

Christie NAS-S3 Installation and Setup

A network attached storage (NAS) device provides local storage for media files. This document provides information and procedures for installing and configuring the Christie NAS-S3.

Two installation methods are available: default and customized. The default setup uses preconfigured settings provided by Christie. The customized setup allows you to modify settings as required for your specific network.

You can use the projector touch panel menus or the NAS-S3 management application web interface to configure the communication settings between the Christie IMB-S3 and the Christie NAS-S3. If you use the web interface, the IP address of your computer must be on the same subnet as the projector and the computer must be connected by an Ethernet cable to either the Ethernet port of the projector intelligence board (PIB) for series 2 projectors, or the main projector communication board (F-Main) for series 3 projectors.

This document is intended for professionally trained operators of Christie projection systems and assumes an intermediate understanding of projector functionality and network infrastructure.

Affected products

These instructions apply to the following product.

- Christie NAS-S3 (P/N: 153-101103-XX)

Prerequisites

The following components are required to complete the installation.

- Ethernet cable (included with the NAS-S3).
- A Christie series 2 or series 3 projector with the Christie IMB-S2 or IMB-S3 installed and correctly configured.

Christie NAS-S3 ports

Learn the Christie NAS-S3 ports



A	Ethernet port 1
B	Ethernet port 3
C	Ethernet port 4
D	USB ports
E	Ethernet port 2

Logging into the Christie NAS-S3 management application web interface

Complete the following procedure to open and log into the Christie NAS-S3 management application web interface.

1. Open a web browser.
Christie recommends Mozilla Firefox or Google Chrome.
2. In the Address field, type `http://192.168.1.101:8080`.
3. Press **Enter**.
4. In the User name field, type `admin`.
5. In the Password field, type `cdsclub`.
6. Click **Login**.

Installing with default settings

Use this procedure to set up the Christie NAS-S3 device with the preconfigured default settings.

Port 1 of the preconfigured Christie NAS-S3 device uses the static IP address 192.168. 1.101.

1. Unpack the Christie NAS-S3.
2. Using the provided screws, attach the hard drives to their cradles.
3. Install the hard drives.

The hard drives are preconfigured and can be installed in any order.

4. Connect one end of an Ethernet cable to Ethernet port 1 on the Christie NAS-S3.
5. Connect the other end of the Ethernet cable to the projector intelligence board (PIB) for series 2 projectors, or the gigabit Ethernet port labeled NAS on main projector communication board (F-Main) for series 3 projectors.
6. Connect the Christie NAS-S3 to AC power.
7. Turn on the projector and the Christie NAS-S3.

Configuring content replication

Synchronizing content allows content replication across multiple Christie NAS-S3 devices.

This procedure uses Ethernet port 2 of both NAS devices. Port 3 or 4 can be used instead, if port 2 is being used for other purposes.

1. Install the projectors and the *Christie NAS-S3 devices* (on page 2).
2. Connect one end of an Ethernet cable to Ethernet port 2 of one Christie NAS-S3 device.
3. Connect the other end of the Ethernet cable to Ethernet port 2 of the other Christie NAS-S3 device.
4. On a Christie NAS-S3 device, *log into the management application interface* (on page 2).
5. On the desktop, click **Control Panel**.
6. Click **Network and Virtual Switch**.
7. Switch to the **TCP/IP** tab.
8. From the list, select Ethernet port 2.
9. Click **Edit**.
10. Select **Use static IP address** and complete the Fixed IP Address, Subnet Mask, and Default Gateway fields.
To avoid network routing issues, ensure that the subnet used for Ethernet port 2 is different from the subnet used for the primary IP address.
Ensure that the IP address for Ethernet port 2 is unique (different from IP address set for the other NAS used for content replication).
11. Click **Apply**.
12. Repeat steps 4 to 11 on the other Christie NAS-S3 device.

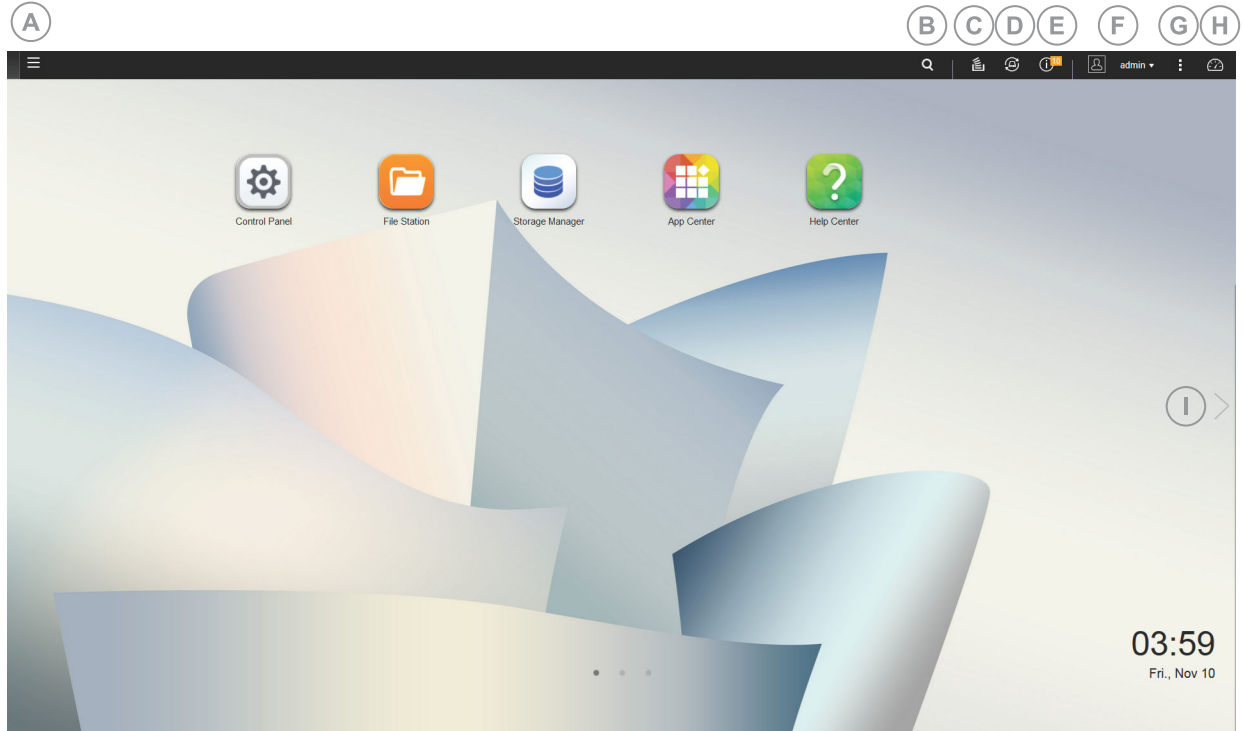
Modifying user settings

Use the Christie NAS-S3 management application interface to set user privileges on the network.

1. *Log into the Christie NAS-S3 management application interface* (on page 2).
2. On the desktop, click **Control Panel**.
3. In the Privilege area, click **Users**.
4. Using the controls in the Action column, modify the permission settings as required.

The Christie NAS-S3 management application interface

Use the management application interface to monitor Christie NAS-S3 performance and connected devices, and to show error and warning messages.



Item	Description
A	Displays or hides the main menu.
B	Searches for a function you specify.
C	Displays the background tasks currently running.
D	Displays all external devices currently connected to the Christie NAS-S3 and eSATA ports.
E	Displays error and warning messages. To view system logs, click More .
F	Opens a menu that contains the following: <ul style="list-style-type: none"> • Options—Customize the application settings • Restart—Restart the Christie NAS-S3 • Shutdown—Turn off the Christie NAS-S3 • Logout—Log out of the application interface
G	Opens a menu that contains the following: <ul style="list-style-type: none"> • ? Help—Displays online help • Language—Changes the language used in the application

Item	Description
	<ul style="list-style-type: none"> • Desktop Preferences—Changes the appearance of the desktop icons • About—Displays application version information
H	Displays Christie NAS-S3 performance data.
I	Moves to the next or previous desktop.

Backing up and restoring the Christie NAS-S3

Learn how to protect the Christie NAS-S3 from power failures and restore system settings.

Connecting the Christie NAS-S3 to a uninterruptible power supply

To protect the Christie NAS-S3 from unexpected power disruptions, connect it to an uninterruptible power supply (UPS).

When a power disruption occurs, information is saved in the *system event logs* (on page 8).

Christie NAS-S3 power failure settings

The Christie NAS-S3 has several selectable modes and built-in functionality that dictates how it operates during a power failure and power restoration.

Power failure modes

The following modes are selectable when configuring the connection settings.

- Automatically turn off the Christie NAS-S3 after a specific period. When this mode is selected, the Christie NAS-S3 waits for a specified amount of time, then shuts down.
- Move the Christie NAS-S3 to auto-protection mode. When this mode is selected, the Christie NAS-S3 waits a specified amount of time, then stops all running services and unmounts all volumes to protect the data. If the duration of the power disruption is longer than the available UPS power, the Christie NAS-S3 does not shut down correctly and a data loss can occur.

Power recover settings

The following settings are selectable when configuring the system power recovery settings.

- Resume the previous power-on or power-off status. When this option is selected, the Christie NAS-S3 remains powered off if its power was off before the power failure, or turns on if its power was on before the power failure.
- Turn on automatically. When this option is selected, the Christie NAS-S3 turns on when power is restored.
- Remain off. When this option is selected, the Christie NAS-S3 remains powered off when power is restored. Turn the Christie NAS-S3 on manually using the power button.

Phases of a power outage

Phase 1: From initial loss of power until the end of the specified wait time

As soon as the power loss starts, the Christie NAS-S3 detects how much charge the UPS battery contains. If the charge is less than 15%, the system automatically shuts off or enters auto-protection mode after 30 seconds, ignoring any set wait time. If the charge is 15% or above, the system remains operational until the end of the specified wait time.

If the power is restored during this phase, the Christie NAS-S3 remains operational.

Phase 2: From the end of the specified wait time to the point where the UPS runs out of battery power

If set to auto-protection mode, the Christie NAS-S3 stops all running services, unmounts all volumes, and becomes inaccessible. If set to automatically turn off, it shuts down.

If the power is restored during this phase, in auto-protection mode the Christie NAS-S3 restarts and resumes its previous state. If powered off, it remains off.

Phase 3: After the UPS runs out of battery power to the restoration of power

If the Christie NAS-S3 has not shut down or entered auto-protection mode by this point, it will lose its power and shut down incorrectly. A data loss can occur.

When the power is restored, the Christie NAS-S3 uses the selected power recovery setting to dictate how it operates.

Connecting to the uninterruptible power supply with a USB cable

Connect an uninterruptible power supply (UPS) to the Christie NAS-S3 using a USB cable.

1. Connect one end of a USB cable to the *USB port* (on page 2) on the back of the Christie NAS-S3.
2. Connect the other end of the USB cable to the UPS USB port.
3. *Log into the Christie NAS-S3 management application interface* (on page 2).
4. On the desktop, click **Control Panel**.
5. In the System area, click **External Device**.
6. Switch to the **UPS** tab.
7. Select **USB Connection**.
8. Select one of the following options:
 - **Turn off the server after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before shutting down. Enter the number of minutes to wait for shutdown.
 - **The system will enter "auto-protection" mode after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before entering auto-protection mode. Enter the number of minutes to wait before entering auto-protection mode.
9. Click **Apply All**.

Connecting to the uninterruptible power supply with the SNMP protocol

Connect an uninterruptible power supply (UPS) to the Christie NAS-S3 to the same physical network.

1. Ensure the UPS is connected to the same physical network as the Christie NAS-S3.
2. *Log into the Christie NAS-S3 management application interface* (on page 2).
3. On the desktop, click **Control Panel**.
4. In the System area, click **External Device**.

5. Switch to the **UPS** tab.
6. Select **SNMP connection**.
7. In the IP address of SNMP UPS field, enter the IP address of the UPS.
8. Select one of the following options:
 - **Turn off the server after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before shutting down. Enter the number of minutes to wait for shutdown.
 - **The system will enter "auto-protection" mode after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before entering auto-protection mode. Enter the number of minutes to wait before entering auto-protection mode.
9. Click **Apply All**.

Connecting to the uninterruptible power supply in network slave mode

Connect an uninterruptible power supply (UPS) to the Christie NAS-S3 using a network slave connection.

A network UPS slave communicates with the network UPS master to receive the UPS status.

1. Ensure the UPS is connected to the same physical network as the Christie NAS-S3.
2. *Log into the Christie NAS-S3 management application interface* (on page 2).
3. On the desktop, click **Control Panel**.
4. In the System area, click **External Device**.
5. Switch to the **UPS** tab.
6. Select **Network UPS Slave**.
7. In the IP address of the network UPS server field, enter the IP address of the master UPS.
8. Select one of the following options:
 - **Turn off the server after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before shutting down. Enter the number of minutes to wait for shutdown.
 - **The system will enter "auto-protection" mode after the AC power fails for minute(s)**
Select this option so the Christie NAS-S3 waits a specific period before entering auto-protection mode. Enter the number of minutes to wait before entering auto-protection mode.
9. Click **Apply All**.

Setting the system power recovery options

Set how the Christie NAS-S3 operates when power is restored after a power failure.

1. *Log into the Christie NAS-S3 management application interface* (on page 2).
2. On the desktop, click **Control Panel**.
3. In the System area, click **Power**.
4. Switch to the **Power Recovery** tab.

5. Select one of the following options:
 - **Resume the server to the previous power-on or power-off status**
Select this option so the Christie NAS-S3 turns on or off after the power is restored, depending on the previous power state.
 - **Turn on the server automatically**
Select this option so the Christie NAS-S3 turns on when the power is restored.
 - **The server should remain off**
Select this option so the Christie NAS-S3 remains powered off when the power is restored.
6. Click **Apply All**.

Recovering a failed RAID group

Data storage on the Christie NAS-S3 relies on a redundant array of independent disks (RAID) to write data with parity across all disks.

In a RAID 5 configuration, two hard disk drives are required for volume recovery.



When disk drive recovery is in process, the performance of the NAS may be reduced. Wait until the process is complete before displaying content.

1. Remove the failed hard disk drive.
2. Insert the new hard disk drive.
The hard disk formatting process starts automatically.
3. Confirm that all hard disks of the disk volume are properly seated in the NAS drive bays.
4. *Log into the Christie NAS-S3 management application interface* (on page 2).
5. On the desktop, click **Storage Manager**.
6. In the left-hand pane, select **Disks**.
7. From the RAID Group list, select a raid group.
8. Click **Recover**.
9. Close Storage Manager.

Troubleshooting

This section provides information and procedures for resolving common issues. If you cannot resolve an issue, contact Christie technical support.

Viewing the system logs

Use the management application interface to review log files for detailed system information.

1. *Log into the Christie NAS-S3 management application interface* (on page 2).
2. On the desktop, click **Control Panel**.
3. In the System area, click **System Logs**.
4. Select a log to view.

Viewing status information

To assist with diagnostics, the management application interface allows you to view status information about the Christie NAS-S3 on the network.

1. Log into the Christie NAS-S3 management application interface (on page 2).
2. On the desktop, click **Control Panel**.
3. In the System area, click **System Status**.
4. Review the available status information.

Understanding status LEDs

Status LEDs provide information on the Christie NAS-S3 system, local area network (LAN), hard disk drive (HDD), USB port, and eSATA device.

LED	Activity	Description
System Status	Flashing red and green	<ul style="list-style-type: none"> • The Christie NAS-S3 hard drive is being formatted. • The Christie NAS-S3 is being initialized. • A system firmware update is in progress. • The redundant array of independent disks (RAID) are being rebuilt. • The RAID capacity is being expanded. • An online RAID migration is in progress.
	Solid red	<ul style="list-style-type: none"> • The hard drive is invalid. • The disk volume has reached its capacity. • The disk volume is approaching maximum capacity. • A system fan is not working. • A read or write error occurred while accessing data. • The hard drive has a bad sector. • Two of the Christie NAS-S3 hard drives in a RAID 5 or RAID 6 configuration has failed, but the data can still be read. • A hardware self-test error has occurred.
	Flashing red	<ul style="list-style-type: none"> • One of the Christie NAS-S3 hard drives in a RAID 1, RAID 5, or RAID 6 configuration has failed.
	Flashing green	<ul style="list-style-type: none"> • The Christie NAS-S3 is starting. • The Christie NAS-S3 is not configured. • The hard drive is not formatted.
	Solid green	<ul style="list-style-type: none"> • The Christie NAS-S3 is ready.
	Off	<ul style="list-style-type: none"> • All Christie NAS-S3 hard drives are in standby mode.
LAN	Solid orange	<ul style="list-style-type: none"> • A read or write error occurred while accessing network data.
	Flashing orange	<ul style="list-style-type: none"> • The Christie NAS-S3 is connected to the network.

LED	Activity	Description
HDD	Flashing red	<ul style="list-style-type: none"> The Christie NAS-S3 is being accessed from the network.
	Solid red	<ul style="list-style-type: none"> A read or write error occurred.
	Flashing green	<ul style="list-style-type: none"> HDD is being accessed.
	Solid green	<ul style="list-style-type: none"> The hard drive can be accessed.
USB	Flashing blue	<ul style="list-style-type: none"> A device is detected. A device is being removed from the NAS. A device is being accessed. Data is being copied to or from the USB or eSATA device.
	Solid blue	<ul style="list-style-type: none"> A device connected to the front USB port is detected.
	Off	<ul style="list-style-type: none"> A device is not connected or detected. The data transfer between the USB and the Christie NAS-S3 is complete.
eSATA	Flashing orange	<ul style="list-style-type: none"> A device is being accessed.
	Off	<ul style="list-style-type: none"> A device is not connected or detected.

Understanding audible alarms

Audible alarms indicate the operational status of the Christie NAS-S3.

Sound Pattern	Repetition	Description
Short	1X	<ul style="list-style-type: none"> Christie NAS-S3 is starting. Christie NAS-S3 is shutting down (software). Reset button was pressed. System firmware was updated.
Short	3X	<ul style="list-style-type: none"> Data cannot be copied to the external storage device from the front USB port.
Short followed by long	3X (5 minute intervals)	<ul style="list-style-type: none"> System fan has stopped working.
Long	2X	<ul style="list-style-type: none"> Disk volume is reaching its capacity. Disk volume is at full capacity. Hard disk drives are in degraded mode. Hard drive is rebuilding.
	1X	<ul style="list-style-type: none"> Hardware shutdown has occurred. Christie NAS-S3 is on and ready.

Technical support

Technical support for Christie products is available at:

- North and South America: +1-800-221-8025 or Support.Americas@christiedigital.com
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or Support.EMEA@christiedigital.com
- Asia Pacific: +65 6877-8737 or Support.APAC@christiedigital.com