (HTTP & HTTPS)
- SMB (CIFS/SAMBA)
- Apple Filing Protocol (AFP)
- File Transfer Protocol (FTP)
- Secure Shell (SSH)
- iSCSI
- WebDAV

Dr. ASUSTOR

Dr. ASUSTOR performs checkups based the current state of your system, settings and connectivity. After performing these checkups, Dr. ASUSTOR will diagnose any problems and provide you with appropriate recommendations. Additionally, you can also export a health record for your NAS in order to help ASUSTOR engineers quickly identify the causes of any problems. The health record contains information pertaining to the NAS' s system event logs, core information and basic configuration files.



Activity Monitor

Activity Monitor dynamically monitors your NAS. Here you can view current usage information such as:

CPU Usage

Memory (RAM) Usage

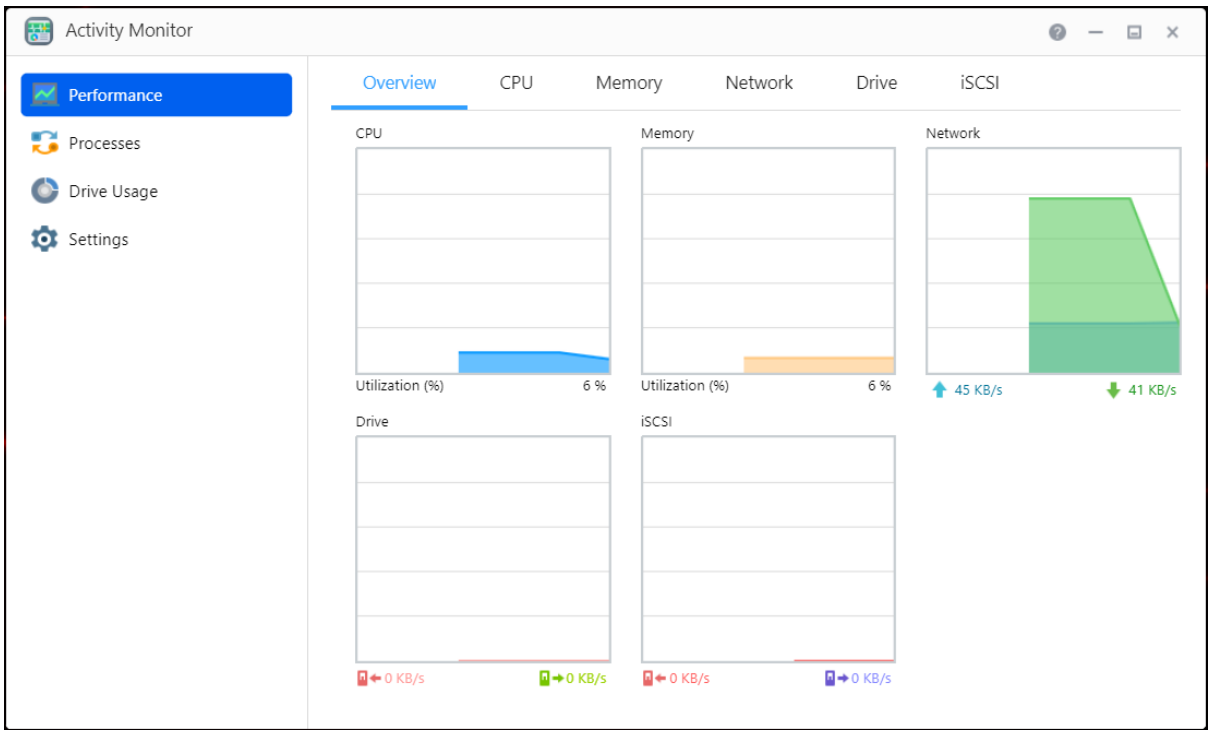
Network Traffic

Storage Space Usage

Resources Being Used by System Programs

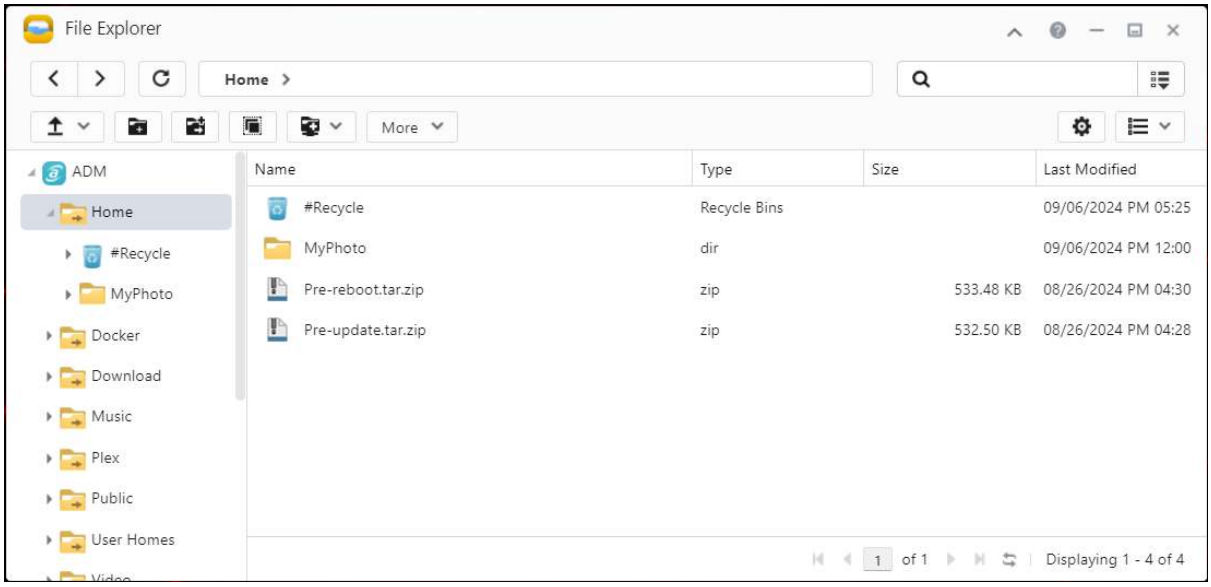
You can also set up the detection frequency of resource monitoring and whether to enable event notification in the Settings.

Note: This function may differ depending on the NAS model in use.



File Explorer

File Explorer comes pre-installed with ADM and can be used to browse and manage the files on your NAS. File Explorer displays accessible directories to users based on the access rights that are assigned to them. Additionally, ADM supports three simultaneously open File Explorer windows. You can easily make copies of files by dragging and dropping them into a different File Explorer window. ADM File Explorer can also use the right mouse button or keyboard shortcuts to copy, cut, paste, select all, delete and rename files and folders。



1.ADM

Create Share Link:

You can use Share Links to share files with people who don’ t have accounts on your NAS. Share Links allow you to instantly create download links for designated files that you want to share. Expiry dates can also be set for each Share Link that you create, allowing for safe and flexible management.

- Share Links for downloads
- Share Links for uploads.
- Share Links for downloads and uploads.

Permissions:

Right-clicking on a file or folder and then selecting “Properties” followed by the “Permissions” tab will allow you to configure detailed access permissions for the file or folder.

If the top-level shared folder does not have Windows ACL enabled, the options for configuring permissions will be:

- Owner: The owner of the folder or file
- Group: The group that has been assigned to the folder or file
- Others: All other users on the system or network that are not owners or part of the group that has been assigned to the folder or file.

  The permission types that you will be able to configure are: RW (Read & Write), RO (Read Only) and DA (Deny Access). 。
- If the top-level shared folder has Windows ACL enabled, you will be able to configure file permissions for all users and groups. In total, there will be 13 types of configurable permissions. These types of permissions are as follows:

Traverse folder / execute file
List folder / read data
Read attributes
Read extended attributes
Create files / write data
Create folders / append data
Write attributes
Write extended attributes
Delete
Delete subfolders and files
Read permissions
Change permissions
Take ownership

Reminder: An individual file or folder can utilize up to a maximum of 250 Windows ACL permissions (including inherited permissions).

Include inheritable permissions from this object's parent:

This option is enabled by default. The system will automatically configure sub folders and files to inherit permissions from the object above it. Disabling this option will reject all inheritable permissions and only keep newly added permissions.

Replace all child object permissions with inheritable permissions from this object:

Enabling this option will replace all sub folder and file permissions with ones from the parent object.

Effective Permissions:

Clicking on this button and then selecting a user from the list will allow you to view the user's effective permissions with regards to the specified folder or file.

2. External Devices: Here you can view and format all USB or eSATA external hard disks that are connected to your NAS. Please refer to here .

3. Virtual Drive:

You can mount an ISO image file (.iso file) as a virtual drive and directly browse the content of the ISO image file. ADM' s virtual drive function also provides simplified access control settings allowing you to either configure access for all users or limit access to only administrators . Please refer to here.

4. CIFS Folder:

Here, you will be able to view all CIFS folders (including personal CIFS folders you have mounted and shared CIFS folders mounted by administrators). Please refer to here

1. If you are a regular user that requires use of the CIFS folder mounting service, please contact the system administrator to grant the associated permissions.
2. When a remote server supports the CIFS protocol, the server's remote folders can be mounted.
3. The maximum number of simultaneously mounted CIFS folders is 50.

- Network Recycle Bin: Here you can access the enabled Network Recycle Bins of all shared folders.

Chapter

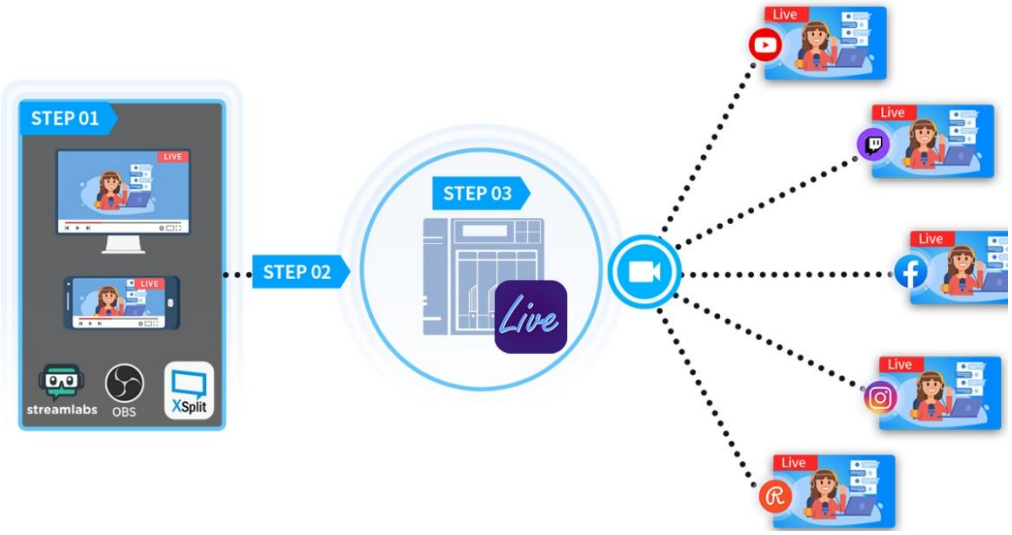
4

From App Central

In addition to the built-in apps that come with ADM, every ASUSTOR NAS comes with several pre-installed apps. You can choose whether you want to keep or remove these apps. At your convenience, you can also browse through and download any additional apps that peak your interest from App Central.

ASUSTOR Live

ASUSTOR Live gives you more control over your live streams than ever before. Store, stream and broadcast with ASUSTOR Live.



1. Setting up ASUSTOR Live only requires three steps to turn your ASUSTOR NAS into the ultimate companion for live streamers in a way that functions similarly to Restream.io. Unlike Restream.io, ASUSTOR Live is free and broadcasts to a variety of platforms from your phone, tablet or computer. ASUSTOR Live supports Twitch, YouTube, Facebook, Instagram, Restream and any RTMP supported streaming platform. Since ASUSTOR Live can simultaneously broadcast to multiple platforms, it is not necessary to have multiple streams open at once. This saves computer resources, such as CPU and memory resources as well as saving money.

2. ASUSTOR Live also supports simultaneous recordings of your broadcast. Store the entire video on your NAS while you are streaming for future sharing and/or editing。

- See More

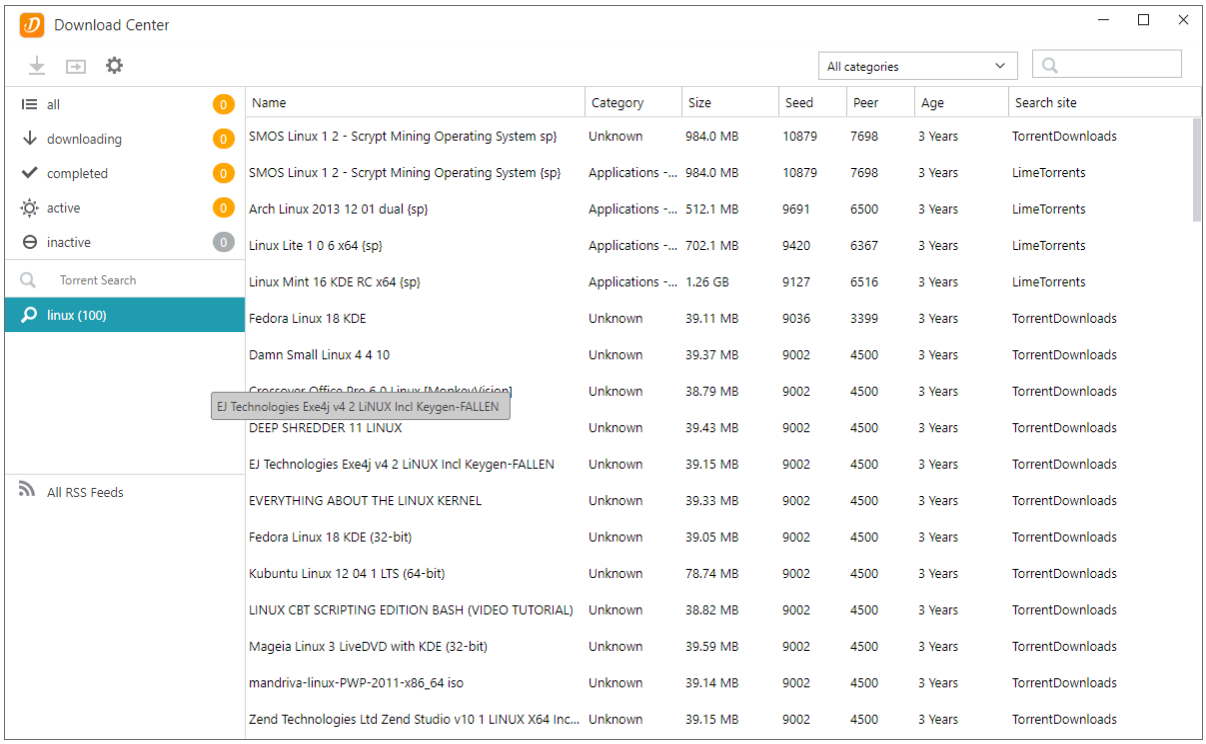
NAS-131-Using ASUSTOR Live to Back Up and Save Live Streams

Download Center

Download Center allows you to easily download and save files to your NAS. Your NAS can effectively replace your computer in helping you with any download jobs. This provides you with data protection and energy saving benefits. An ASUSTOR NAS consumes far less power during operation than a normal computer does. No longer will you have to leave your computer on for long periods of time while downloading files. Download Center supports HTTP, FTP, and BitTorrent downloads along with the scheduling of download tasks and the limiting of download and upload speeds.

Furthermore, Download Center supports selective downloading with respect to BitTorrent downloads. This gives you the ability to select and download only the files that you wish to from

within a torrent. You no longer need to waste bandwidth and storage space downloading unnecessary files that you don't want. Finally, you can remotely control Download Center using our exclusive mobile app (Android). ◦



BitTorrent Downloads:

When you upload torrent files to Download Center, the system will automatically create a new download task and then proceed to add this task to the download list. Download Center also supports directly inputting the torrent's download link as well as the use of magnet links.

HTTP/FTP Downloads:

Download Center supports HTTP and FTP downloads. You only need to paste or enter the link of your choice. The system will then immediately begin your download.

RSS Subscriptions and Downloads:

RSS downloading (also known as Broadcatching) is a type of technology that allows you to select the items you wish to download from within the contents of RSS feeds. Additionally, Download Center also offers an RSS automatic downloader. In accordance with your settings, the system will regularly update RSS feeds and then proceed to download items based on your set keywords and preferences. This is frequently used with items that require regular downloading. For example, weekly TV shows.

Search:

Download Center allows you to use keywords to search for files that you wish to download.

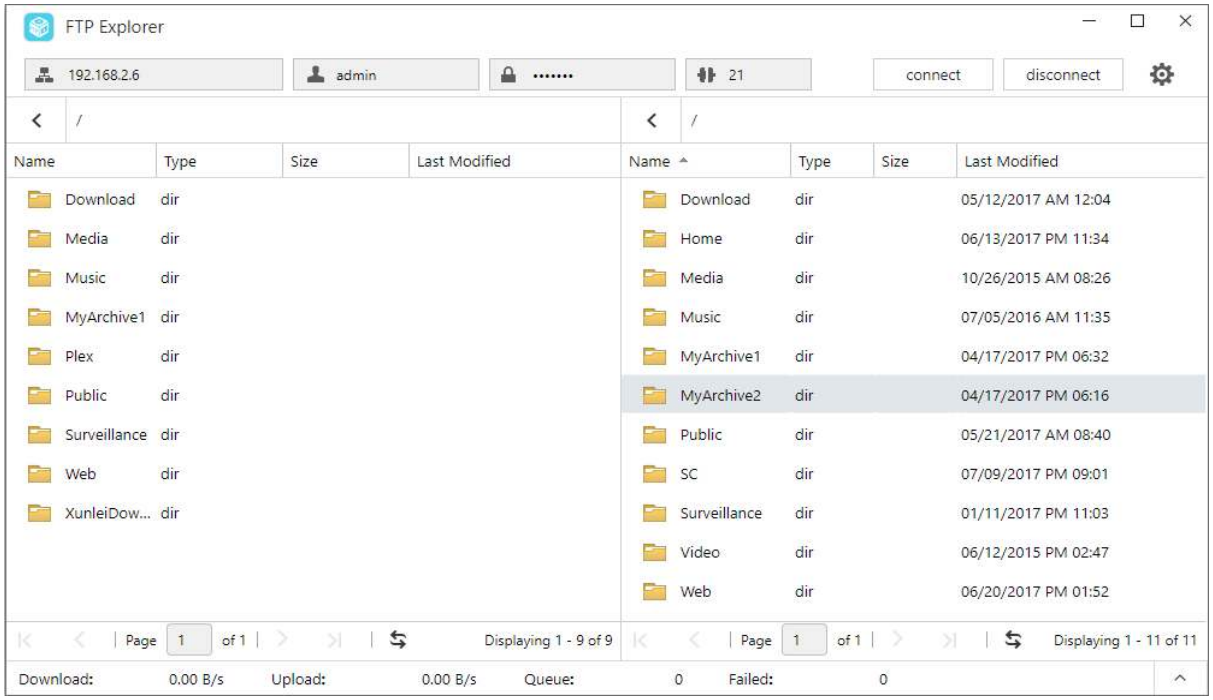
See More

NAS 162 – Introduction to Download Center
NAS 265 – Automating Download Center

FTP Explorer

FTP Explorer is ADM' s FTP client. It can be used to connect to different FTP servers and execute direct file transfers. This increases transfer efficiency as the file transfer process does not require the use of any computers.

FTP Explorer supports the following functions:



Site management, allowing you to configure multiple sets of FTP server connection information

Drag and drop file transfers

Encrypted transmission protocols (SSL/TLS)

Resuming downloads

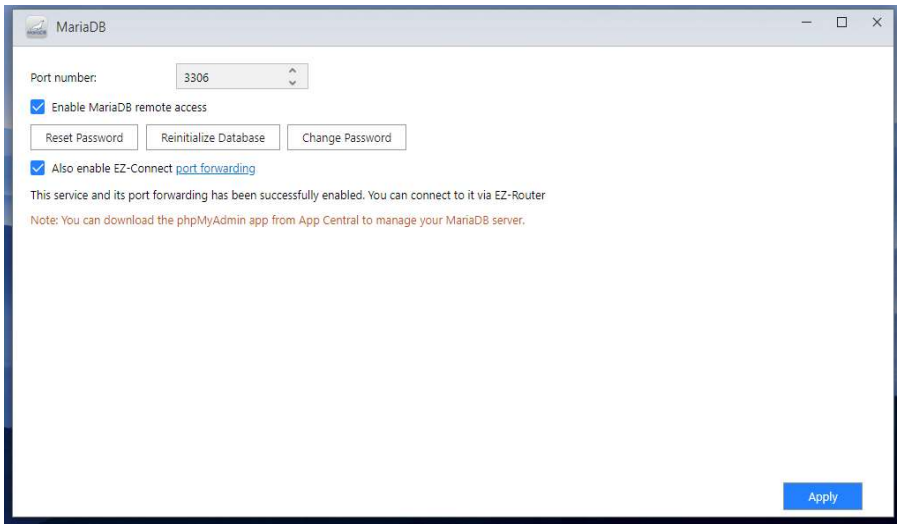
Custom transfer speeds

See More

NAS 225 - Introduction to FTP Explorer

MariaDB

You can use it as your website database which can be download and install through App Central.You can manage your MariaDB server with phpMyAdmin which can be downloaded and installed from App Central.



Port number:

The default port of MariaDB server can be modified to other customized ports.

Enable MariaDB remote access:

Enabling this setting will allow remote access to the MariaDB server. For security reasons, if you enable remote access, you must change the root password. It is also recommended to change the default port.

Reset Password:

If you happen to forget your MariaDB login password, you can reset the password for the "root" account (The default password is "admin"). This is also the default administrator account.

Reminder：For the MariaDB administrator account, the default username is "root" and the default password is "admin". For security reasons, please remember to change the password for this account.

Reinitialize Database:

Here you can reinitialize your entire MariaDB database. Upon reinitialization, all of your MariaDB databases will be erased.

Surveillance Center

Surveillance Center allows you to manage an array of IP cameras and features Live View and Playback functions. All video recorded from IP cameras can be directly and safely stored on the NAS. Using Surveillance Center' s exclusive playback interface you can review previously recorded video at any time.

Surveillance Center also supports several different recording modes such as schedule, motion detection and alarm trigger. Additionally, you also have the option of receiving notification in response to specific events. Notifications are sent by either SMS or e-mail.

See More

NAS 161 – Introduction to Surveillance Center
NAS 261 – Advanced Setup for Surveillance Center
NAS 262 – Managing Surveillance Center Camera Licenses
NAS 263 – Creating and Using Maps with Surveillance Center

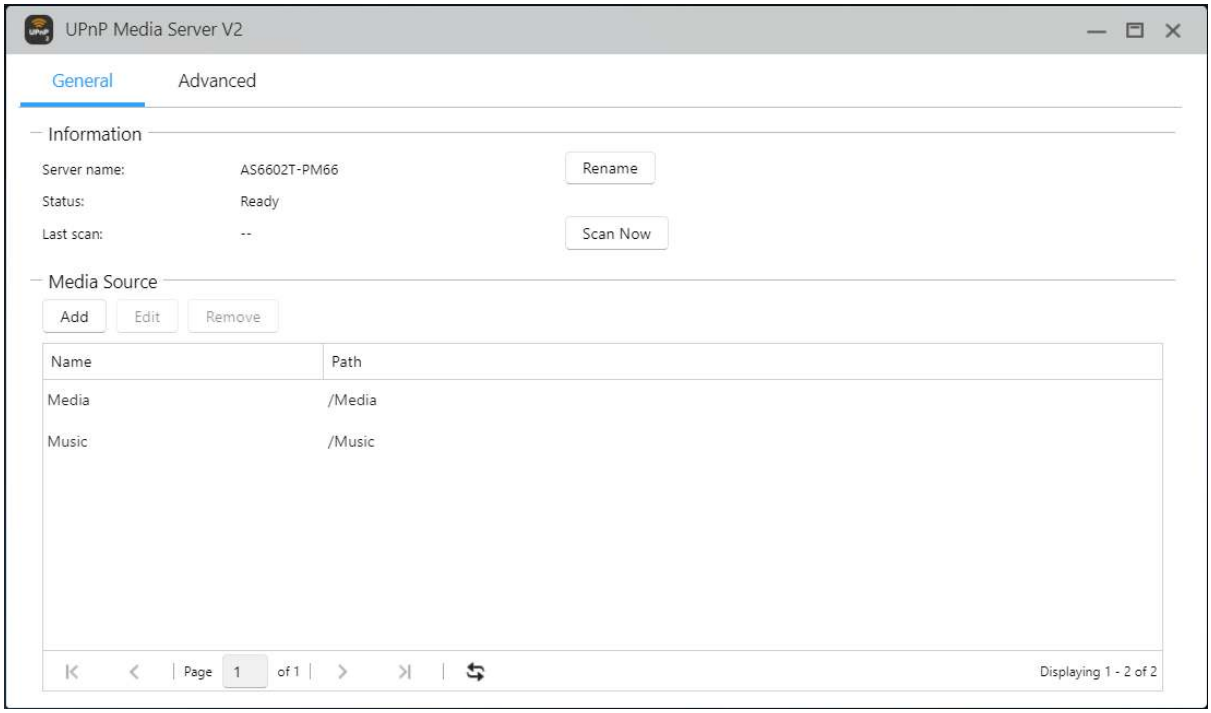
Related

Compatibility – IP Camera

UPnP Media Server

The UPnP Media Server app can turn your NAS into your home' s multimedia streaming server. As long as you have devices that support UPnP or DLNA (for example, SONY BRAVIA TV or PlayStation5®), you can directly browse and stream the pictures, music and videos stored on your NAS.

Additionally, you can use UPnP/DLNA compatible applications on your mobile device (for example, a notebook, iPhone or iPad) to stream multimedia files from your NAS.



You only need to have your multimedia files stored in the shared folders "Media" or "Music" to be able to broadcast them. UPnP Multimedia Server will automatically scan designated directories for supported multimedia files.

UPnP Multimedia Server currently only supports on-the-fly transcoding for photos and music.

Reminder: The media formats that are playable may vary between devices.

About UPnP Multimedia Server

UPnP Multimedia Server supports the following file formats:

- Video: 3GP, 3G2, ASF, AVI, DAT, FLV, ISO, M2T, M2V, M2TS, M4V, MKV, MPv4, MPEG1, MPEG2, MPEG4, MTS, MOV, QT, SWF, TP, TRP, TS, VOB, WMV, RMVB, VDR, MPE
- Audio: 3GP, AAC, AIFC, AIFF, AMR, APE, AU, AWB, FLAC[1], M4A, M4R, MP2, MP3, OGG Vorbis[1], PCM, WAV, WMA
- Photo: BMP, GIF, ICO, JPG, PNG, PSD, TIF, RAW Image[1] (3FR, ARW, CR2, CRW, DCR, DNG, ERF, KDC, MEF, MOS, MRW, NEF, NRW, ORF, PEF, PPM, RAF, RAW, RW2, SR2, X3F)

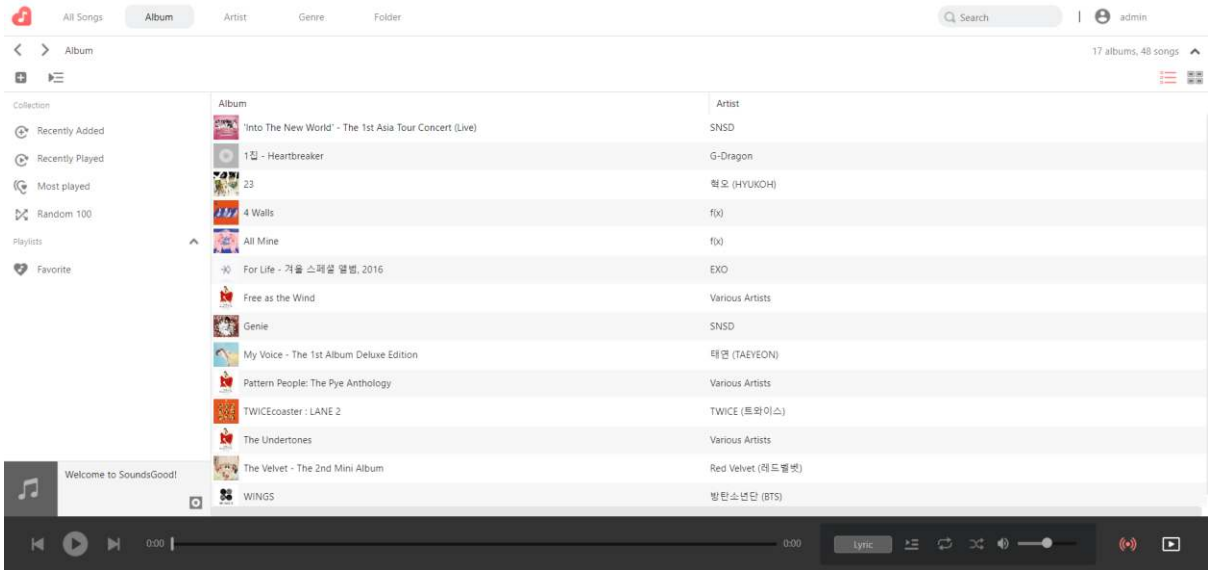
[1] You must first enable real time transcoding for these files in order to play them.

See More:

NAS 168 – Your Home Media Center

SoundsGood

SoundsGood is a Web music player that allows you to listen to all the music stored on your NAS via a Web browser in addition to browsing through and managing your entire music collection.



- Personalized settings: SoundsGood provides personalized music collections and playlists. You can configure any folder on the NAS as SoundsGood' s media source and can further configure the media source as personal or shared.
- Music collection editing: SoundsGood has a built-in ID3 tag editor, letting you immediately edit the ID3 tags in your music collection.

About SoundsGood

SoundsGood supports the following file formats:

- Supported audio formats for browser：MP3, WAV, Ogg
- Supported audio formats for transcoding through browser: AIFF, Flac
- Supported Audio formats for local speaker：MP3, WAV, Ogg, AIFF, Flac
- Local audio output support：HDMI, USB, Audio Jack*

*Suitable for use with AS-302T/AS-304T/AS-202TE/AS-204TE models

Related:

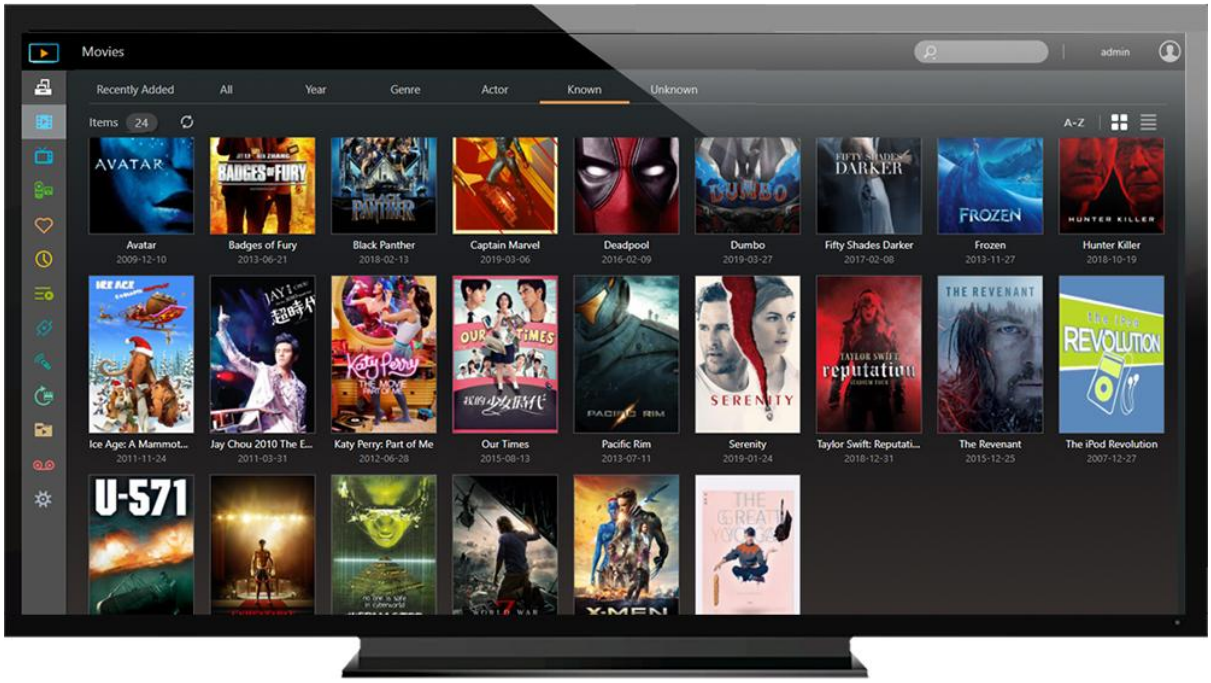
Compatibility – USB DAC

LooksGood

LooksGood is a dedicated management center for video files and a Web-based video player for content on your NAS. Compatible with the most popular web browsers, users only need to enable the LooksGood App from within ADM to begin playing 1080p high definition videos. LooksGood features a stylish and modern interface that displays video collections via thumbnails and a poster wall layout for easy browsing. Furthermore, enhanced smart database management now makes global searches to be faster and more efficient for users.

LooksGood also features real-time transcoding and media conversions that help provide users with a smooth and stress-free playback experience. Additionally, you could stream videos from your NAS via Chromecast or DLNA with LooksGood, allowing you to enjoy your videos on a larger TV.

Additionally, AiVideos allows you to stream videos via Chromecast or DLNA, so you can enjoy your videos on a larger TV.



Formats supported by LooksGood are as follows:

- Supported Web Browsers: Windows Edge / Chrome / Firefox, Mac Safari
- Supported Video Formats: avi, flv, mov, mp4, mkv, mka, ts, mpg, ra, ram, rm, rv, rmvb
- Supported Video Codecs: aac_latm, aac, dca, H.264 (AVC), H.265 (HEVC), mlp, mp1, mp2, mp3, mpeg2video, mpeg4, vc1, wmav2, wmv3
- Supported External Subtitle Formats (UTF-8): srt, ass, ssa
- Supported Image Formats: jpg, jpeg, bmp, png, gif, tif

- Hardware Transcoding Support: Please click here

See More

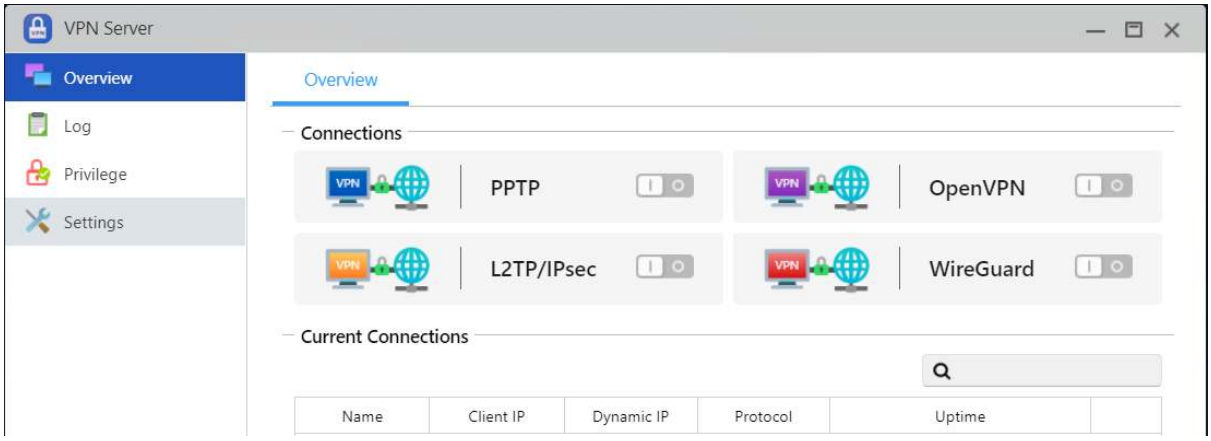
NAS 138 – Introduction to LooksGood
NAS 139 – LooksGood: Introduction to Media Converter

Photo Gallery 3

The all new Photo Gallery 3 and AiFoto 3 have been revamped and brings a variety of new features to make photo organization easier than ever. New features for Photo Gallery 3 include, but not are limited to custom folder selection, timelines, smart albums, deduplication, and new photo modes. Easily blow up photos to up to twice their size, play songs on slideshows, performance enhancements and customized share links make for an even better photo viewing and sharing experience.

VPN Server

ASUSTOR's VPN Server supports PPTP, Open VPN and L2TP/IPsec protocols, turning your NAS into a VPN Server and allowing you to connect remotely to your NAS and safely access resources from your internal network.



Configuring the ASUSTOR NAS as a VPN server:

Log in to ADM and then open App Central. Select "ASUSTOR Apps" from the left-hand panel and then search for and install "VPN Server".

Connecting the ASUSTOR NAS to a VPN server:

Log in to ADM and then click on Settings and then select "VPN".

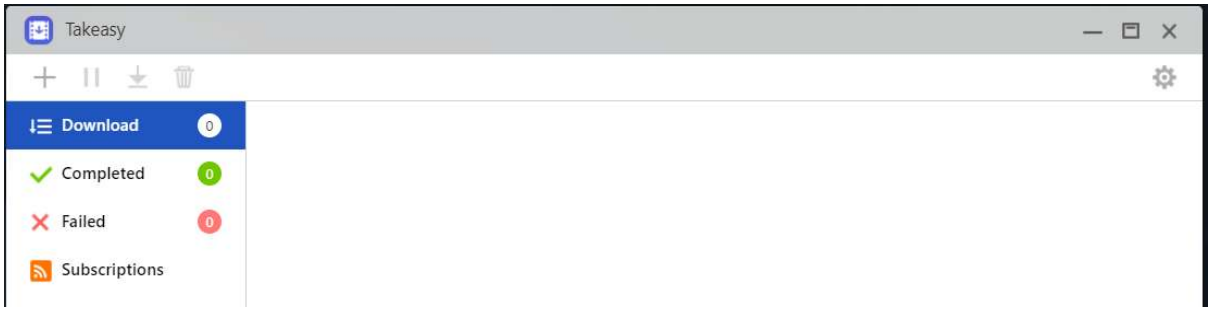
Reminder: The VPN client cannot be used simultaneously with the VPN Server. If you need to use the VPN client, please first stop any use of the VPN server.

See More:

NAS 322 – Connecting Your NAS to a VPN
NAS 323 - Using Your NAS as VPN Server

Takeasy

Takeasy allows you to conveniently download online videos and playlists, giving you options to select the type of video file and video quality you want.



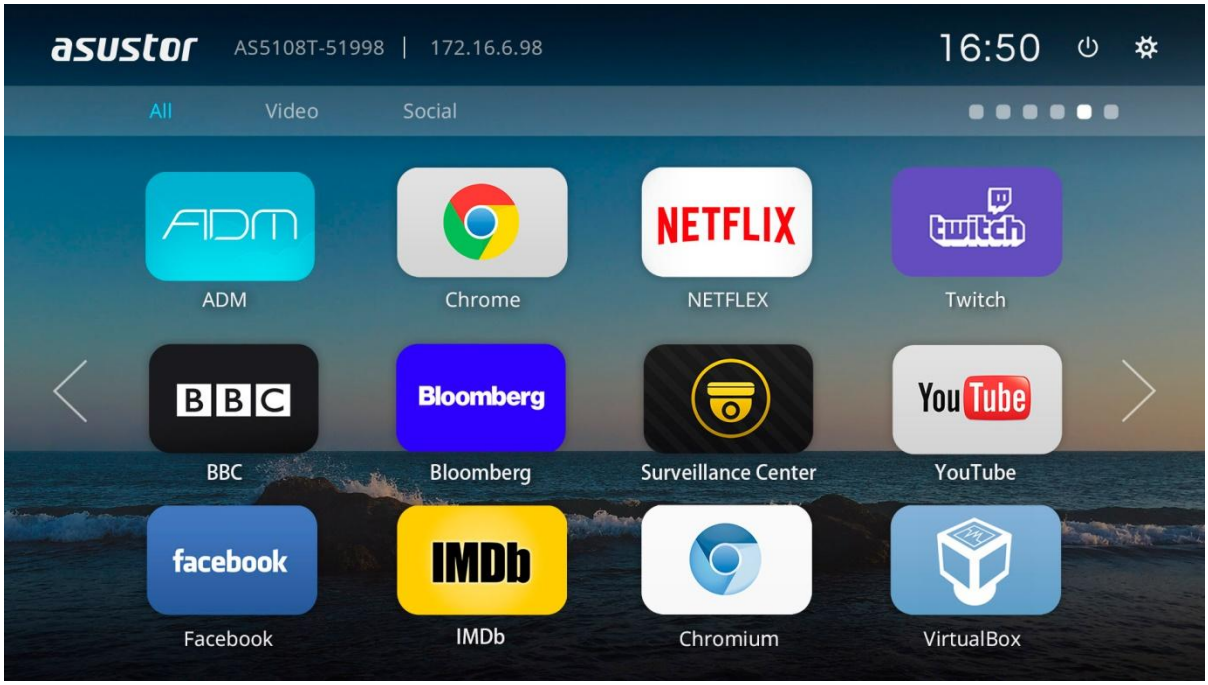
- Integrated Twitch channel subscriptions allow your NAS to automatically download the newest content from your favorite YouTube channels.

- Online media playback support allows you to preview any downloads in progress and also playback already downloaded videos.
- To install Takeasy, log in to ADM, open App Central and then search for "Takeasy".
- Supported websites include: Takeasy supported websites

Reminder: The quality of downloaded videos will depend on the quality of the unoteploaded video. For example: an uploaded video with a quality of 1080p will allow you to download a video of 1080p.

ASUSTOR Portal

With ASUSTOR Portal there's no need to turn on your computer when you want to play videos or browse the internet. You need only simply connect your NAS to any HDMI ready display. Within ASUSTOR Portal integrates the **Firefox browser, YouTube channels, Netflix** and monitoring of live video feeds from **Surveillance Center**.



- ASUSTOR Portal provides customizable display information including: IP address, server name, time, ADM, Firefox, YouTube
- You can configure a default start app on ASUSTOR Portal (For example: ASUSTOR Portal, ADM, YouTube, Surveillance Center). Once configured, the App will automatically launch when you open ASUSTOR Portal without having to be launched via the main ASUSTOR Portal interface.
- You can also configure the desktop wallpaper, shortcuts to favorite websites, resolution, overscan and screensaver for ASUSTOR Portal.
- To install ASUSTOR Portal, log in to ADM, open App Central and then search for and install "ASUSTOR Portal" under "ASUSTOR Apps".

Note:

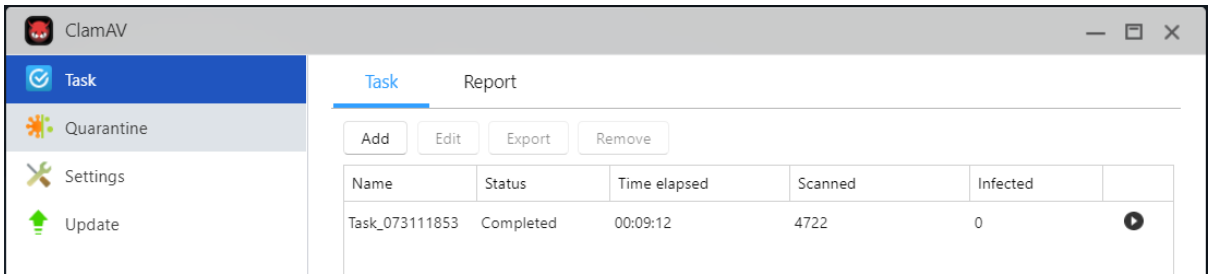
- ASUSTOR Portal only provides browser shortcuts to streaming websites such as Netflix, YouTube, Amazon Prime, or Disney+ to make opening each service's webpage easier and faster.
- ASUSTOR does not provide any warranty for the user experience or content hosted on third party sites. Your mileage may vary when using third party websites.

See More:

NAS 135 - Introduction ASUSTOR Portal
NAS 136 - Controlling ASUSTOR Portal
Video - ASUSTOR College Episode 3 - ASUSTOR Portal
Compatibility - HDTV
Accessories: Remote Control

Antivirus Protection

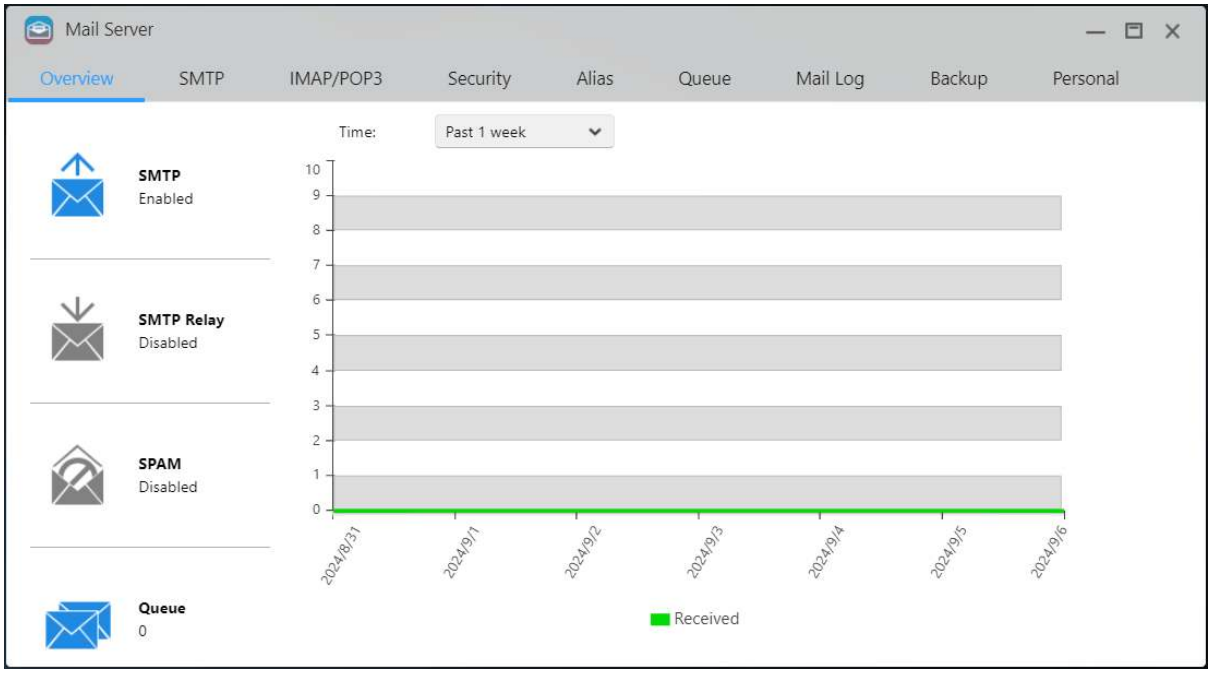
ASUSTOR NAS provides antivirus protection, effectively protecting your NAS's critical data and preventing malware from spreading.



Mail Server

ASUSTOR's Mail Server offers a comprehensive and cost-effective solution that allows any business to easily maintain their own dedicated mail server.

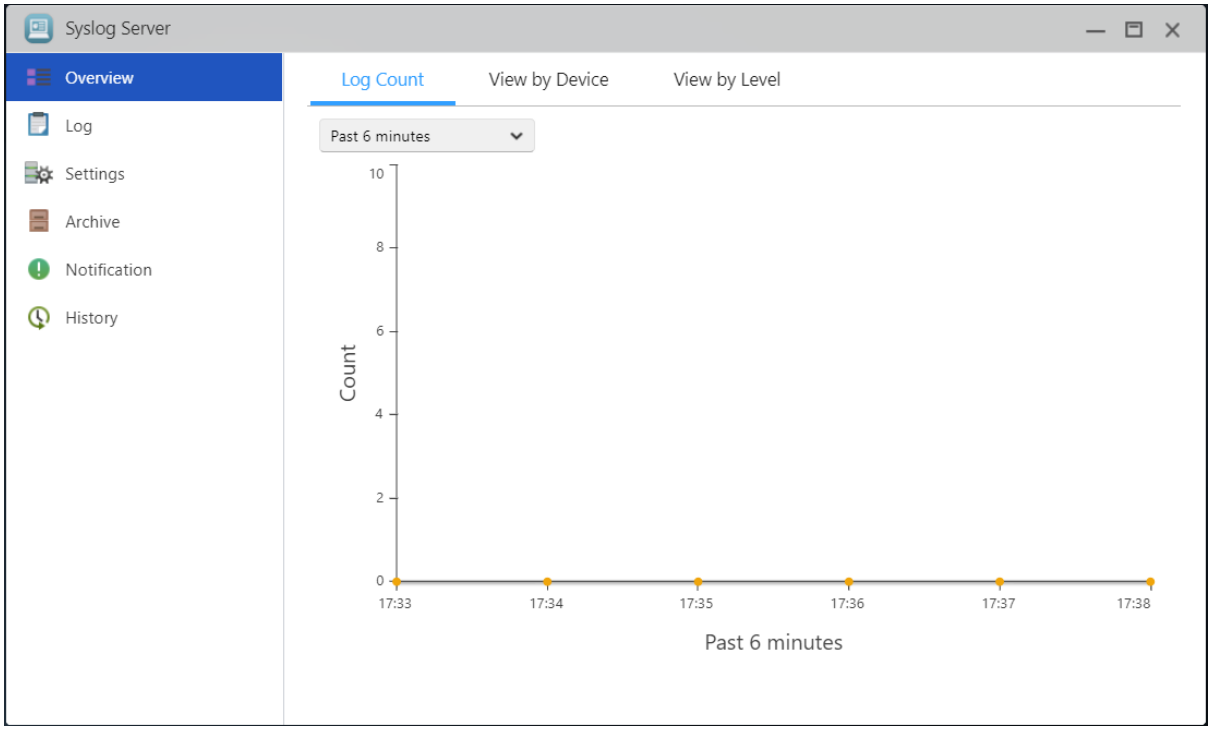
Note: asustor mail server is recommended for 5 people max. asustor mail server provides a simple mail delivery management service and includes simple antivirus and antispam processing. you bear the risks of using the product if you are involved in a dispute with your internet service provider, including, but not limited to isp restrictions and domain name related issues.



See More: NAS- 269- Introduction to Mail Server

Syslog Server

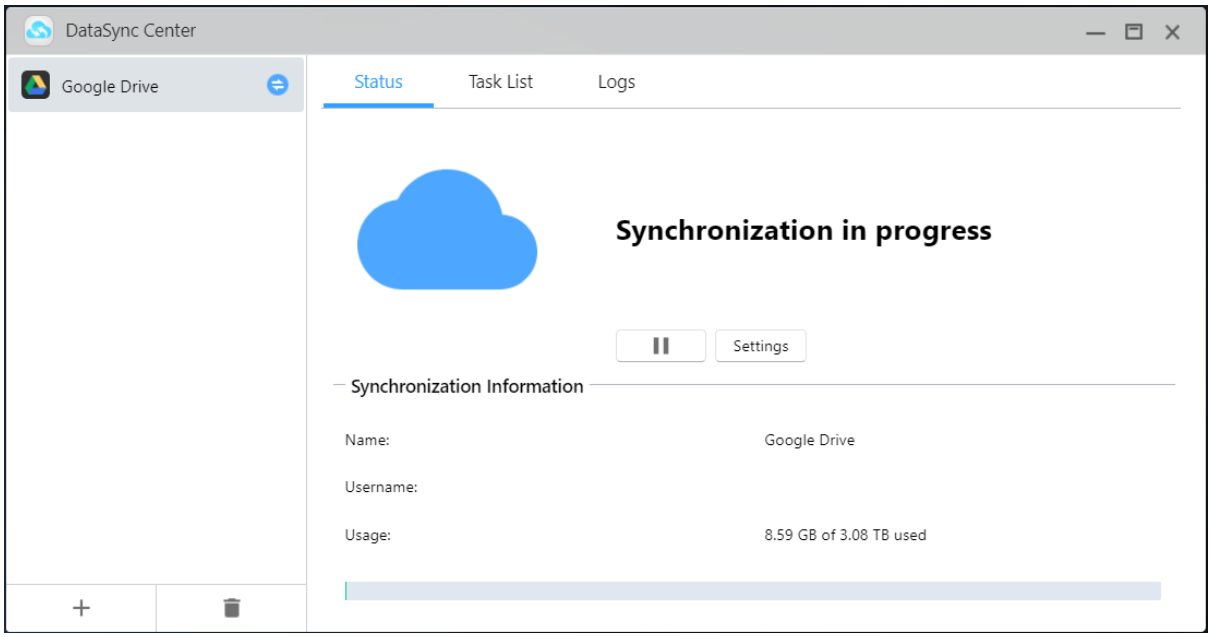
Syslog Server supports standard Syslog protocols and can centrally aggregate system logs that are spread out over various network devices for storage and management. Furthermore, Syslog Server integrates with the NAS' s Instant Notification function, allowing administrators to receive e-mails or SMS notifications when specified events occur, in order to quickly employ appropriate measures.



See More

NAS 272 – Using Your NAS as a Syslog Server

DataSync Center



DataSync Center combines multiple cloud services into a single app. DataSync Center includes, but is not limited to Google Drive, Dropbox, Onedrive, ASUSTOR NAS (EZ Sync), Baidu netdisk,Yandex and supports multitasking as well as multiple accounts. Control your data with

instant and scheduled backups as well as using Cloud Backup Center to create a hybrid cloud that keeps your data online and offline, keeping your data protected.

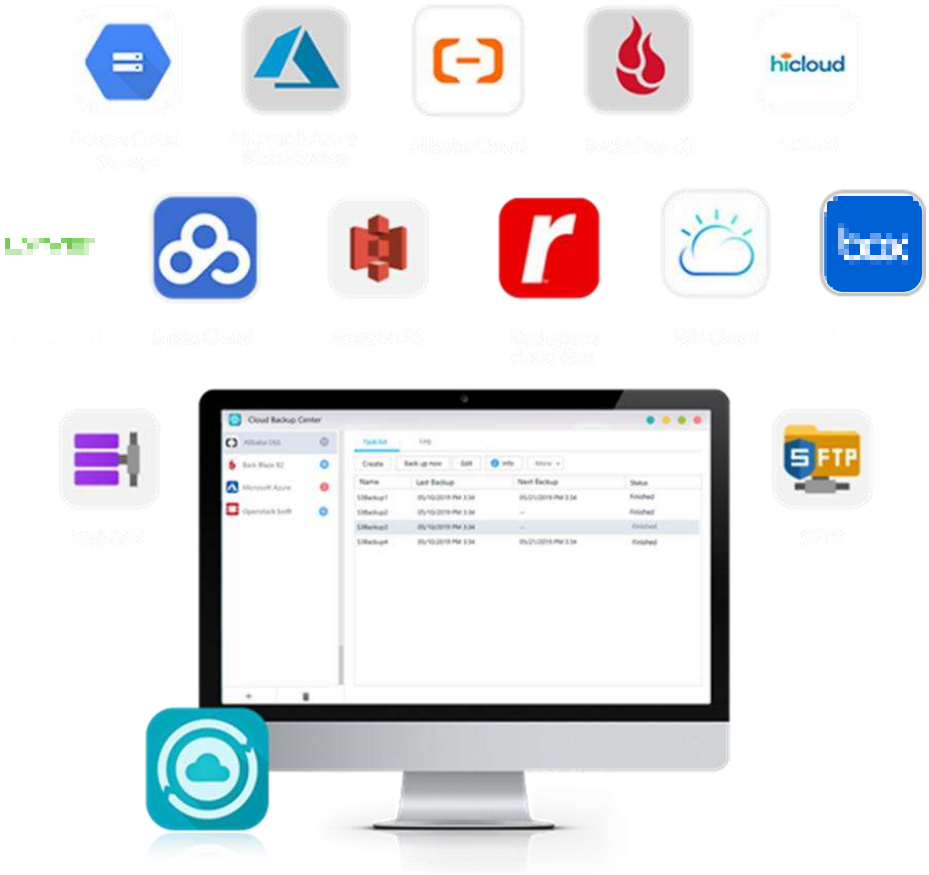
HiDrive Backup

Strato HiDrive is a popular cloud storage platform that is widely used in Europe. Now you can integrate your ASUSTOR NAS with HiDrive, to create more flexible data applications. HiDrive' s supported data transfer methods include Rsync, FTP, FTPS and SFTP.

> **Note: Only HiDrive paid accounts are able to use Rsync, FTP, FTPS and SFTP transfer services.**

Cloud Backup Center

Cloud Backup Center brings support for various business cloud services including, but not limited to Amazon S3, Backblaze B2, Microsoft Azure Blob Storage, Baidu Cloud, IBM Cloud, Rackspace Cloud Files, Alibaba Cloud, box, Google Cloud storage, hicloud, Lyve Cloud, WebDAV, and SFTP. Control your data with instant and scheduled backups as well as using Cloud Backup Center to create a hybrid cloud that keeps your data online and offline, keeping your data protected.


hicloud
box
Cloud Backup Center
SFTP

Chapter

5

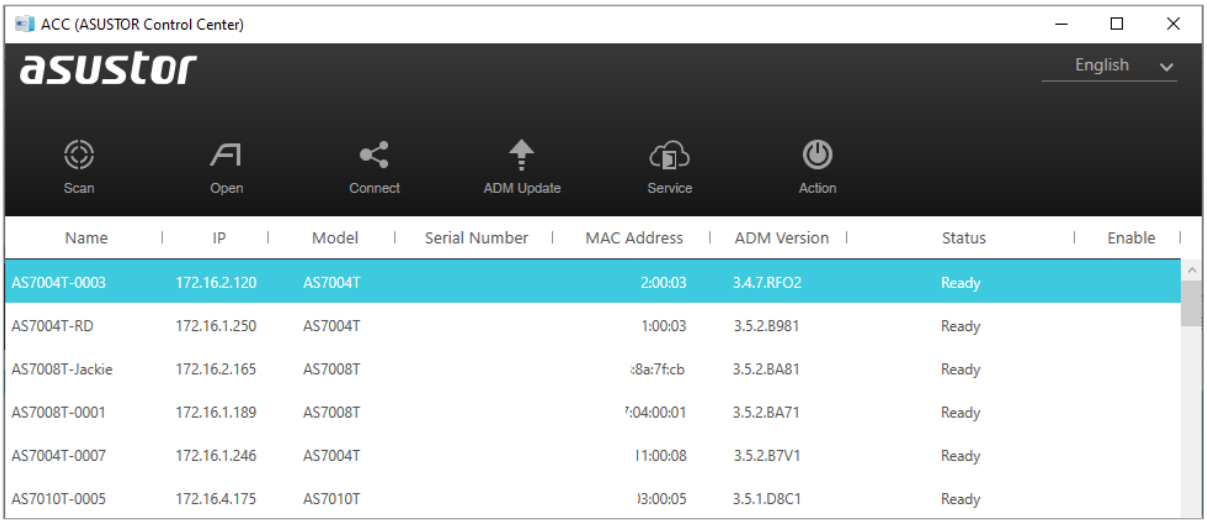
Utilities

ASUSTOR's utilities currently include **ACC** (ASUSTOR Control Center), **AEC** (ASUSTOR EZ Connect), **ABP** (ASUSTOR Backup Plan), **AES** (ASUSTOR EZ Sync) which allows you to use your PC/Mac to more conveniently manage your NAS, backup your PC/Mac data to your NAS.

Note: Mac only support ACC

ACC (ASUSTOR Control Center)

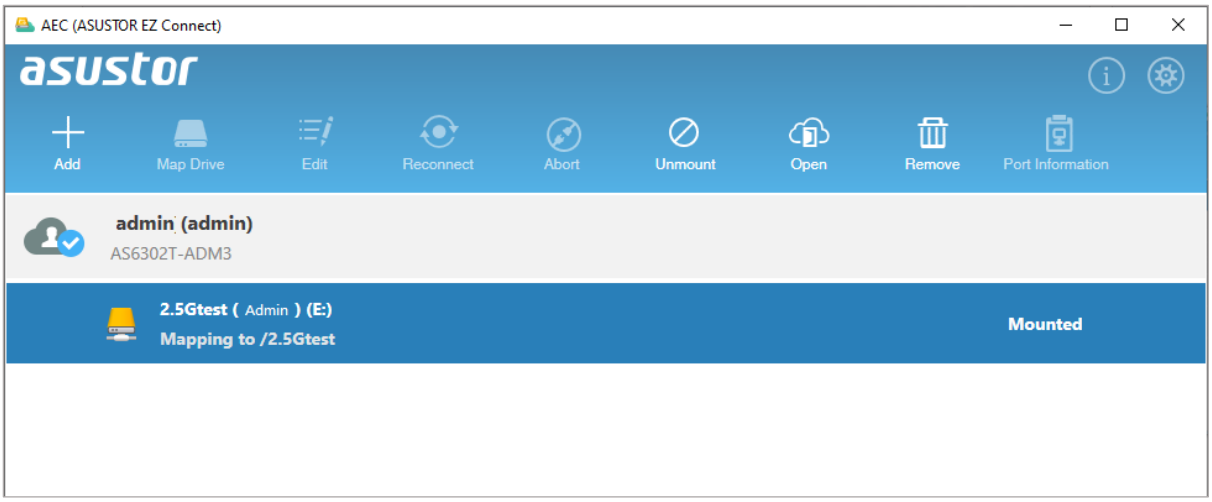
Control Center can conveniently locate and configure any ASUSTOR NAS in your local area network. You can also manage your NAS without having to log in to ADM. You can download the latest version of Control Center from the ASUSTOR Website



AEC (ASUSTOR EZ Connect)

ASUSTOR EZ Connect (AEC) is a dedicated utility designed for ASUSTOR NAS (with ADM3.0 and up). Users no longer need to do any complicated configurations when connecting to their NAS. They only need to enable ADM's EZ-Connect function, configure a Cloud ID and they can connect to their NAS in their home or local network from anywhere and at any time.

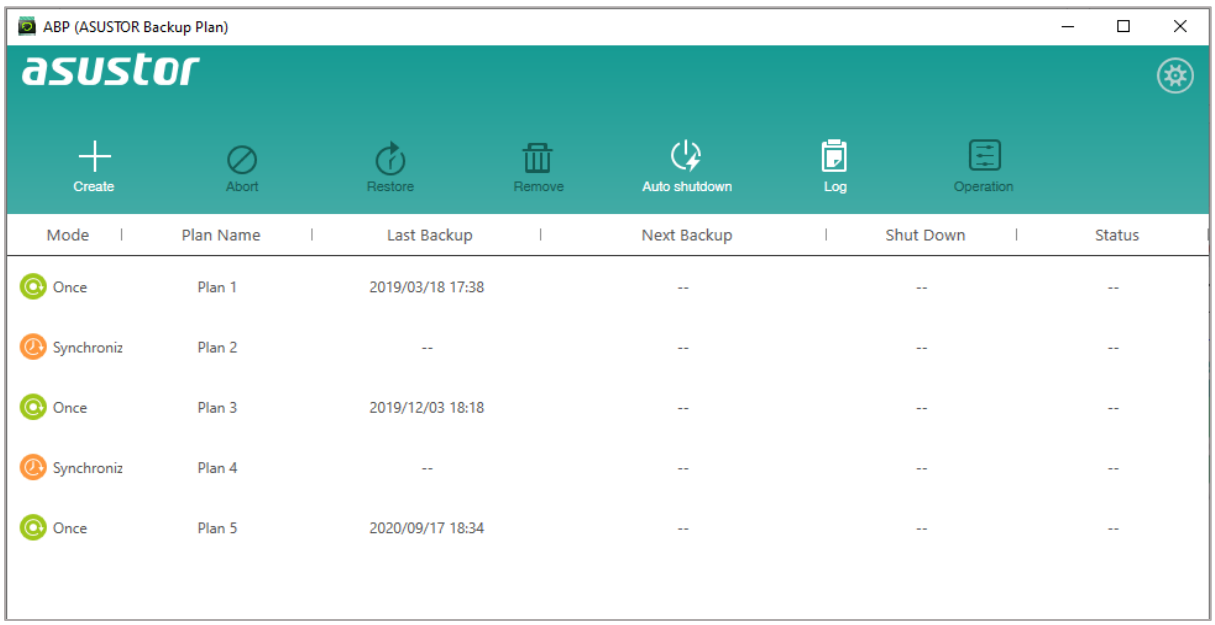
AEC can be downloaded from Downloads.



ABP (ASUSTOR Backup Plan)

Backup Plan can help you to back up the data from your Windows PC/server to an ASUSTOR NAS, FTP site, Local PC or other network location. You will also be able to quickly restore any data you back up from your Windows PC/server.

ABP can be downloaded from Downloads.

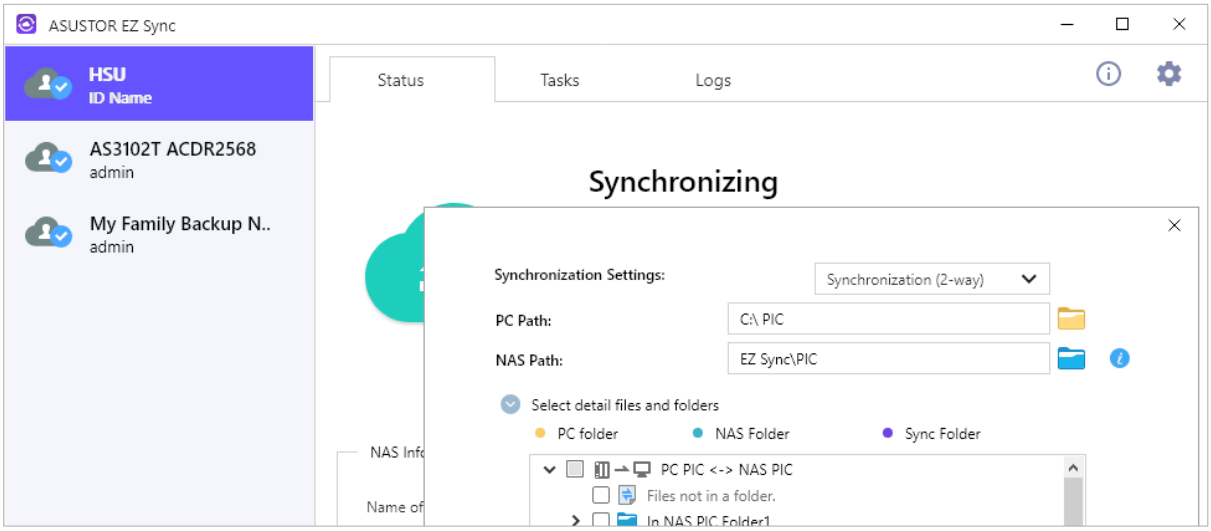


AES (ASUSTOR EZ Sync)

ASUSTOR EZ Sync is for synchronizing data between computers and your NAS. Turning your NAS into a personal cloud space like Dropbox™ with ample capacity at your fingertips with historical version management. If a file is unintentionally overwritten with the wrong information, it can be restored using a previously saved backup copy. ASUSTOR EZ Sync includes

two parts, EZ Sync Manager which is preinstalled on every NAS and ASUSTOR EZ Sync which can be installed on your PC.

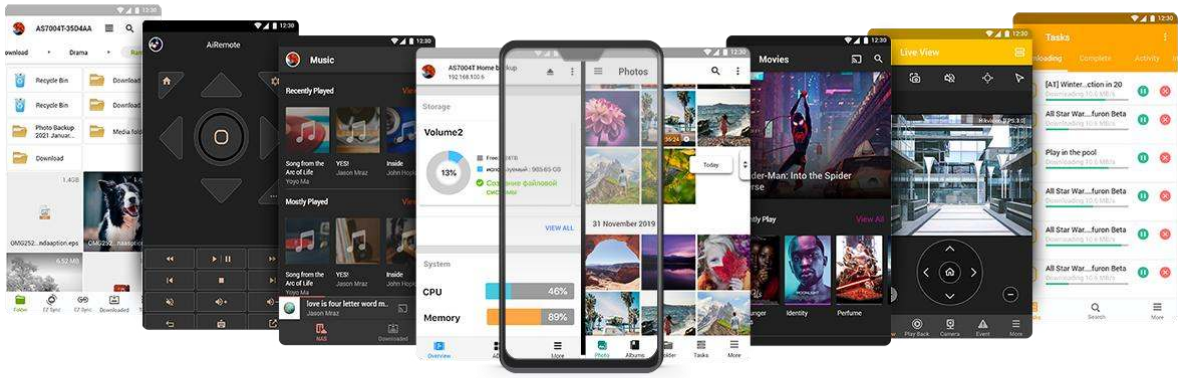
AES can be downloaded from Downloads.



Chapter

6

Mobile Apps



AiData AiRemote AiMusic AiMaster AiFoto3 AiVideos AiSecure AiDownload

ASUSTOR's mobile apps currently include: AiData, AiMaster, AiRemote, AiDownload, AiMusic, AiFoto3, AiVideos and AiSecure. You can download these apps by scanning the provided QR codes below。

AiData

AiData allows you to intuitively browse and manage the files on your NAS from the convenience of your mobile device. More Information.

AiData for iOS	AiData for Android

See More

NAS 243 - Using AiData on Your Mobile Devices

AiMaster

AiMaster is ASUSTOR' s dedicated NAS management app for mobile devices. It allows everyday users and IT professionals to easily manage functions on multiple ASUSTOR NAS devices.More Information

AiMaster for iOS	AiMaster for Android

See More

NAS 242 - Using AiMaster on Your Mobile Devices

AiRemote

AiRemote allows you to control all types of functionality on ASUSTOR Portal, from the basic up, down, left, right controls used with ASUSTOR Portal interfaces to the play, pause, rewind, fast forward and volume controls used when playing videos. Furthermore, when using the Firefox web browser in ASUSTOR Portal, AiRemote provides a Touchpad Mode giving you intuitive control over your web browsing.

More Information

AiRemote for iOS	AiRemote for Android

See More

NAS 136 – Controlling ASUSTOR Portal

AiDownload

AiDownload is a mobile app that interfaces with ASUSTOR's Download Center to provide you with mobile download management. AiDownload allows you to search, download, configure settings and monitor your downloads.

More Information

AiDownload for Android

AiMusic

AiMusic allows you to stream music from your NAS to your mobile device, letting you enjoy your entire music collection while on the go. Reminder: In order to use AiMusic, SoundsGood must first be installed on the NAS。

More informaiton。

AiMusic for **iOS**	AiMusic for Android

AiFoto3

AiFoto3 is ASUSTOR' s photo management mobile app that interfaces with Photo Gallery3 on ASUSTOR NAS devices. New AiFoto3 include, but are not limited to, timelines, smart album. It allows users to easily upload, browse and manage photos on their NAS

Reminder: In order to use AiFoto3, Photo Gallery 3must first be installed on the NAS.

More information

AiFoto 3 for iOS	AiFoto 3 for Android

AiVideos

AiVideos brings you the smoothest mobile video viewing experience around. Browse through the video collection on your NAS without the need to wait for long downloads. Enjoy high-definition 1080p streaming video with just one click. You can even select multilingual subtitles and different audio channels to enjoy films in different languages, bringing the movie theater to your mobile device. Additionally, AiVideos allows you to stream videos via Chromecast or DLNA, so you can enjoy your videos on a larger TV.

Reminder: In order to use AiVideos, LooksGood must first be installed on the NAS.

More Information。

AiVideos for iOS	AiVideos for Android

See More

NAS 246 – Introduction to AiVideos

AiSecure

AiSecure is ASUSTOR' s Surveillance Center mobile app that makes it easy to monitor the things you care about most. After connecting with Surveillance Center, you will be able to watch live video, receive customized alerts and check events while on the go.

More Information

Reminder: In order to use AiSecure, Surveillance Center must first be installed on the NAS.

AiSecure for iOS	AiSecure for Android

Chapter

7

EULA

END-USER LICENSE AGREEMENT FOR ASUSTOR DATA MASTER (“ADM”) IMPORTANT PLEASE READ THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT CAREFULLY BEFORE CONTINUING WITH THIS PROGRAM INSTALLATION: ASUSTOR End-User License Agreement ("EULA") is a legal agreement between you and ASUSTOR Inc. for the ASUSTOR software product(s) identified above which may include associated software components, media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT"). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. This license agreement represents the entire agreement concerning the program between you and ASUSTOR Inc., (referred to as "licenser"), and it supersedes any prior proposal, representation, or understanding between the parties. If you do not agree to the terms of this EULA, do not install or use the SOFTWARE PRODUCT.

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Chapter

8

GNU General Public License

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

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