PELCO

by Schneider Electric

CONFIGURATION

# Endura®
# NSM5200 Series

## Web Configuration

C4603M-F (2/14)

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# Important Notices

## VIDEO QUALITY CAUTION

### Frame Rate Notice Regarding User-Selected Options

Pelco systems are capable of providing high quality video for both live viewing and playback. However, the systems can be used in lower quality modes, which can degrade picture quality, to allow for a slower rate of data transfer and to reduce the amount of video data stored. The picture quality can be degraded by either lowering the resolution, reducing the picture rate, or both. A picture degraded by having a reduced resolution may result in an image that is less clear or even indiscernible. A picture degraded by reducing the picture rate has fewer frames per second, which can result in images that appear to jump or move more quickly than normal during playback. Lower frame rates may result in a key event not being recorded by the system.

Judgment as to the suitability of the products for users' purposes is solely the users' responsibility. Users shall determine the suitability of the products for their own intended application, picture rate and picture quality. In the event users intend to use the video for evidentiary purposes in a judicial proceeding or otherwise, users should consult with their attorney regarding any particular requirements for such use.

## WARRANTY STATEMENT

For information about Pelco's product warranty and thereto related information, refer to *www.pelco.com/warranty*.

# Description

This manual explains how to configure the Endura® NSM5200 network storage manager (NSM) using a standard Web browser. The NSM5200 can be configured using a Web browser on a PC connected to the Endura network or directly connected to each NSM5200.

**NOTE:** Each NSM5200 must be individually configured while connected to the network. If the NSM5200's Dynamic Host Configuration Protocol (DHCP) address is not available, a default IP address of 172.31.255.254 is programmed into Ethernet port 2.

## USING THE WEB BROWSER

The following minimum system requirements are necessary to use a Web browser with the NSM5200:

**Operating system:** Windows® 98, Windows 2000, Windows XP or later, or Mac® OS X 10.3.9 or later

**Monitor:** Minimum of 1024 x 768 resolution, 16- or 32-bit pixel color resolution

**Web browser:** Microsoft® Internet Explorer® 5.5 or later or Mozilla® Firefox® 1.5 or later

**Media player:** Adobe® Flash® Player 10 or later (available on the NSM5200 resource disc)

**Network:** At least one reserved static IP address for each Storage Pool (must be outside of the DHCP address range if using DHCP addressing)

# CONFIGURING THE NETWORK SETTINGS

If you are connecting directly to each NSM5200 through a laptop, follow the instructions below to connect to Ethernet port 2. If you are connecting to the NSM5200s through a central PC, use the Endura Utilities to find the DHCP address assigned to each NSM5200, and then type that address in an Internet Explorer session on a PC connected to the Endura network.

Configure your cable setup using a straight-through or cross-over cable. Use this setup to configure the network settings for the Pool Manager and for each Pool Member.

To configure your network settings (refer to Figure 1):

1. Connect a standard network cable from Ethernet port 1 to the Endura network.
2. Connect one end of a straight-through or cross-over cable to the network connector on the laptop.
3. Connect the other end of the straight-through or cross-over cable to Ethernet Port 2 located on the NSM5200 rear panel.
4. Turn on your laptop.
5. Start the NSM5200. It will take approximately 10 to 15 minutes for the unit to turn on completely.

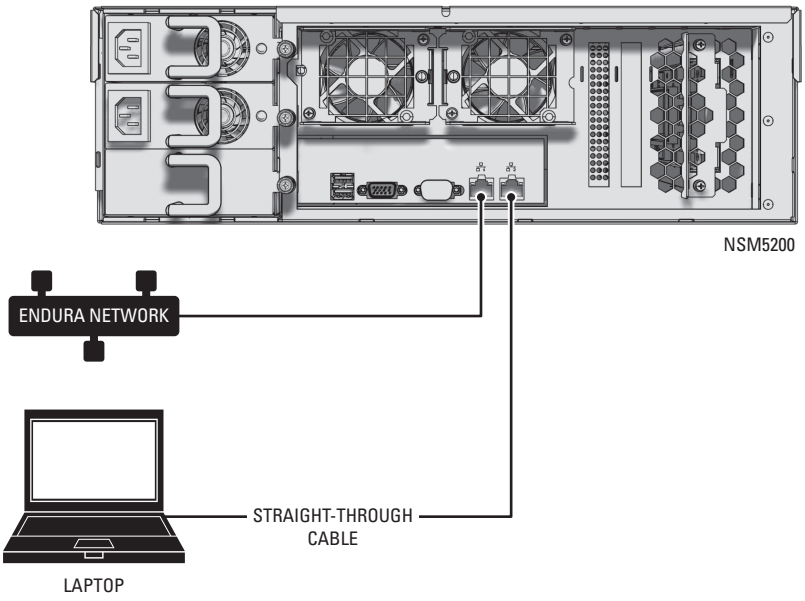


**Figure 1.** Configuration Setup

6. Configure the network settings on the laptop.

   **IP address:** 172.31.255.253

   **Subnet mask:** 255.255.255.0

7. Click OK or Apply.
8. Open a Web browser, and then type the following IP address: 172.31.255.254. The Web browser logon dialog box appears.
9. Type **admin** (the default password) to log on to the Web application. The setup window for the Pool Manager appears (refer to Figure 2 on page 8).

   **NOTE:** For security purposes, change the password after you log on for the first time (refer to Figure 11 on page 17).

# Setting Up the NSM Pools

## CONFIGURING THE POOL MANAGER

Figure 2 displays the setup window for the Pool Manager.

**NOTE:** Do not configure pool members until the pool manager is configured completely.

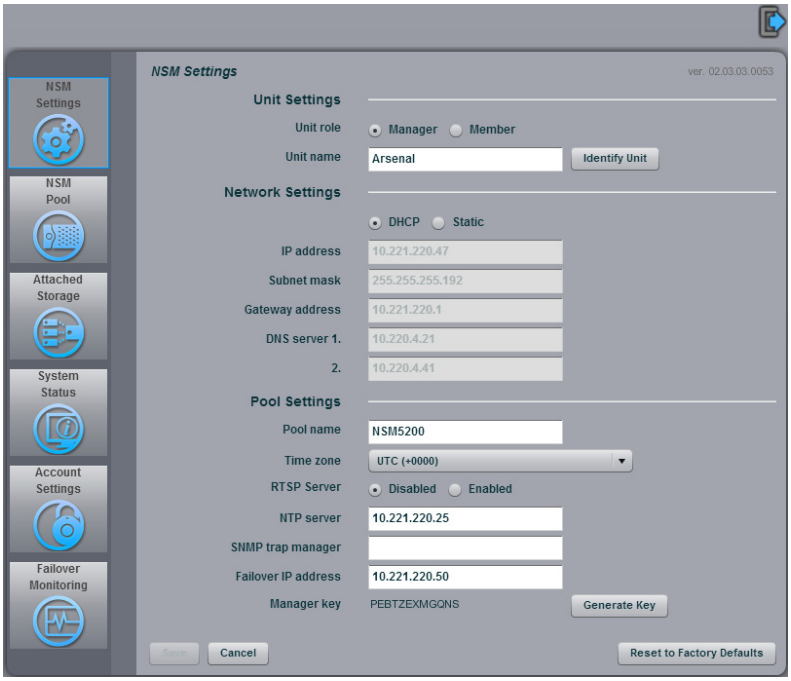


**Figure 2.** NSM Settings: Configuring the Pool Manager

### UNIT SETTINGS

1. Select Manager as the "Unit role."
2. Type a user-friendly name in the "Unit name" box. This name will appear on the Endura workstation and is a convenient way to identify a specific unit.

   **NOTE:** The unit name is limited to a maximum of 32 characters, and it must consist of letters, numbers, and underscores only.

### NETWORK SETTINGS

Select DHCP or Static.

**DHCP:** Select DHCP if you want the network to automatically assign an IP address to the NSM5200. Go to Pool Settings to continue with the Pool Member configuration.

**Static:** Select Static if you want to assign IP settings manually. Additionally, you will need to assign a unique IP Address for the NSM5200, Subnet Mask, and Gateway Address.

**NOTE:** If you change an IP address manually and click the Save button, the "Restarting Services, Please Wait..." message appears momentarily, and then a Reboot NSM dialog box appears. After reviewing the reboot information, click OK to close the dialog box.

## POOL SETTINGS

1. Configure the following Pool settings:

   **Pool Name:** Enter a user-friendly name for the pool. The pool name is limited to a maximum of 32 characters, and it must consist of letters, numbers, and underscores only.

   **Time Zone:** Select the appropriate time zone to be used by this unit.

   **RTSP Server:** Enable or disable RTSP streaming. By default, RTSP streaming is disabled.

   **NTP Server:** Type the IP address of the NTP server used to synchronize time on the network. If the Endura System Manager is used as the NTP server, type its IP address. The NTP server should be running before you assign its IP address to an NSM5200.

   **SNMP Trap Manager:** If an SNMP monitoring system is being used, type the IP address of the SNMP trap manager to which SNMP traps should be sent.

   **Failover IP Address:** Type the static IP address reserved for the pool. This IP address is a virtual IP address for the NSM5200. It must be an unused IP address on the network.

   **NOTE:** This IP address must not be the same as the unit IP addresses used by the manager or pool members. If you are using DHCP, make sure the virtual IP is outside of the DHCP address range.

   **Manager Key:** Note the key generated for the storage pool; this key will be used to add members to the pool. Click the Generate Key button to generate a Manager key.

2. Click the Save button to retain the settings.

3. When the configuration is complete, click the Log Out button to log off from the Web application, and then disconnect the straight-through or cross-over cable from Ethernet port 2 on the NSM5200. Complete this step for each Manager and Member network setup.

## RESETTING THE FACTORY DEFAULTS

If desired, you can reset some or all of the settings to the factory defaults.

1. Click the "Reset to Factory Defaults" button. A dialog box appears asking you to select one or both options.

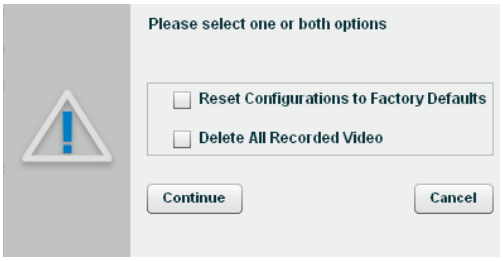


**Figure 3.** Factory Default Options Dialog Box

2. Depending on the outcome you desire, click one or both of the options as follows.
   - Select both options to remove and reset configurations, video, and database.
   - Select "Reset Configurations to Factory Defaults" to reset the configurations only. The video is retained and can be searched by using the Enhanced Search feature.
   - Select Delete All Recorded Video to remove the video and the database. The configurations are retained.
   - If no option is selected, you will receive an error dialog box stating that one option must be selected.

3. Click the Continue button. Click the Cancel button to return to the NSM Settings window.

# CONFIGURING POOL SETTINGS

Prior to configuring any units, it is recommended that camera names and attributes are configured using the WS5000 advanced system management software. Each camera is assigned to one storage pool at a time. Once assigned, the camera is seen in the storage pool and redundant pool (if redundant recording is enabled). If the camera is removed from the associated pool, it becomes visible to all NSM5200s and can be reassigned.

**NOTE:** No more than one operator at a time should configure or modify pool settings.

## ADDING OR REMOVING CAMERAS FROM THE POOL

1. Click the NSM Pool button to access the Pool Settings window (refer to Figure 4). The pool name, address, bitrate, and the NSM5200s in the pool are listed in the top portion of the window.
2. Select the cameras you want to record from the "Select Cameras to Record" list. You can also select a camera that is not in the list by typing the camera name or IP address in the box next to the Look For icon ( ).
3. Click the Add> button. The selected cameras are added to the "Cameras Recorded in This Pool" list.
   You can also remove cameras from this list by clicking the <Remove button. The cameras are moved back to the "Select Cameras to Record" list.
4. Click Save to retain the settings.

**NOTE:** To update the camera lists, click the Refresh button. The update takes approximately 10 minutes. To complete the refresh process, click one of the other windows (NSM Settings or Accounts Settings), and then return to the NSM Pool window.

## REMOVING OFFLINE POOL MEMBERS

1. Click the NSM Pool button to access the Pool Settings window (refer to Figure 4).
2. Click the Remove icon located to the right of the unit to be removed. The offline pool member will be removed from the "NSMs in pool" list.

   **NOTE:** If you attempt to remove an online pool member from the "NSMs in pool" list, the Cannot Delete Online Member error message will appear at the bottom of the Pool Settings screen.

**Figure 4.** NSM Pool Settings Window

## SETTING UP REDUNDANT RECORDING

Redundant recording allows a user to add cameras to multiple recording pools, thereby ensuring the duplication of vital data for critical applications. Independent schedules can be created on the primary and redundant storage pools to ensure the safety of critical data.

**NOTE:** Make sure that redundant recording and failover monitoring are not operating at the same time.

To enable redundant recording:

1. On the Pool Settings window, click the Enabled radio button for "Redundant recording." The "Confirm Activation of Redundant Recording dialog box appears (refer to Figure 5).

2. Click the Enable Redundant Recording button.

   **NOTE:** When Redundant Recording is enabled, the "Recording transport method" automatically changes from Unicast to Multicast.

   The NSM5200 pool changes from a primary recorder to a redundant recorder.

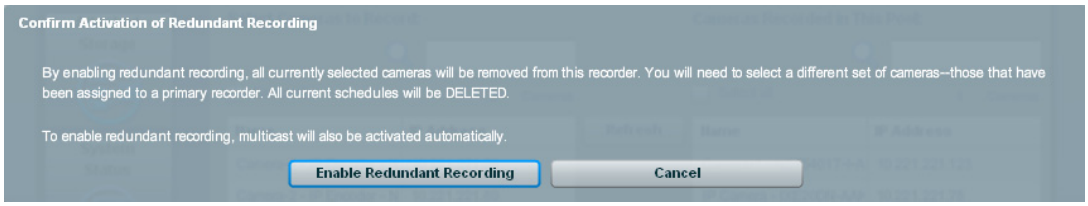


**Figure 5.** Confirm Activation of Redundant Recording Dialog Box

Note the following information when enabling redundant recording:

- Only one redundant recorder is supported.
- Manual recording schedules are only created for the primary NSM5200. If the primary NSM5200 goes off line, manual recording will fail.
- Removing a camera from the primary NSM5200 does not remove the camera from the redundant recorder.
- Redundant pools only see cameras that are currently being recorded to other pools.

- Enabling or disabling redundant recording will remove all schedules in that pool.
- There is no default schedule for cameras recording to a redundant recorder.
- A redundant recorder cannot perform failover monitoring on other NSM5200s.

## MULTICAST RECORDING

Multicast recording allows the user to set up the recording of multicast video. Click the Multicast radio button for multicast recording. This feature is selected automatically if redundant recording is enabled.

# CONFIGURING A POOL MEMBER

Figure 6 displays the setup window for the Pool.

**NOTE:** Reconnect your cable connections for each Pool Member before configuring the settings (refer to *Configuring the Network Settings* on page 7).

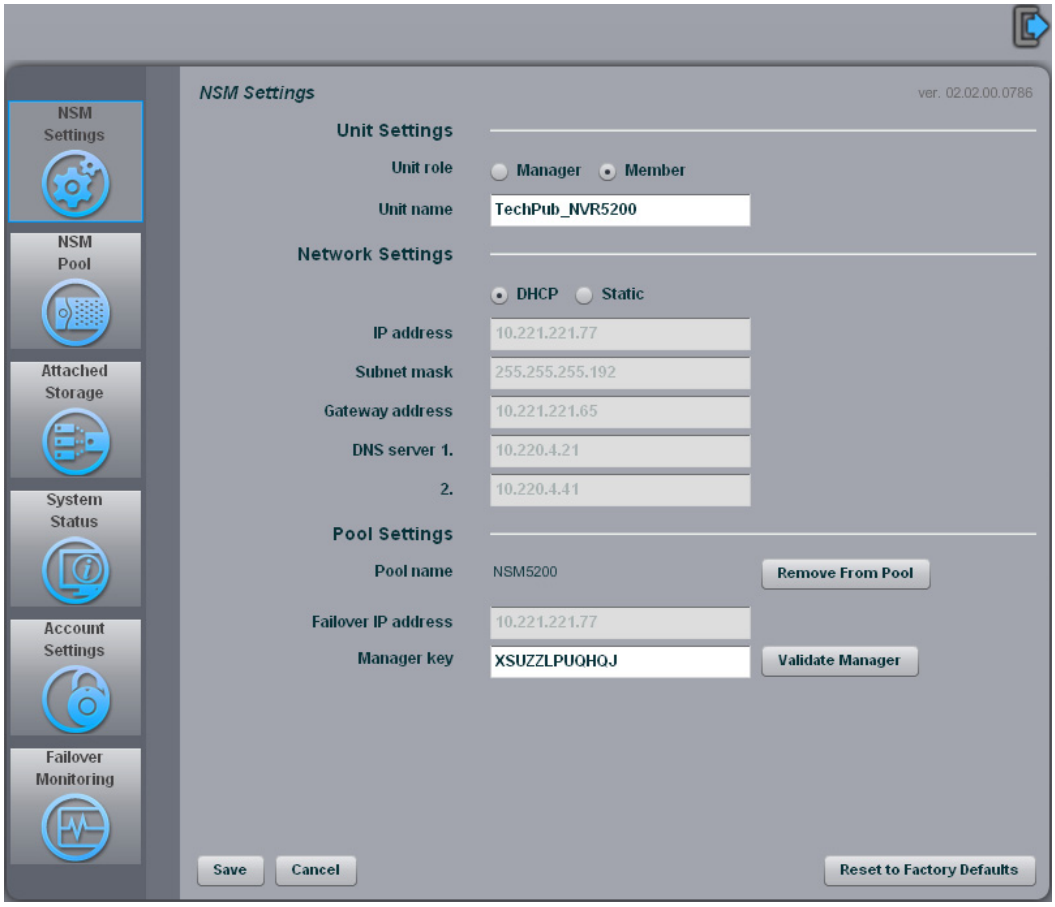


**Figure 6.** Configuring a Pool Member

## UNIT SETTINGS

1. Select Member as the Unit Role.
2. Type a user-friendly name in the Unit Name box.

## NETWORK SETTINGS

Select DHCP or Static.

**DHCP:** Select DHCP if you want the network to automatically assign an IP address to the NSM5200. Go to Pool Settings to continue the Pool Member configuration.

**Static:** Select Static if you want to assign IP settings manually. Additionally, you will need to assign a unique IP Address for the NSM5200, Subnet Mask, and Gateway Address.

**NOTES:**

- If you change an IP address manually and click the Save button, the "Restarting Services, Please Wait..." message appears momentarily, and then a Reboot NSM dialog box appears. After reviewing the reboot information, click OK to close the dialog box.
- Members of a pool should reside on the same network subnet as the pool master and failover IP address. If you are using DHCP, ensure that the failover IP address is outside the DHCP address range.

## POOL SETTINGS

1. Type the failover static IP address that was configured on the Pool Manager, in the Manager Address box.
2. Type the key that is generated on the manager unit in the Manager Key box, and then click Validate Key to verify that the key was entered correctly. If correct, a check mark will appear to verify that the Manager is valid and on line.

   **NOTES:**

   - The Pool Name is assigned through the Pool Manager.
   - To remove a member from the pool, click the Remove From Pool button. The Remove From Pool button is unavailable if the unit is not a member of the pool.
3. Click Save to retain the settings.

# CONFIGURING THE ATTACHED STORAGE

The Attached Storage window shows Local Volumes and External Volumes. Local Volumes list the NSM5200 internal volumes only. External volumes list third-party storage units.

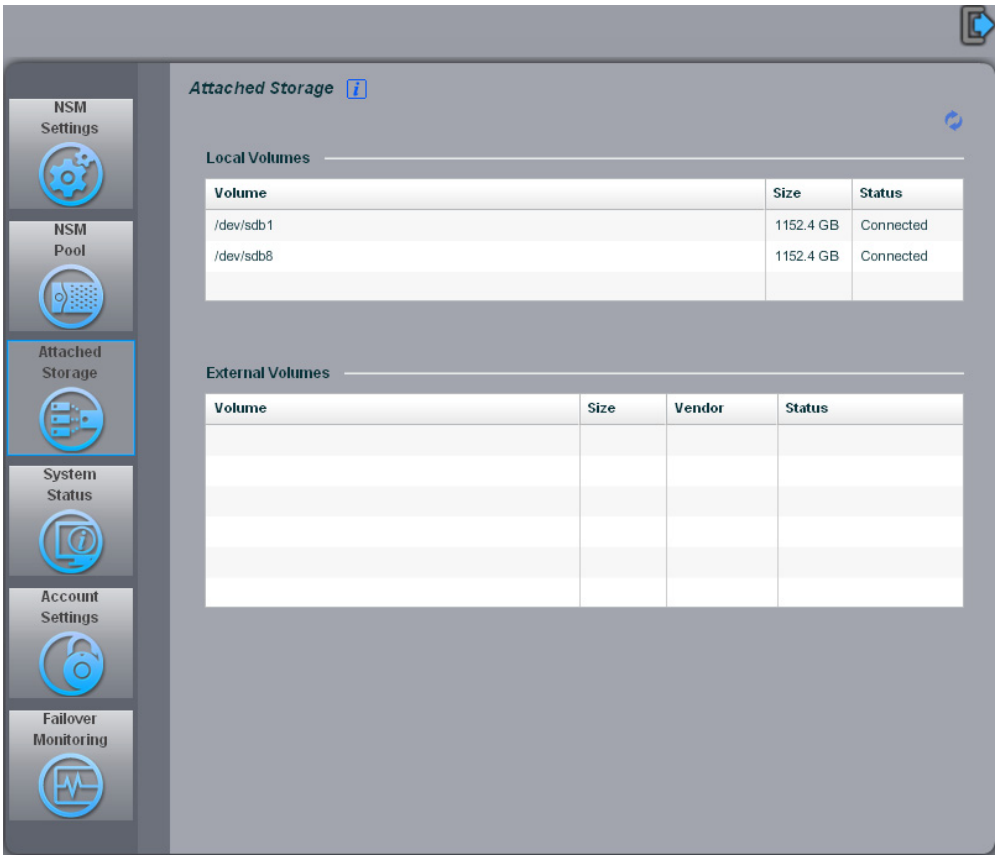


**Figure 7.** Attached Storage Window

### Local Volumes

The Local Volumes section lists the internal volumes of the NSM5200.

### External Volumes

When using the NSM5200F, fibre channel-based storage can be connected to the NSM5200 servers. Follow the instructions for the storage system being used to allocate capacity, configure the RAID array, and map that array to the appropriate port of the external storage system.

1. Click Attached Storage to view the attached storage devices. The third-party storage volumes should appear under External Volumes. If not, click the Refresh button .

2. If the third-party storage volume appears as Disconnected, click the Disconnected Status icon. A status dialog box appears (refer to Figure 8 on page 15). When mounting a new volume to the NSM5200, the unit will reformat the volume to the file system being used by the NSM5200. Any data previously recorded to the volume will be overwritten.

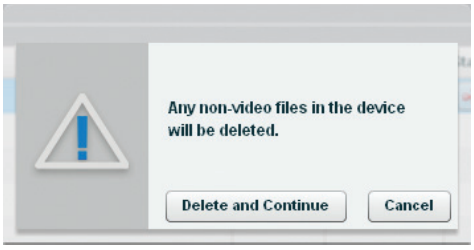


**Figure 8.** Status Dialog Box

3. Click the Delete and Continue button. The third-party storage volume now appears as Connected. Once connected, the NSM5200 will write and read on the external volume when cameras are associated and when recording is scheduled.

# MAINTAINING SYSTEM STATUS

The System Status provides information on incoming bitrate, ambient and CPU temperature, power supply, fans, and disk information, including the hard disk drive number and status. You can silence the HDD alarms and download log reports by clicking the buttons at the bottom of the window.

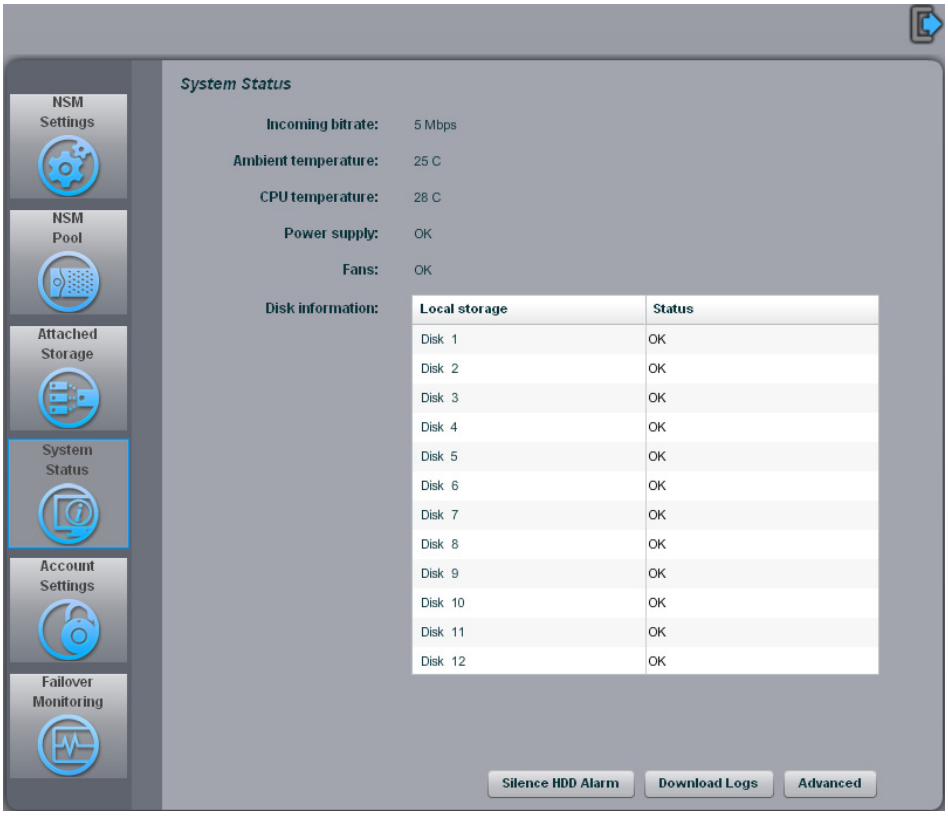


**Figure 9.** Simple System Status Window

Click the Advanced button (refer to Figure 9 on page 15) to open the advanced System Status window. The System Status provides additional information on the file system usage and lists the number of partitions, the partition name, the percentage of a particular partition that is being used, and the directory that is mounted to the corresponding partition.

Click the Simple button to return to the simple System Status window.

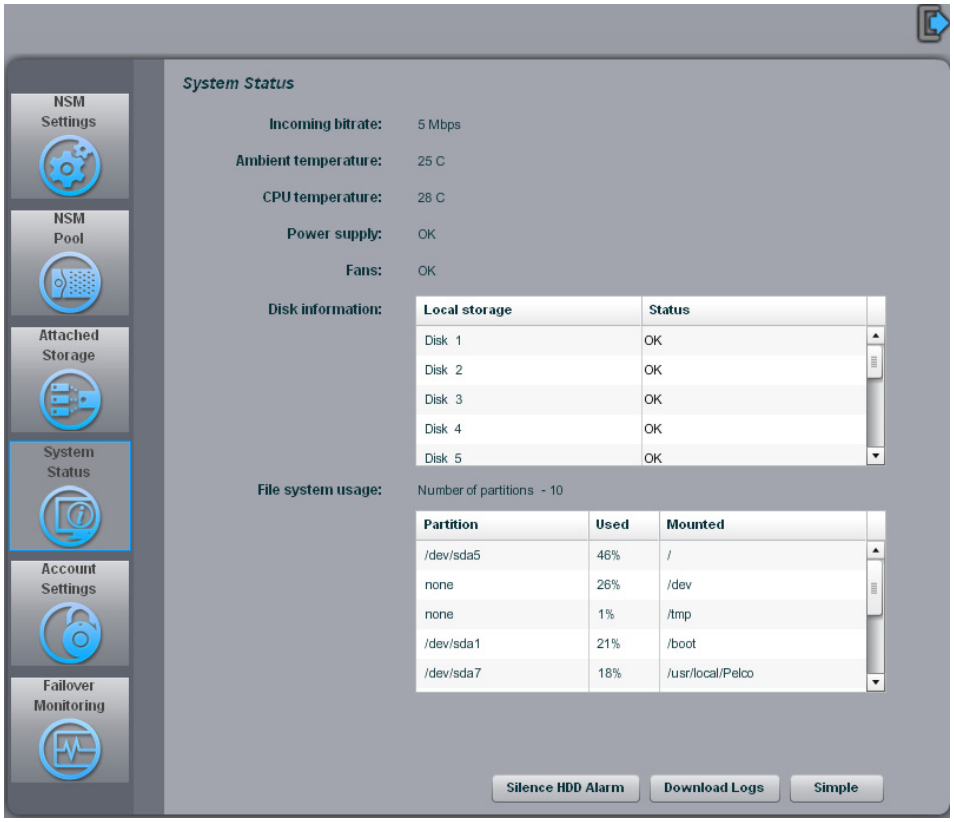


**Figure 10.** Advanced System Status

# ACCOUNT SETTINGS

The account settings page contains options for authentication and timeout. You can choose to authenticate a single user account locally, or to authenticate Endura users through the system manager governing the Endura network to which the NSM5200 is attached.

## AUTHENTICATING USERS THROUGH THE SYSTEM MANAGER

1. Go to Account Settings.
2. Select the System Manager authentication method.
3. *(Optional)* Enable Failback local logic to allow local user authentication if communication should fail between the NSM5200 and the System Manager.
4. Set the Timeout period for user sessions. The Timeout determines the period of inactivity that will end a user session.
5. Click Save.

## CHANGING LOCAL ACCOUNT SETTINGS

Local account settings are available when the local authentication method is selected, or the fallback local login feature is enabled.

1. Go to Account Settings.
2. Select the Local Authentication Method or, if authenticating users through a System Manager, enable the fallback local login option.
3. Provide a user name for the local user.
4. Type a new password for the Web application in the “Enter new password” and “Re-enter new password” boxes. The new password replaces the default password used by the Web application.
5. Type a security question and answer in the respective boxes. This information can be used to access the Web application if you forget the password.
6. Set the Timeout period for user sessions. The Timeout determines the period of inactivity that will end a user session.
7. Click Save.

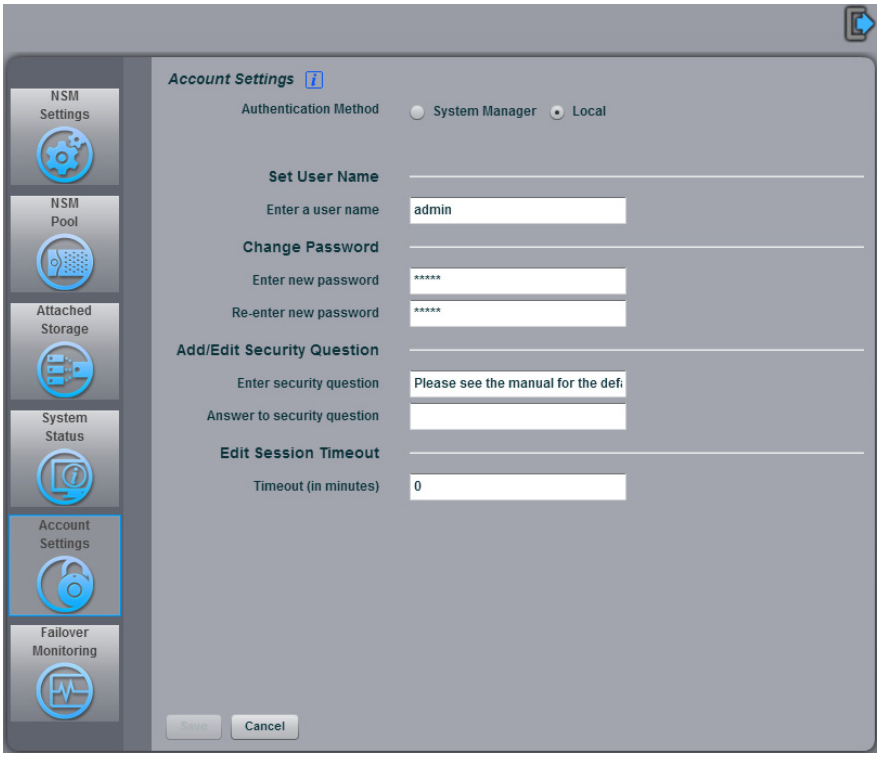


**Figure 11.** Account Settings

# FAILOVER ON DEMAND

Failover on demand (failover monitoring) allows a pool of NSM5200s or a single NSM5200 to monitor the status of a single remote NSM5200. If a remote NSM5200 fails, the monitoring unit or pool assumes the task of recording the cameras from the failed NSM5200.

**NOTE:** Make sure that maximum bandwidth support is considered when selecting an NSM5200 to monitor.

To monitor a remote NSM5200:

1. Click the Failover Monitoring button. The Failover Monitoring window appears (refer to Figure 12).
2. Click the Enabled option.
3. Type the IP Address of the NSM5200 to be monitored in the NSMs To Monitor box, and then click the Add button. The pool name and IP address appear in the list of single-unit pools to be monitored.

To remove a unit from the NSMs To Monitor list, click the Remove icon located to the right of the unit to be removed.

**NOTES:**

- Make sure the NSM5200 you want to monitor is a single-unit pool only.
- Make sure that another NSM5200 is not added to the single-unit pool as a member.
- Make sure that failover monitoring is not enabled if redundant recording is enabled.

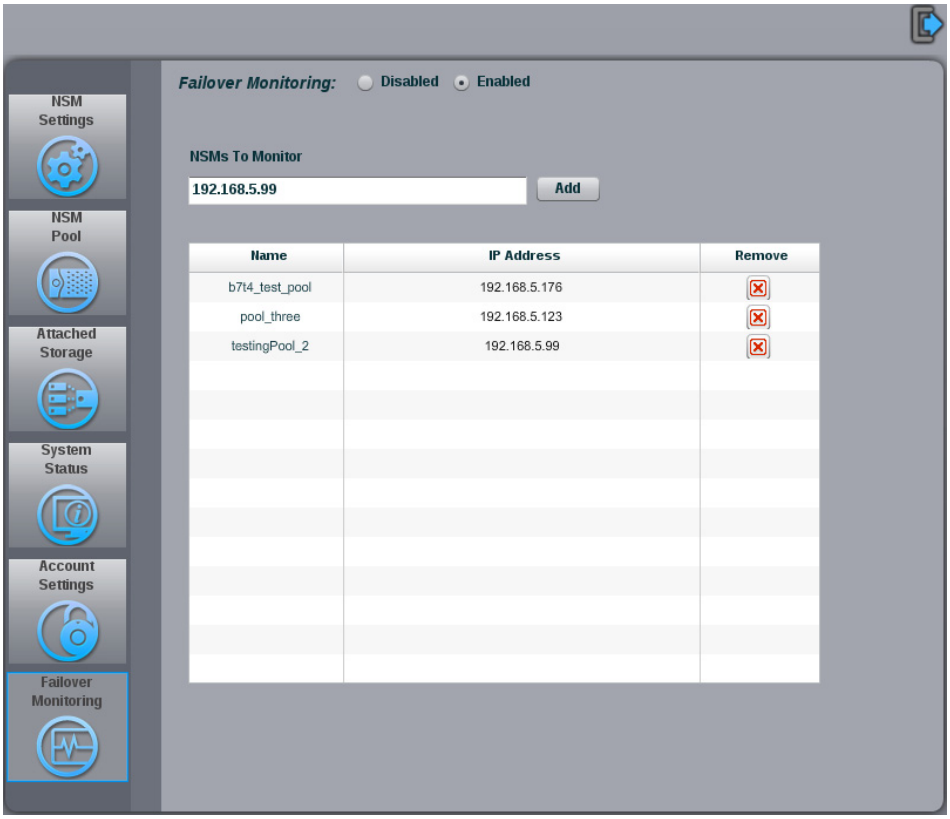


**Figure 12.** Failover Monitoring

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

**REVISION HISTORY**

| Manual # | Date | Comments |
|---|---|---|
| C4603M | 4/09 | Original version. |
| C4603M-A | 5/09 | Changed IP addresses; replaced figures 3, 5, and 6; modified Network Settings; added reboot and refresh information; and added a note on recording schedules. |
| C4603M-B | 9/09 | Replaced figures 3, 5, and 6 to modify the virtual IP address; modified information under Network Settings; and added notes regarding the IP failover address. |
| C4603M-C | 11/09 | Removed all references to DAS5200 and associated values. |
| C4603M-D | 5/11 | Modified network setup. Added Redundant Recording, Failover on Demand, and Reset to Factory Defaults features. Replaced all artwork and screen captures. |
| C4603M-E | 11/13 | Updated Account Information page and added information about enabling/disabling the RTSP server. |
| C4603M-F | 2/14 | Updated information relating to configuring pool members. |

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