Quick Setup

QNAP Enterprise-Class ES NAS Series

Models: ES1640dc v2

Table of Content

Installation and Configuration

Basic Hardware Installation

Open the “Quick Installation Guide” link below and follow the steps to install the following basic hardware:

- Battery backup units (BBU)
- Hard disk drives (HDD)
- Power cables
- Network cables

https://download.qnap.com/Storage/QIG/ES1640dc%20v2_QIG_51000-024427-RS_web.pdf

Drive Compatibility

The ES NAS series can accommodate solid-state drives (SSD), and traditional magnetic disk drives (HDD) **[Note 1]**. Both 3.5 inch and 2.5 inch drives can be installed. The ES NAS natively supports Serial Attached SCSI (SAS) drives.

Drive Installation

The ES NAS series supports the following disk drive configurations:

- **All SSD**: SSDs are the best choice for I/O intensive workloads and business-critical storage.
- **Hybrid**: The ES NAS allows you to mix SSDs and HDDs in one storage system, to help balance cost and performance. In additional to high IOPs, the ES NAS also supports creating an SSD read cache to further increase storage performance. This configuration is especially suitable for virtual desktop infrastructure (VDI) and web servers.
- **All HDD**: Using all hard disk drives offers the best price and capacity. This configuration is suitable for storing cold data that is not accessed frequently, and for applications that require sequential data access, such as video editing and surveillance.

The ES NAS will use drive bays 1 to 4 to store the system configuration, QNAP recommends drive bays 5 to 16 for data storage. This setup prevents data storage operations interfering with the basic operation of the NAS system. It also means that the disks used for data storage can be easily migrated to another NAS.

When using a mixture of SSDs and HDDs, installing the SSDs into drive bays 1 to 4 is recommended.

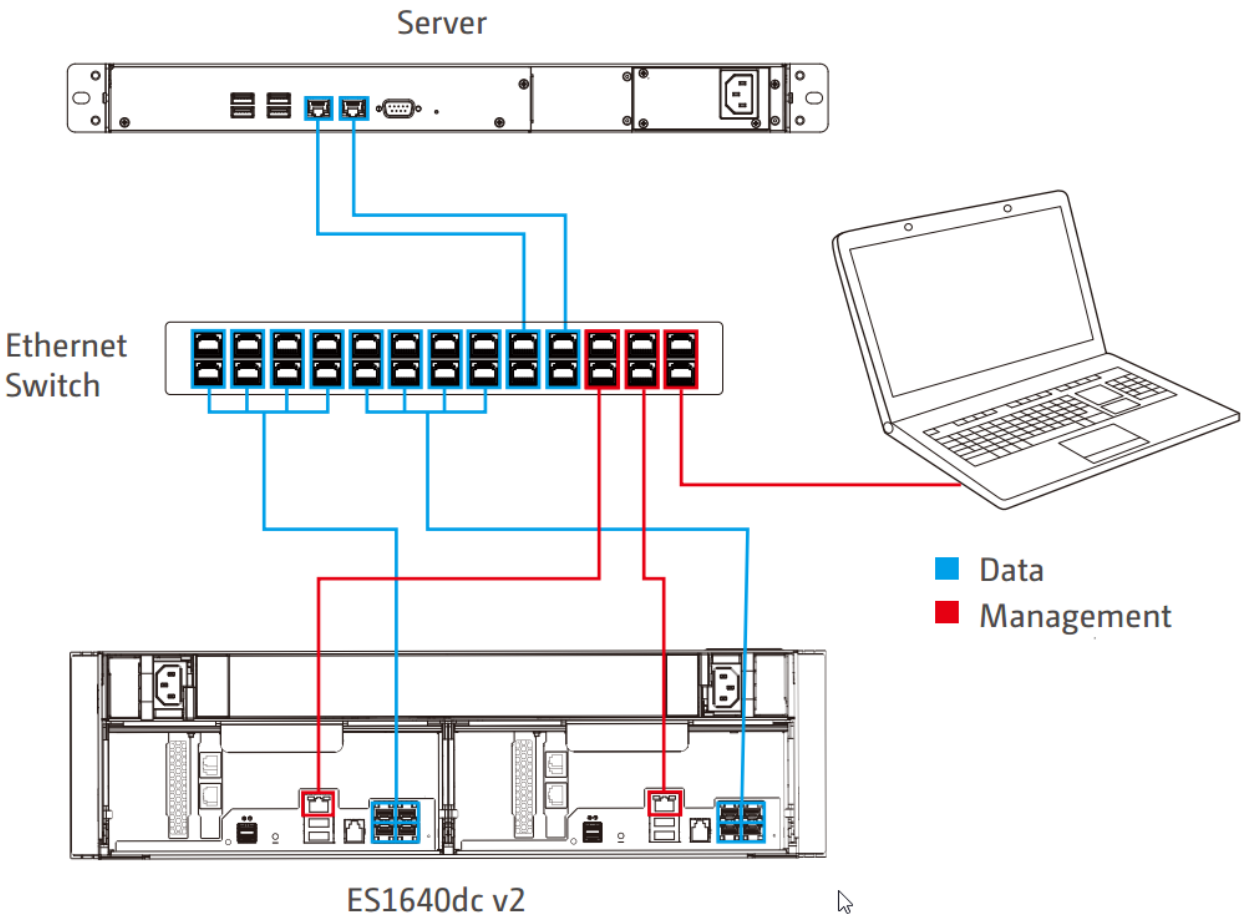
[Note 1]: Check the compatibility link below for compatible disks. The System may have problems or errors if disks not on the list are installed:

https://www.qnap.com/en/compatibility/index.php?model=263

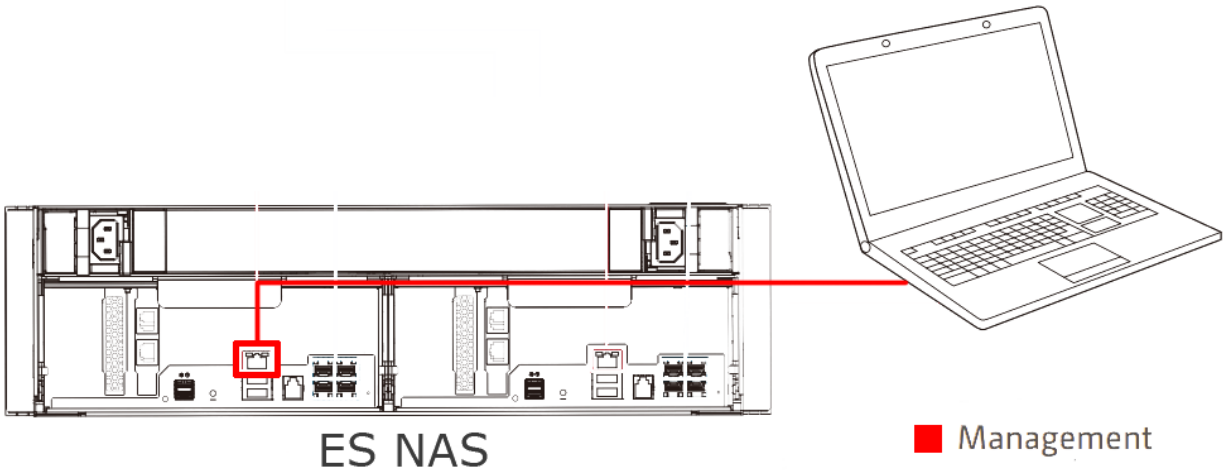
Connecting the ES NAS to a Network

The ES NAS has two types of network ports:

- **Data ports** (shown as blue in the diagram below) are used for accessing data stored on the NAS, using protocols like iSCSI, NFS, and CIFS.
- **Management ports** (shown as red in the diagram below) are for managing the NAS via QES desktop.



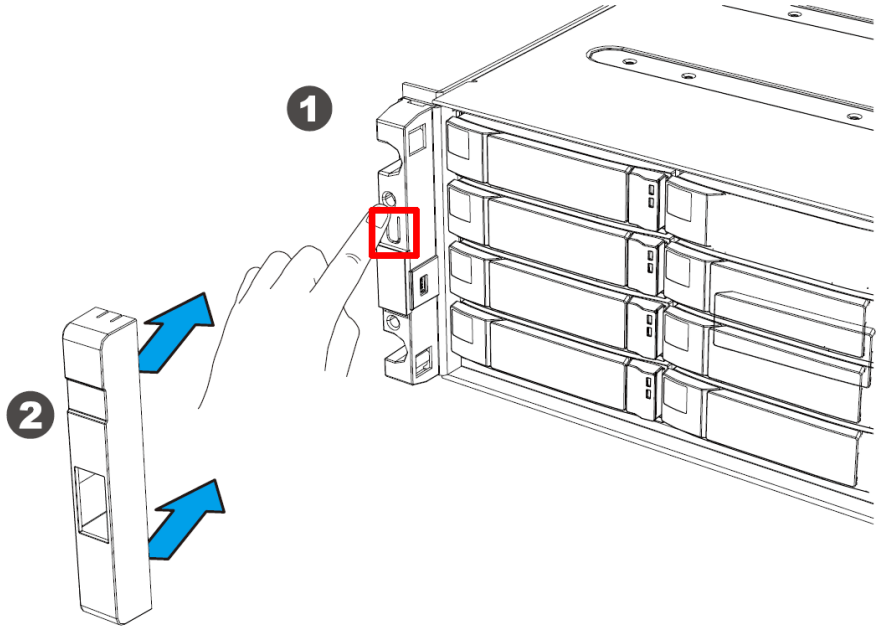
In an environment without DHCP, connect a PC directly to a NAS management port. Then open a web browser and enter the default QES IP: 169.254.100.100.



Powering on the NAS for the First Time

Power on the ES NAS by pressing the power-on button on the left front panel.

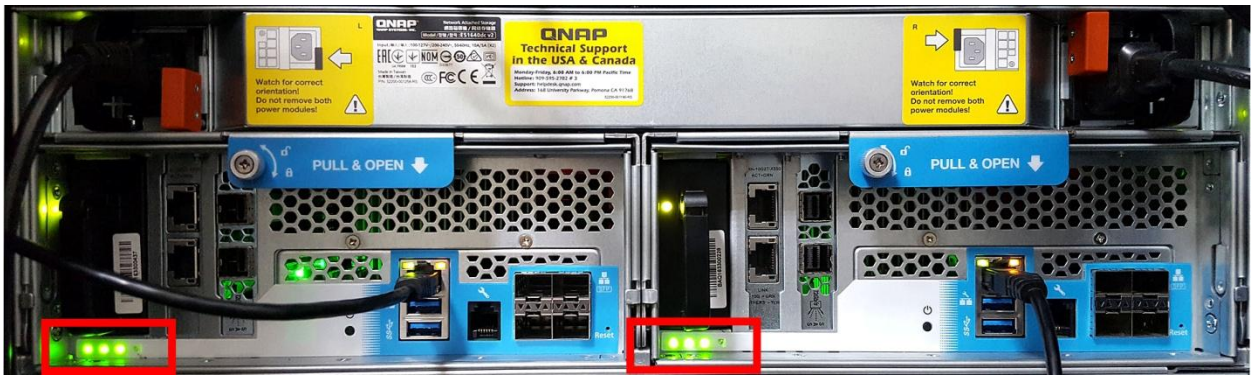
Note: To ensure power availability, installing two power supplies each connected with a separate power cable is recommended.



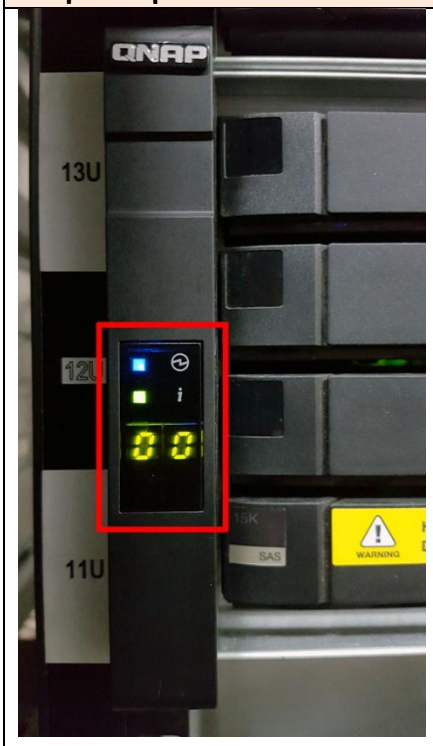
System start-up will take from 10 to 15 minutes, depending on the number of disks and the devices connected to the ES NAS.

The LEDs on the rear of the ES NAS and the LCD status display on the left front panel can both be used to check the status of power on. All storage and management services are disabled while the ES NAS is powering on.

Start-up is finished when the left three of the four LEDs on the rear of the ES NAS turn green. There are two sets of LEDs, one for each storage controller.



Front panel LCD

Graphical position	Position	Number
	The two-digit number displays the state of the ES NAS power on process The left and right digits represent the left Storage Controller (SCB) and the right Storage Controller (SCA) respectively.	No-Display：BIOS booting 1：Device detecting 2：Network settings 3：System settings 4：Services start 5：System self-testing 0：System ready

Rear panel LEDs

Graphical position	Description	LED color	Status
	System status	Green	Off = System is powered off Green= System is operating normally Flashing green=System is starting up
	Fan	Green Orange	Green= Fan is operating normally Orange= Fan error Off = No fans detected
	NVRAM	Green Orange	Green= NVRAM enabling Orange= executing data protection Off = One or more of the following conditions exist: •The storage controller is not powered on. •The system cannot detect the BBU.

	High Availability	Green Orange	Green= Active Flashing orange= Performing takeover or undergoing giveback Orange= The storage controller has taken over from the other storage controller Off = One or more of the following conditions exist: •The storage controller has failed over to the other storage controller •The storage controller is not powered on

Connecting to the ES NAS with Qfinder Pro

Qfinder Pro is a QNAP utility that enables you to quickly search and manage your NAS. Using Qfinder Pro, you don't need to memorize the IP addresses of QNAP NAS in your LAN. NAS in the same subnet as the client running Qfinder will be detected automatically.

Downloading and installing Qfinder Pro

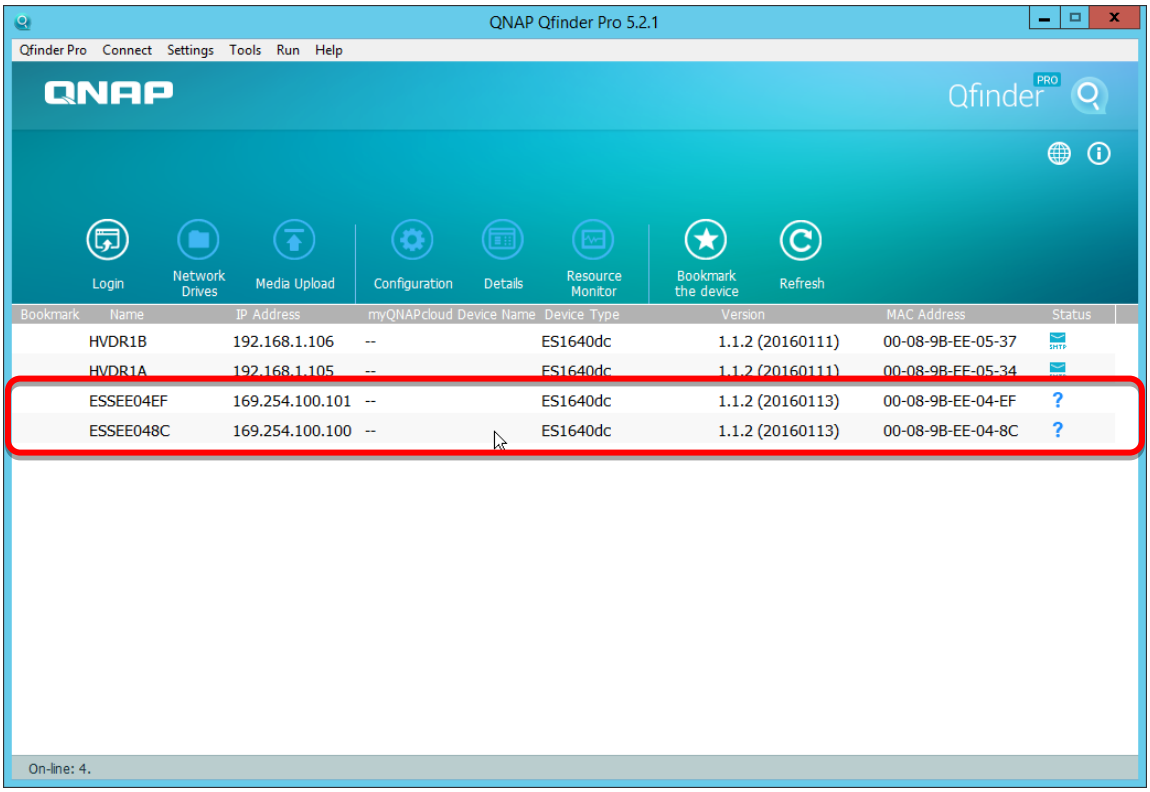
Download Qfinder Pro for your operating system at https://www.qnap.com/i/en/utility. Download and then install it:

1. Run the QNAP Qfinder. If the QNAP Qfinder is blocked by your firewall, unblock it first.
2. Select the installation language. It is recommended to close all other running programs before you proceed.
3. Read the license agreement, check "I accept the terms of the License Agreement," and click "Next".
4. Select if you would like to create Desktop Shortcuts or Quick Launch Shortcuts. Then click "Next".
5. Choose the Installation location and click "Next".
6. Click "Finish" to finish the installation.

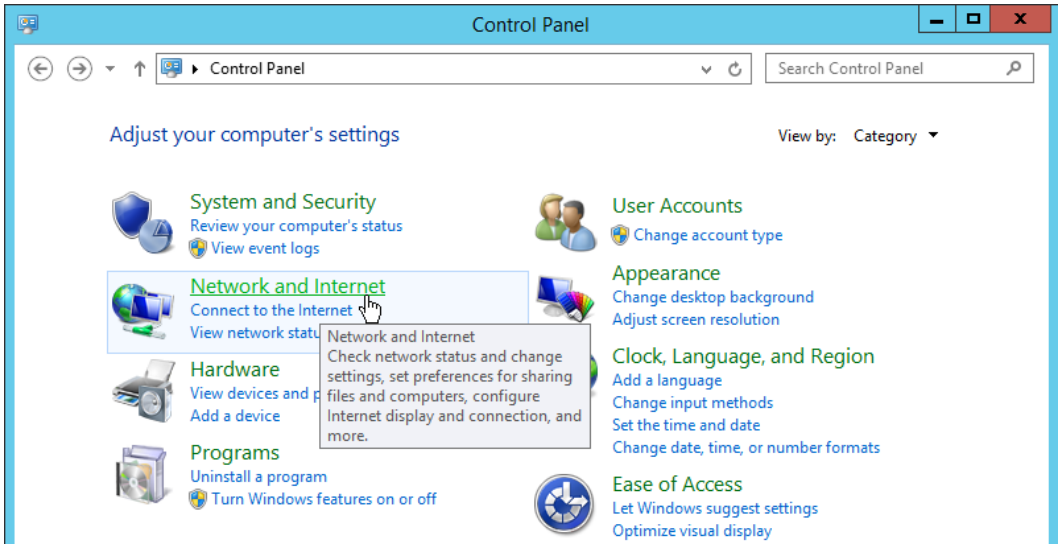
Setting up the ES NAS with a Static IP

1. Run Qfinder Pro.
   Qfinder automatically searches for QNAP NAS on your local network.
   Note: The Qfinder client and NAS must be on the same subnet.

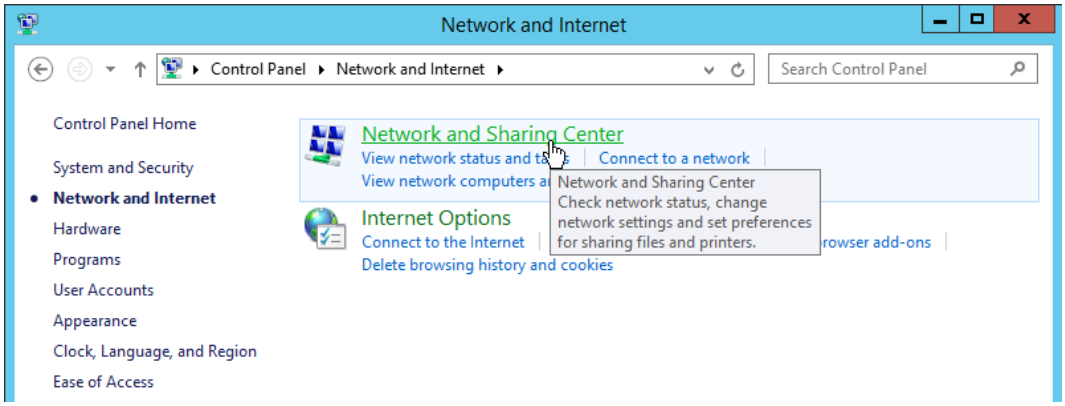
2. Locate IP address 169.254.100.100 in the Qfinder device list. This device the new ES NAS. The status shows "?", meaning that the ES NAS hasn't been configured before.
   Note: If both management ports and the Qfinder client PC are connected using a switch, then Qfinder will also show a second new device 169.254.100.101. This is the IP address of the second management port and storage controller.



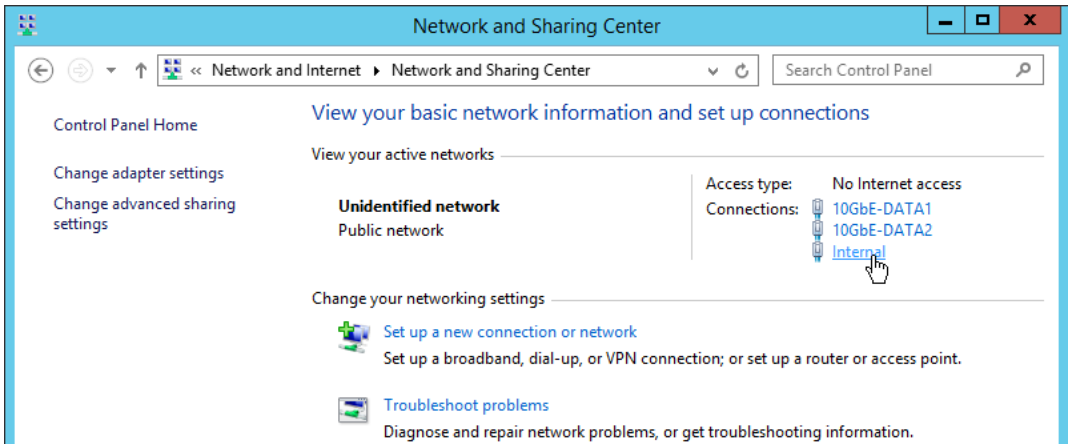
3. Configure the PC network settings to be in the same range as the ES NAS. Using a PC with Windows Server 2012 R2 as an example:
    a. Go to “Control Panel” > “Network and Internet”:



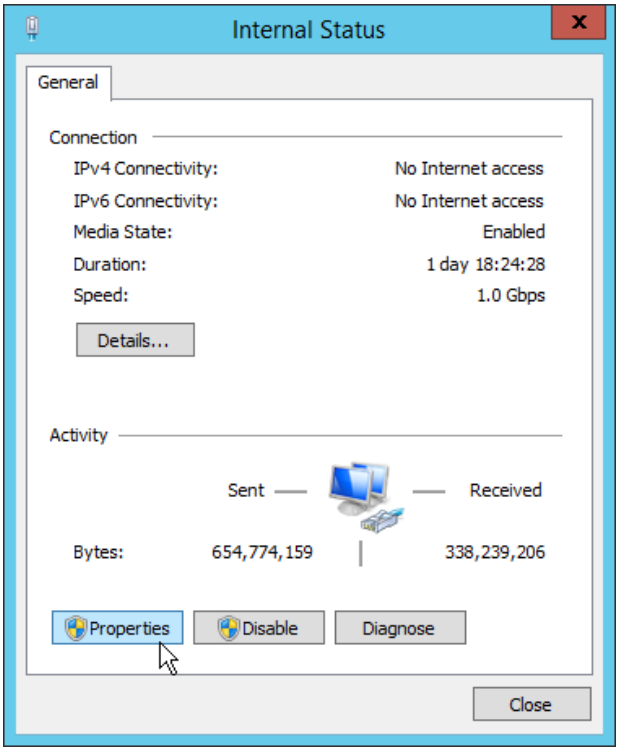
    b. Click “Network and Sharing Center”.



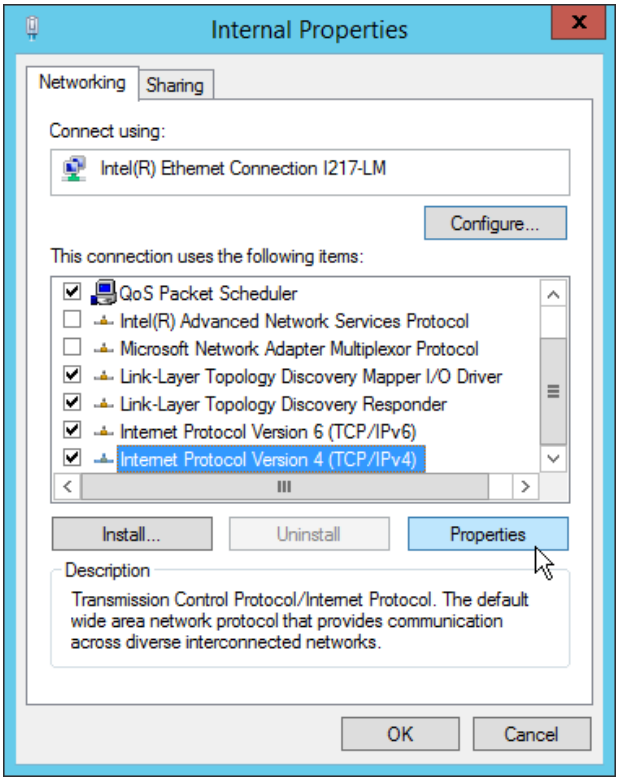
    c. Select the network interface connected to the ES NAS Management port. In this example it is called “Internal”.



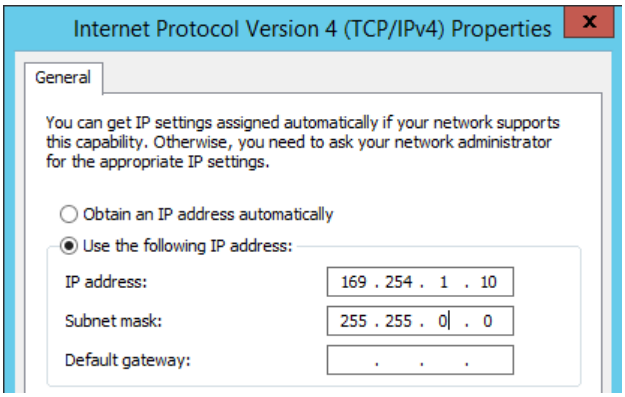
d. Click “Properties”.



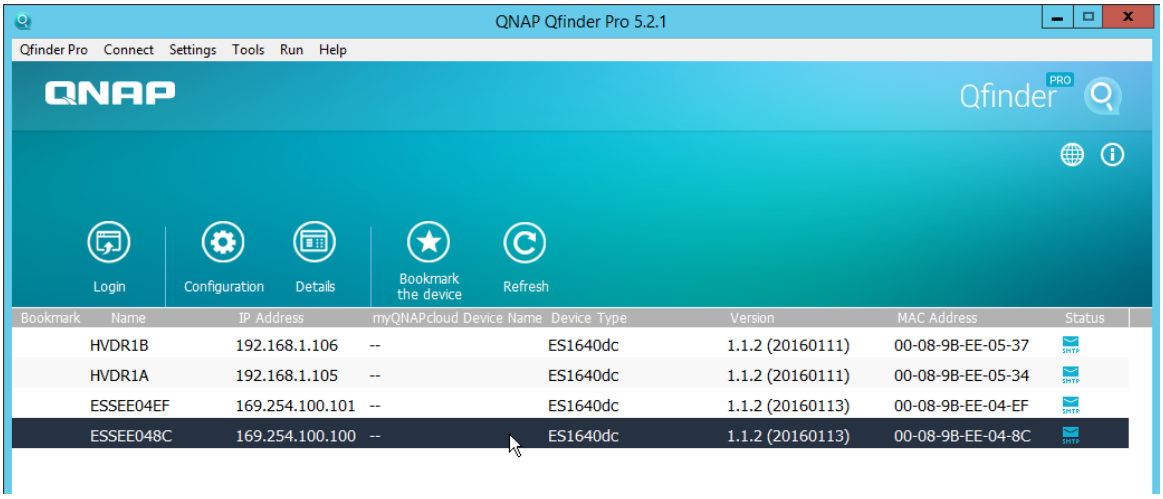
e. Select “Internet Protocol Version 4 (TCP/IPv4)”, and click “Properties”.



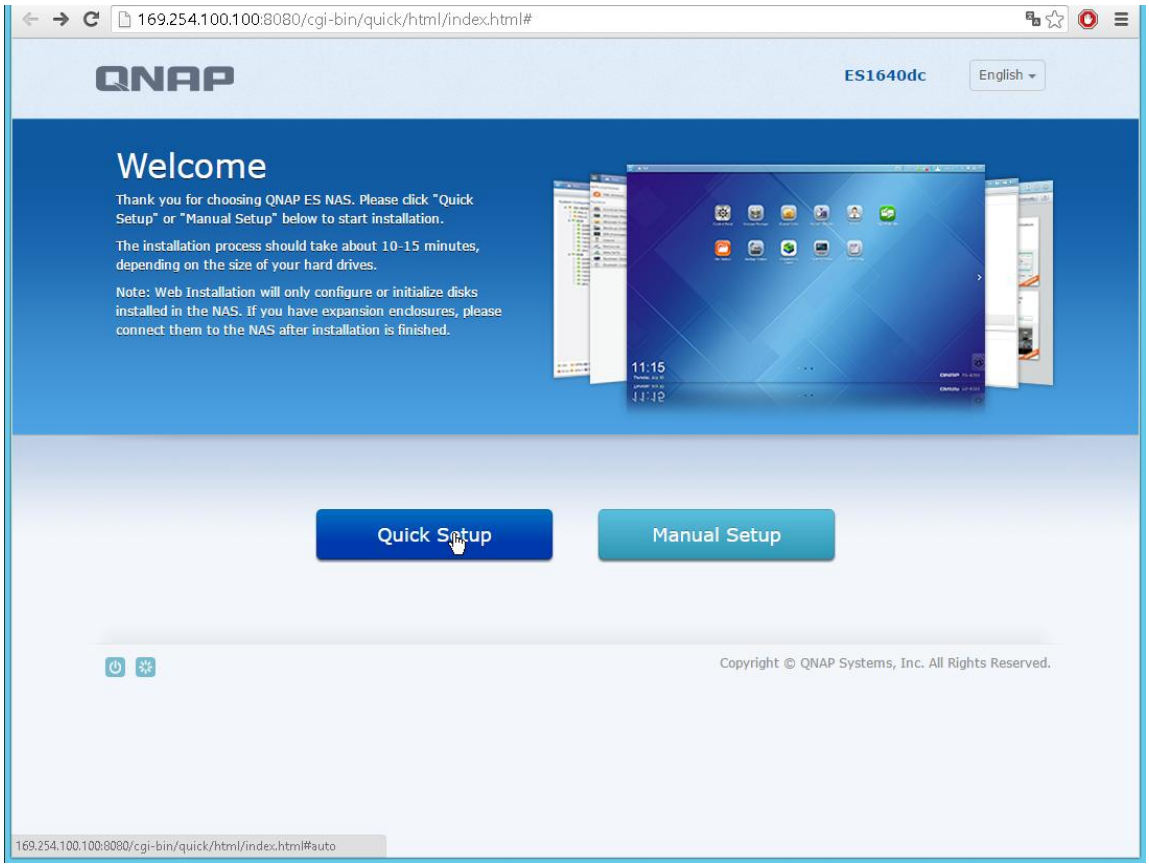
f. Enter the IP address “169.254.1.10”, and Subnet mask “255.255.0.0”. Click “OK”.



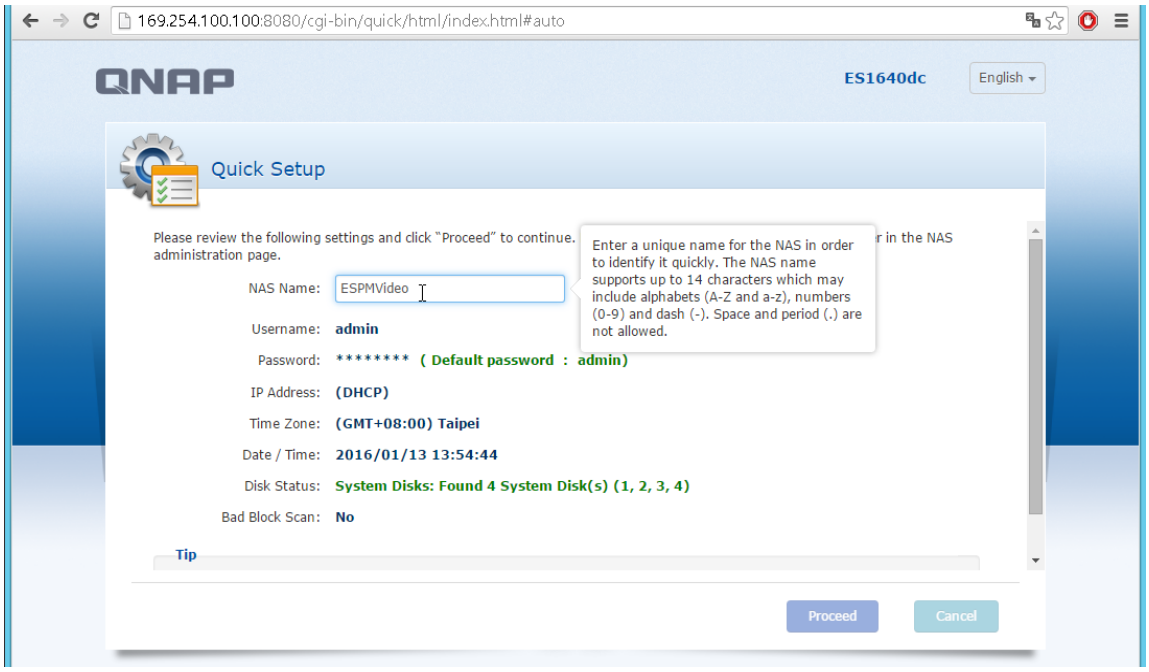
4. Open Qfinder, and double click on one of two uninitialized NAS.



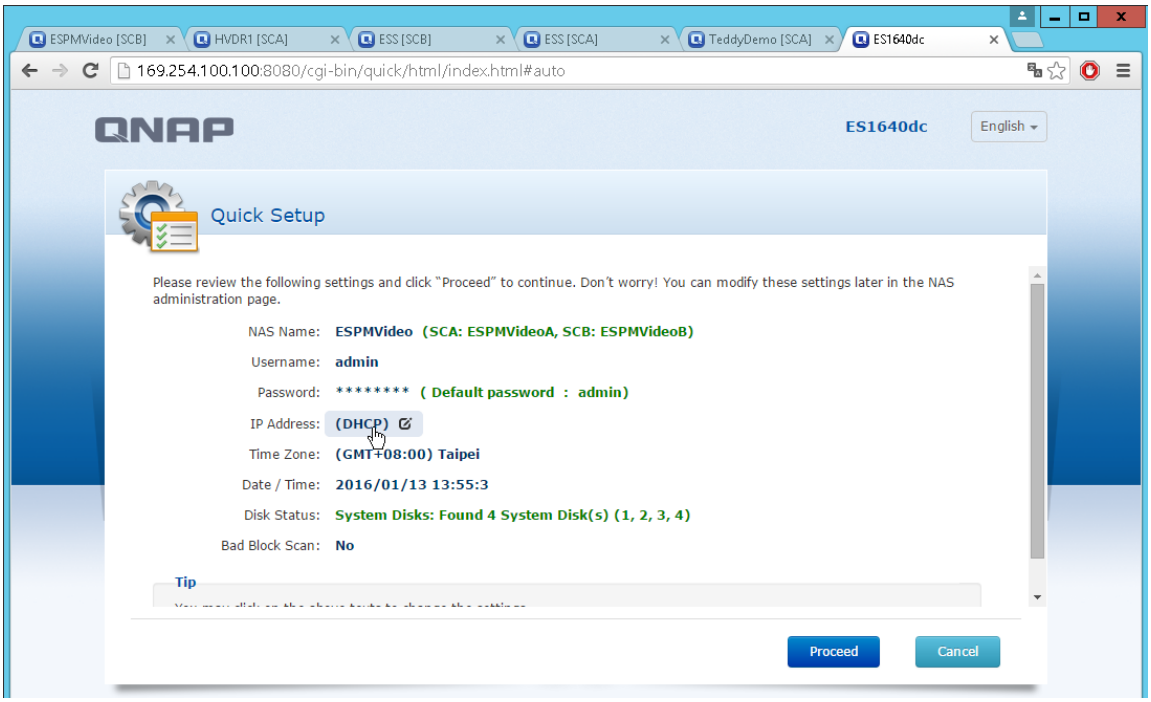
5. Follow the on-screen instructions. The Qfinder Pro Setup Wizard will guide you through the setup process. Click “Quick Setup” to initialize the NAS with common settings. Click “Manual Setup” to configure the NAS with advanced settings.



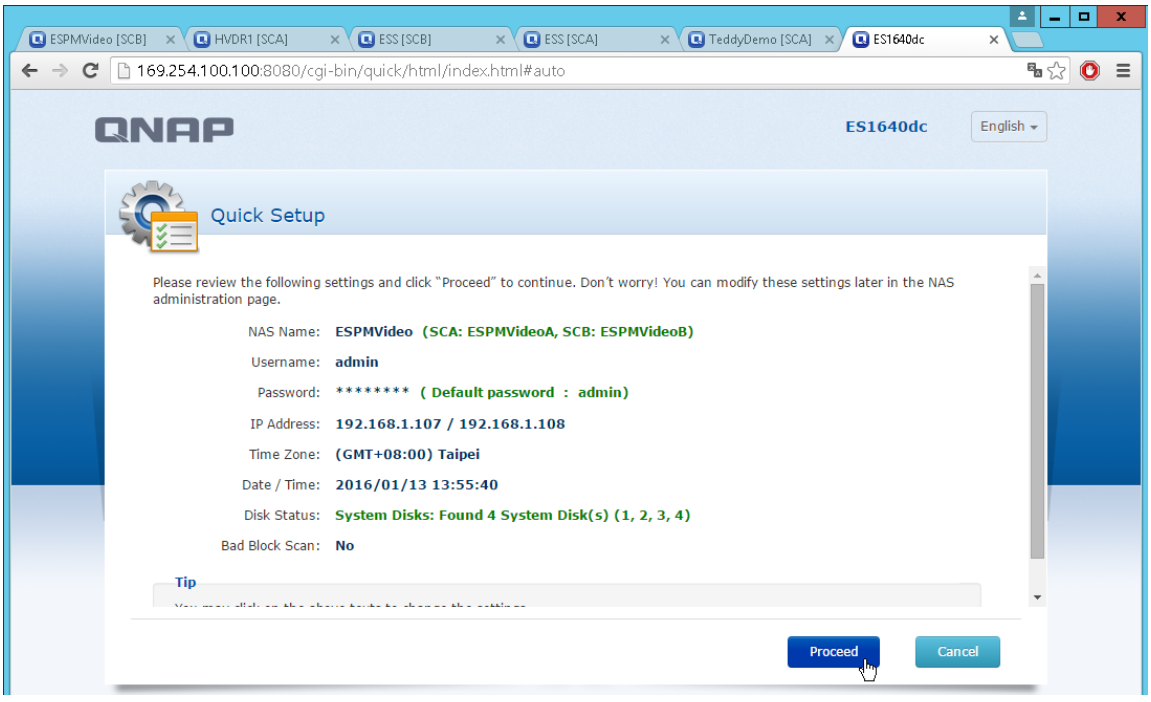
6. You can configure basic settings on this page, including IP address, username and password, and NAS name.



7. In this example the NAS is going to use a fixed IP, so click the IP address field to modify it:

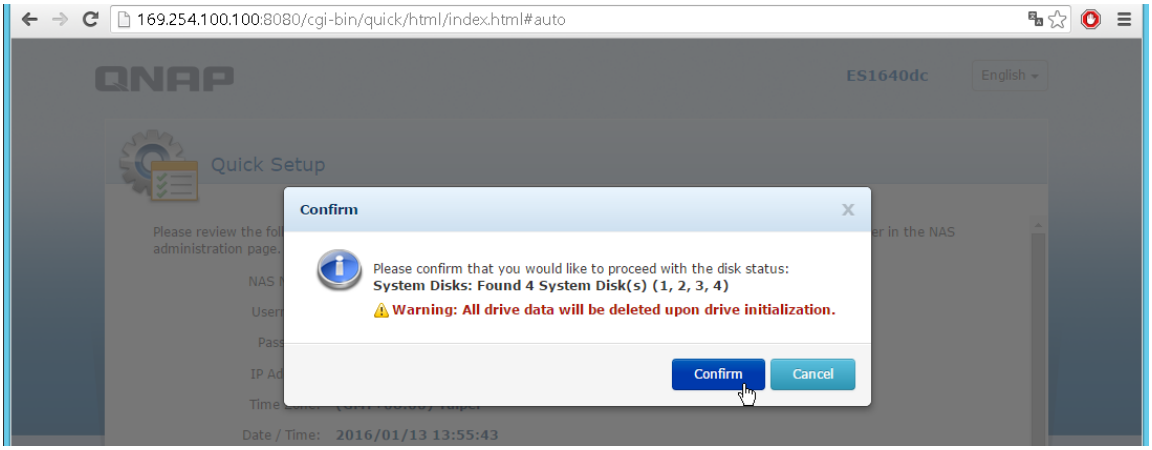


8. Specify a static IP Address for the NAS. In our example, we have two management ports connected and our LAN network is 192.168.x.x, so we use "192.168.1.107" and "192.168.1.108". Click "Proceed."



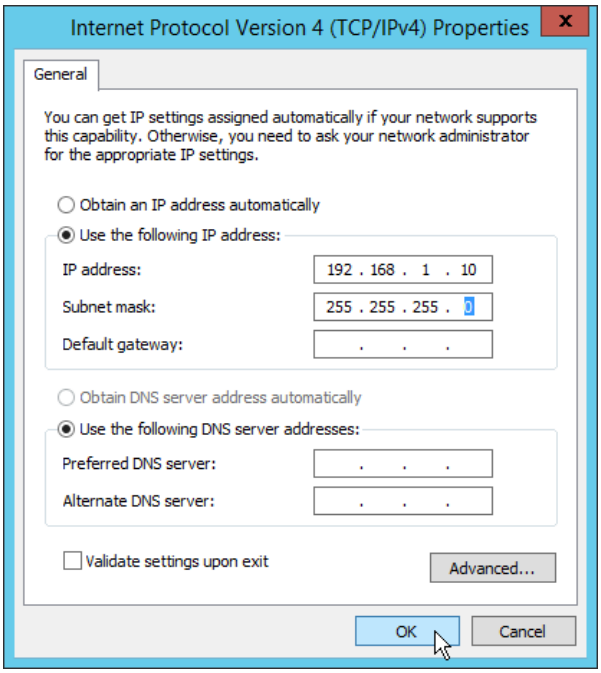
9. A confirmation message appears. Click OK to confirm initializing the system disks.

Warning: All data on the disks will be deleted

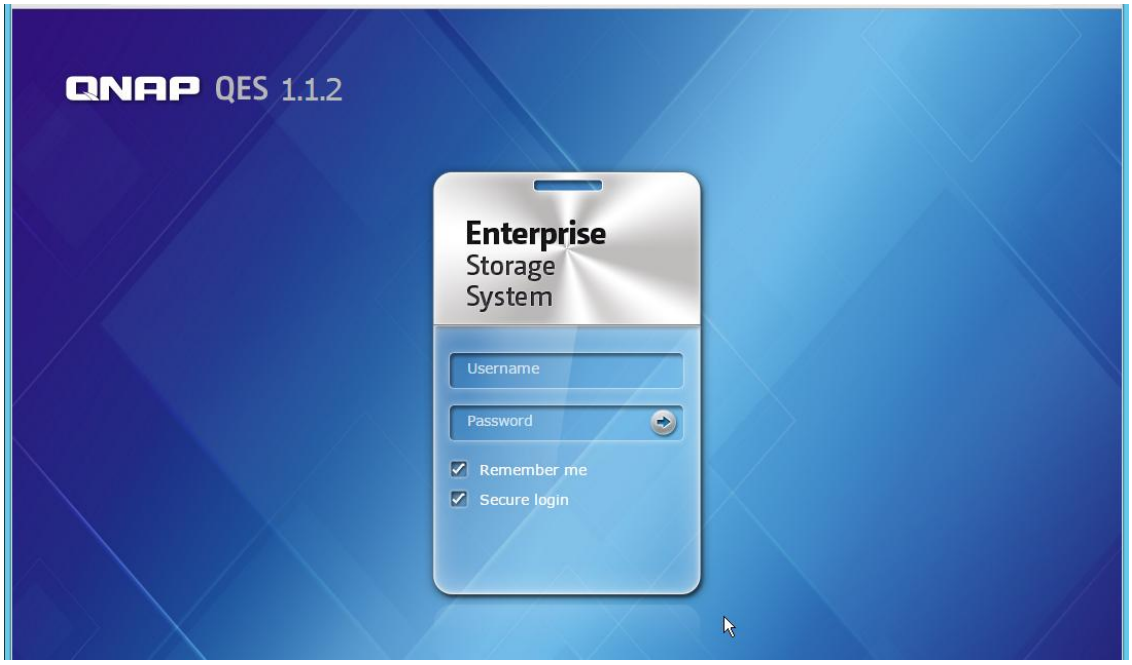


10. The NAS will restart.

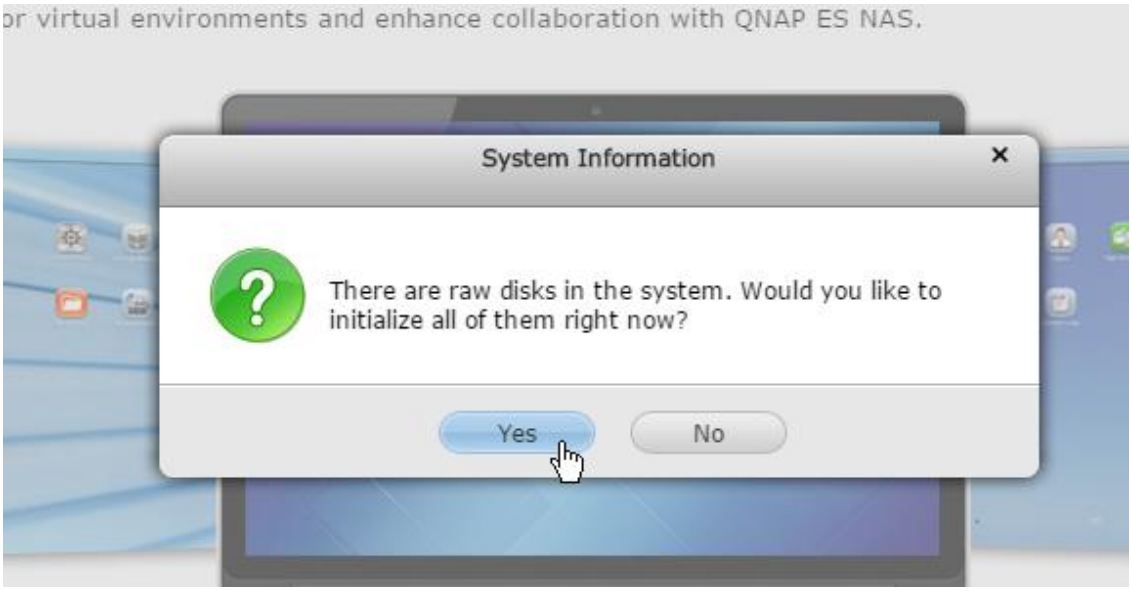
11. Change the PC IP address and Subnet mask from the “169.254.X.X” range, back to its original value.



12. After the ES NAS has finished restarting, double click on your NAS in Qfinder Pro to go to the login page. Log into QES with your username and password created during setup.
    Note: The default username and password is admin/admin.



13. The system prompts you for confirmation of disk initialization, if any raw unused disks are found. Click “Yes” to begin disk initialization or “No” cancel.

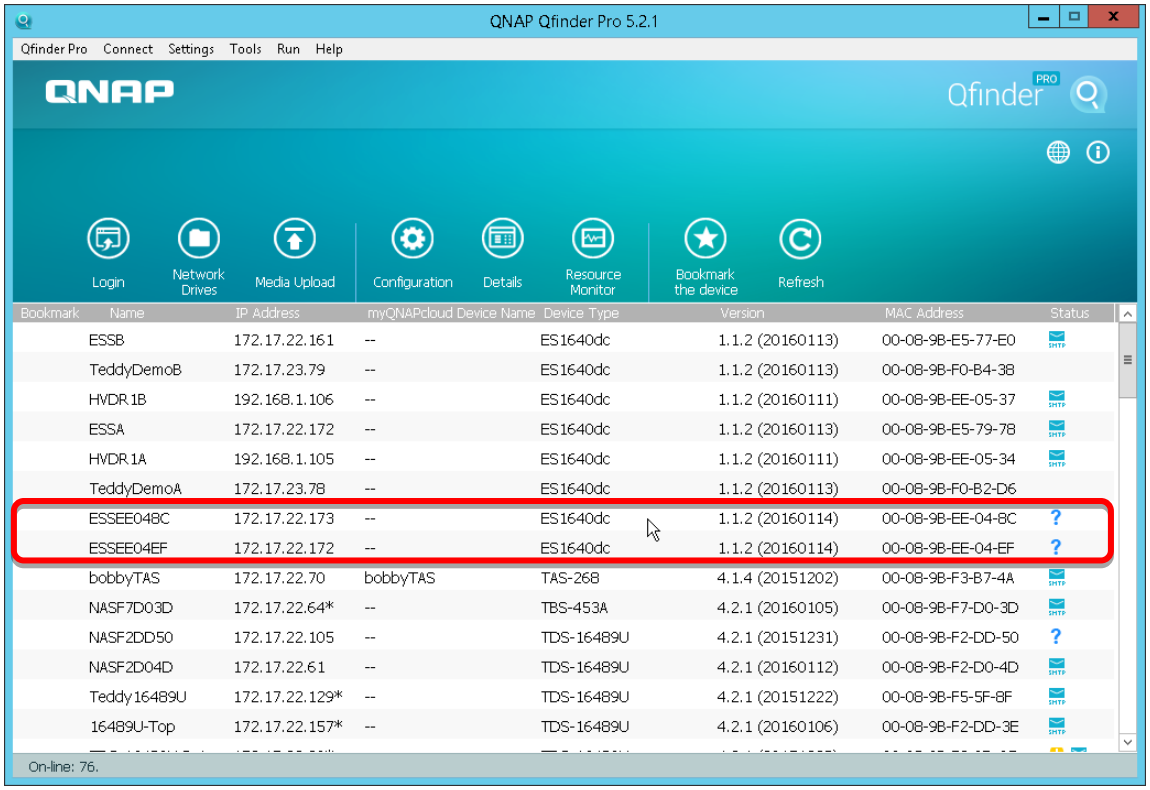


The QES NAS management interface is now ready to use.

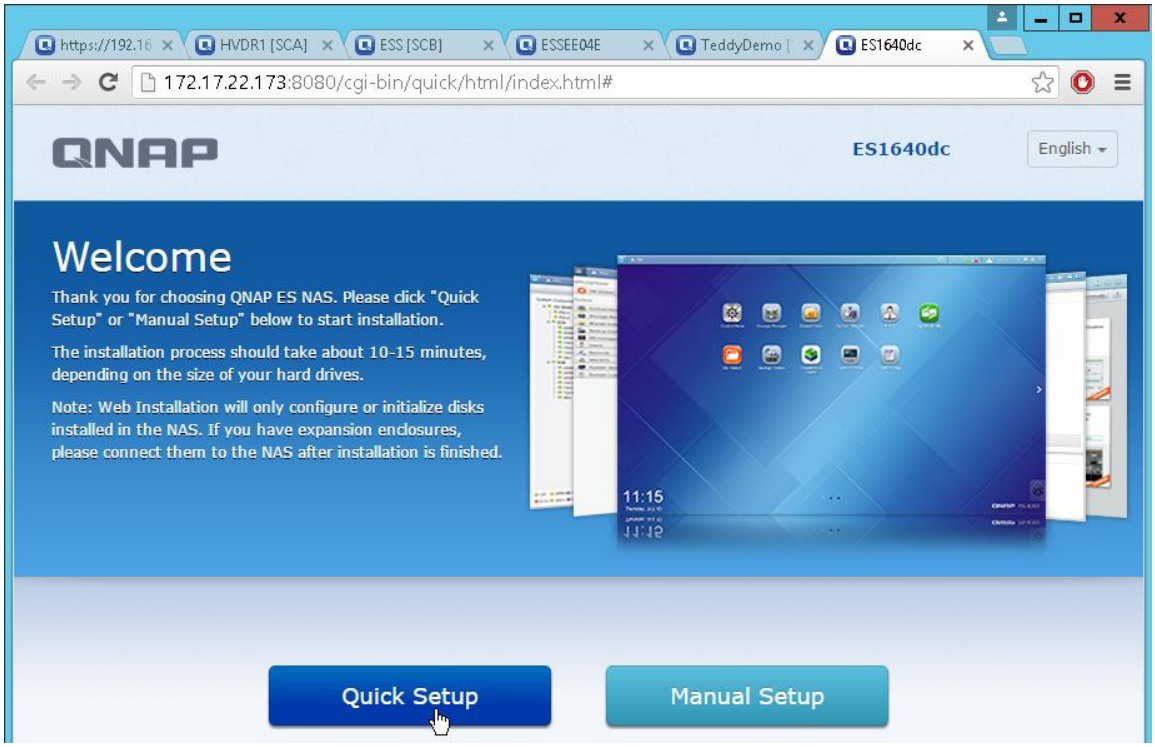
Setting up the ES NAS using DHCP

1. Run Qfinder Pro.
   Qfinder automatically searches for QNAP NAS on your local network.
   Note: The Qfinder client and NAS must be on the same subnet.

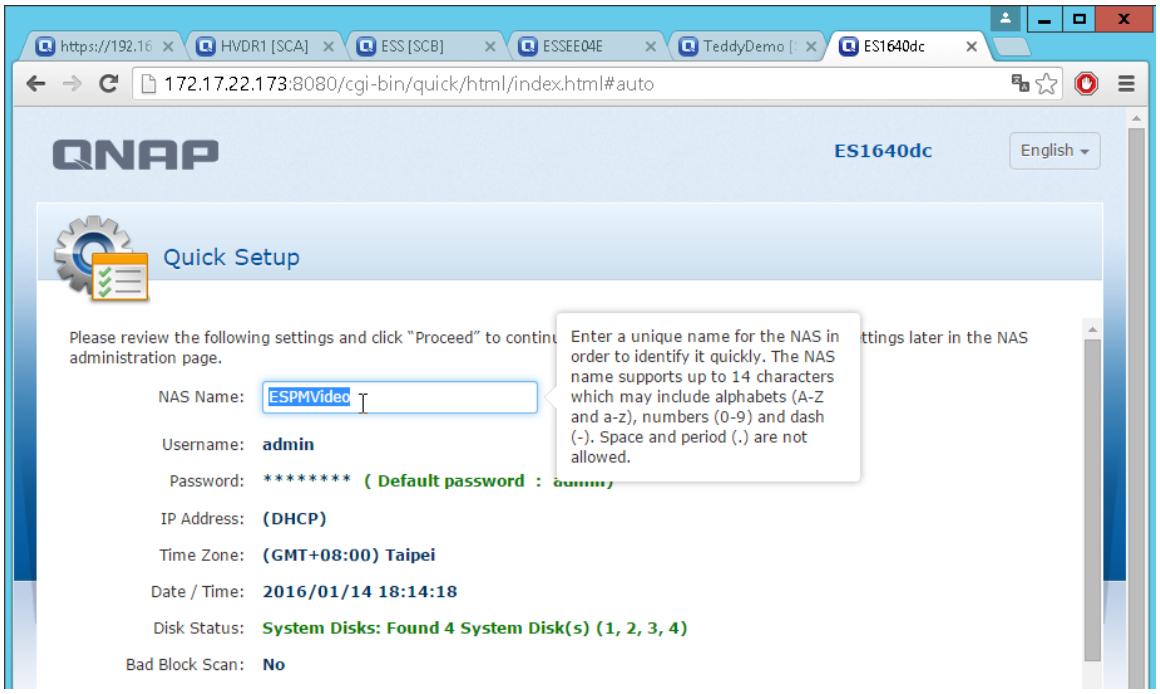
2. Locate the NAS with status “?”. This should be the new ES NAS. Confirm by checking the model under “Device Type”.
   Note: If both management ports and the Qfinder client PC are connected using a switch, then Qfinder will also display a second device with status “?”. This is the IP of the second storage controller and management port.



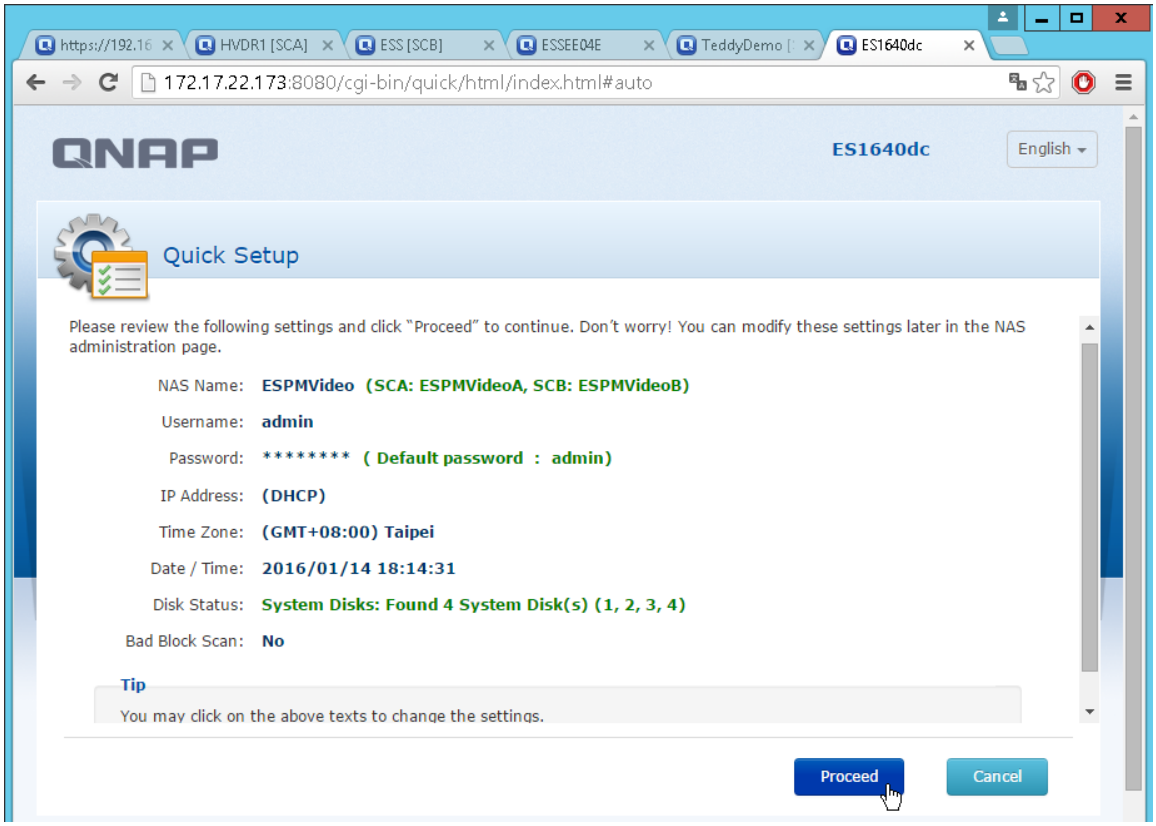
3. Click “Quick Setup”.



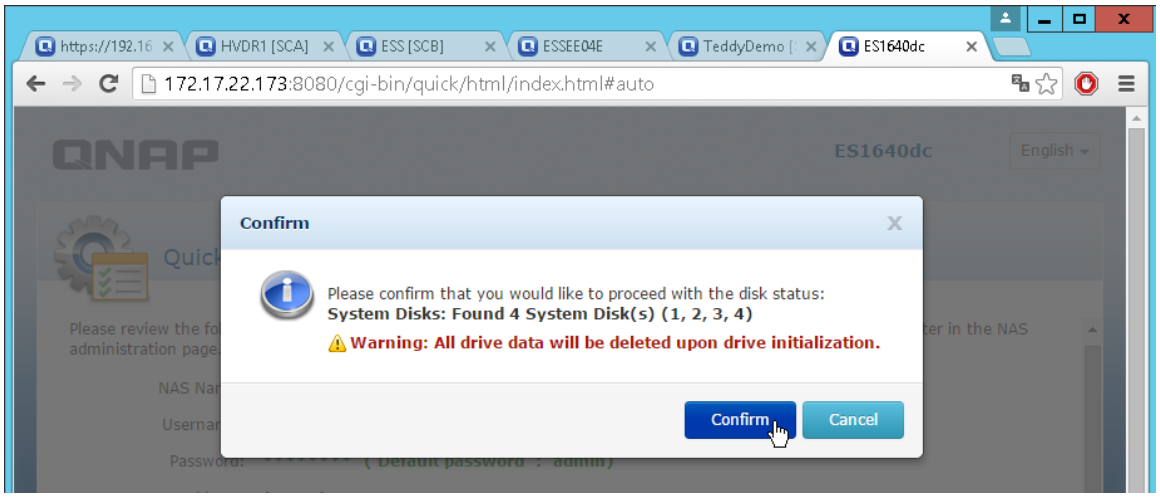
4. Specify a name for the NAS.



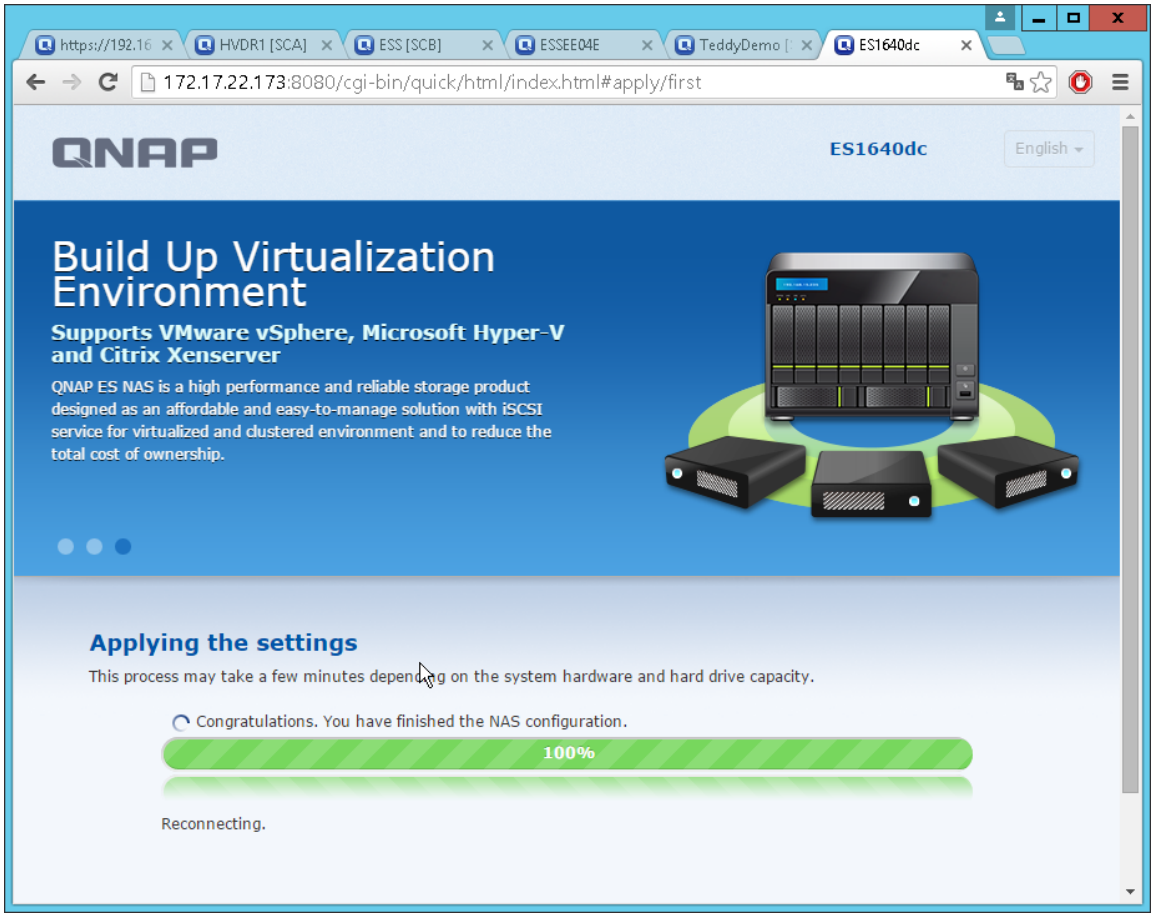
5. Configure the remaining settings and click “Proceed”.



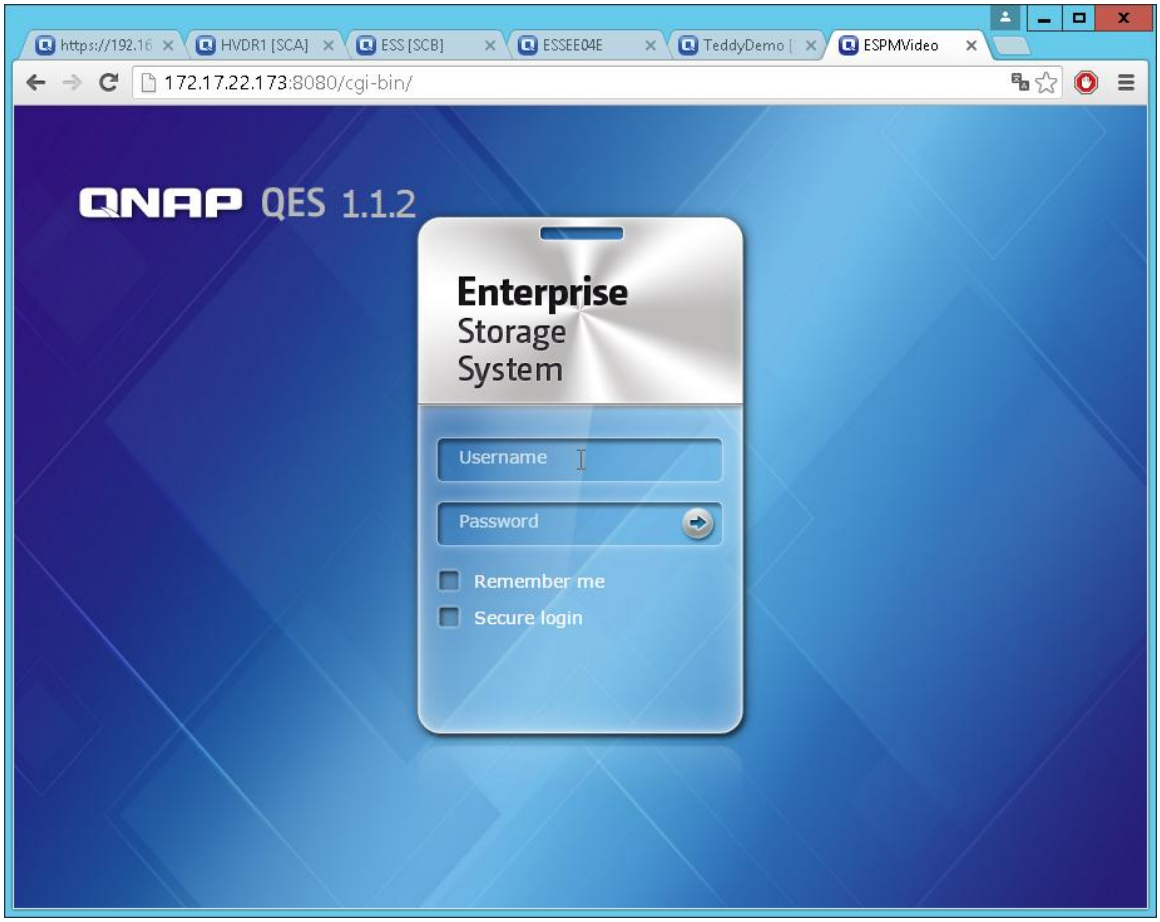
6. A confirmation message appears. Click OK to confirm initializing the system disks.
   Warning: All data on the disks will be deleted.



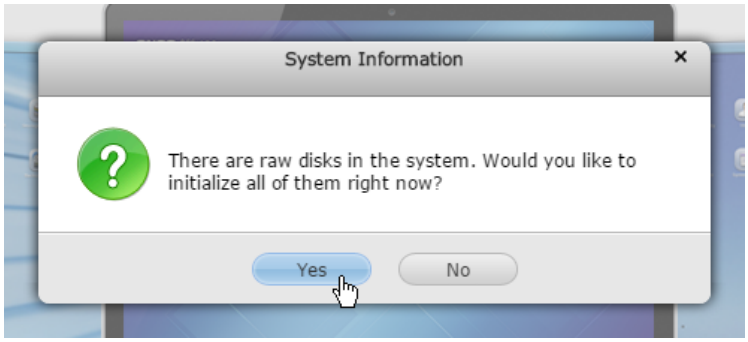
7. The ES NAS will apply settings and then restart.



8. Log into QES with your username and password created during setup.
   Note: The default username and password is admin/admin.



9. The system prompts you for confirmation of disk initialization, if any raw unused disks are found. Click “Yes” to begin disk initialization or “No” cancel.

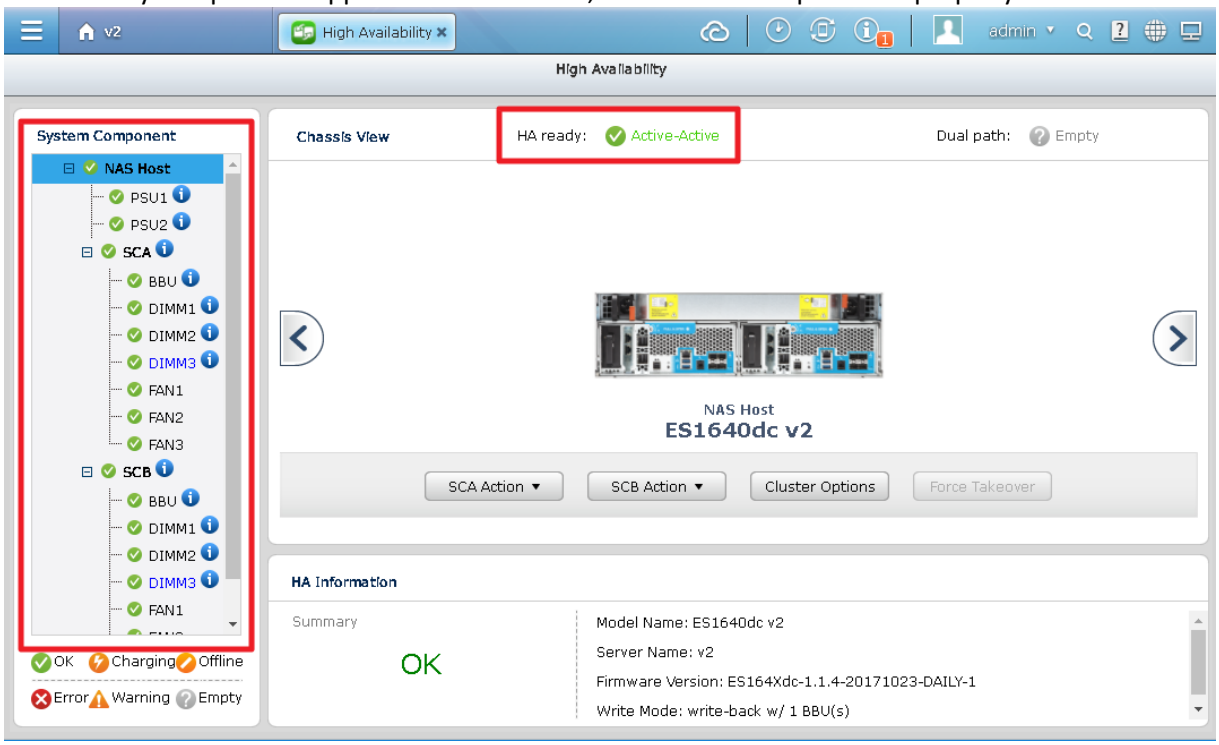


QES is now ready to use.

Check the Status of System and Hardware Components

1. After logging in to QES, it is recommended to check the status of system and hardware components. Click “High Availability” on the QES desktop.

2. Before using the NAS, check if the System Components (displayed on the left) and the "HA ready" field (at the top) are all green. This indicates that the status is normal. Some of the components (for example, the PSU) may take longer (approximately 90 seconds) to confirm and show their status. If any components appear to be abnormal, check if the component is properly installed.



Next Article

For network and storage settings, please refer to the following guide:

Network and Storage Settings of ES NAS High-Availability Network Storage Services