

strand

# Installation Manual

This Installation Manual provides advanced configuration setup information for the Strand NVR hardware and software.



# Strand Installation Guide: v2018

---

## Introduction

This manual provides detailed information on how to install, configure and utilize Strand hardware and software. Please visit the Strand website at [www.strandusa.com](http://www.strandusa.com) for more information.

**Section 1:**        **Strand NVR Hardware Configuration**

- a. Default Settings
- b. Customized Settings

**Section 2:**        **Strand NVR Software Configuration**

- a. Advanced Setup

*Appendix A:*     *Trouble Shooting*

# CONTENTS

## **Section 1a: Strand NVR Hardware Configuration: Default Settings**

Components Required.....	100
Default Settings .....	101
Launch NVR .....	102
Login Page .....	103
Strand Splash Page.....	104

## **Section 1b: Strand NVR Hardware Configuration: Customized Settings**

Hardware Configuration System Components.....	105
Modify Strand NVR Settings .....	106
Default Admin Password .....	107
License Key Information .....	108
Network Settings .....	109
Host Name.....	110
nic0 address .....	111
Gateway Address .....	112
DNS Server Address .....	113
NTP Server Address.....	114
Enterprise Configuration .....	115
Applying Network Settings.....	116
Test Settings with Ping .....	117
Remote Help Portal .....	118
Return to Main Menu .....	119
Prepare System Hard Drives.....	120—122
Set Time Zone .....	123
Set Date/Time.....	124—125
Admin Password.....	126
Run Graphical Console .....	127
Verify Media.....	128
Commit Changes.....	129

## Table of Contents

---

### Section 2: NVR Software Configuration: Advanced Set-up

Login to Configuration Module .....	130
Advanced Setup Menu .....	131
Assign Camera Passwords/Credentials.....	132—133
Change Map/Floorplan Name.....	134
Add Maps/Floorplans .....	135
Set Map/Floorplan position on Toolbar .....	136
Add New Cameras to Map/Floorplan.....	137—138
Edit Existing Cameras .....	139
Camera Icon Placement on Map .....	140—141
Add New Cameras—Restart Jobs .....	142
Request Camera License .....	143—144
Save License Request.....	145
Apply Signed Camera License .....	146
System Setup Verification.....	147—148
Assign a Camera to a Different Map.....	149—150
Delete a Camera.....	151
Delete a Map .....	152
Display Capture Storage Pool .....	153
Maintain/Add/Delete Roles .....	154—155
Maintain/Add Camera Groups .....	156
Maintain Users: Add Users .....	157
Assign User Passwords.....	158
Assign User Roles .....	159
Assign Camera Groups to Users .....	160
<b>Software Version</b>	
Software Version—Menu.....	162
ISO Image Upload .....	162
Satellite Navigator.....	163—166
Raid Mirror Status.....	167
LDAP Management .....	167
Config Backup .....	168

### APPENDIX

System Troubleshooting	
------------------------	--



# Section 1

Strand NVR Hardware Configuration:

- (a) Default Settings
- (b) Customized Settings







# Section 1a

---

## Strand NVR Hardware Configuration: Default Settings

# Contents

This section is for launching Strand NVRs pre-configured with factory default settings.

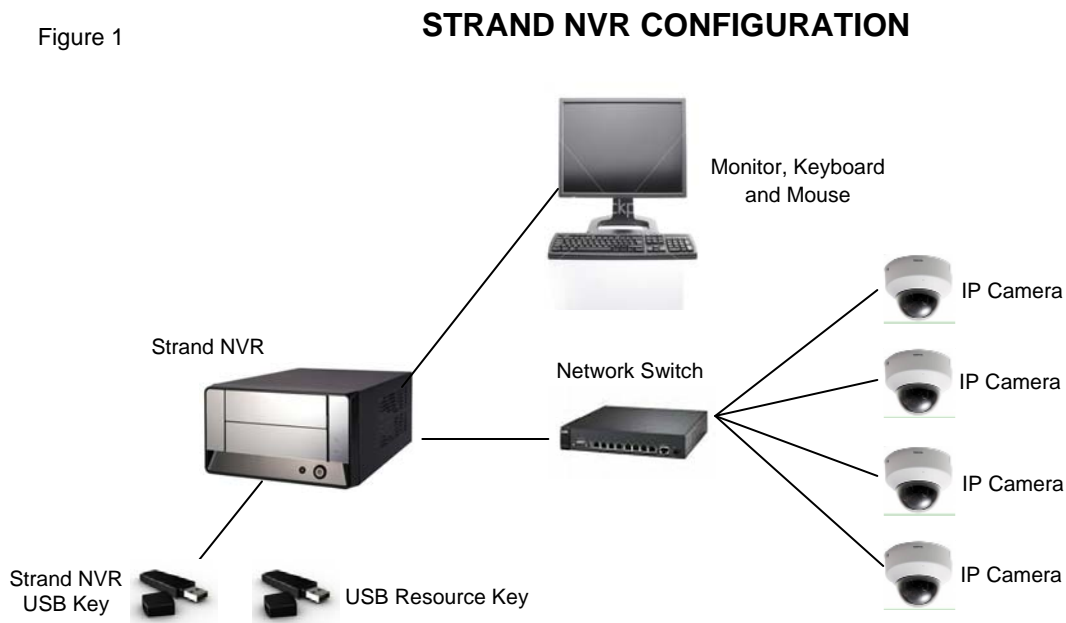
**Section 1a: Strand NVR Hardware Configuration: Default Settings**

- Components Required.....100
- Default Settings .....101
- Launch NVR .....102
- Login Page .....103
- Strand Splash Page.....104

## Hardware Configuration System Components

This NVR configuration is for Strand NVR Series applications as well as Strand compatible server applications.

Figure 1



**Listed below are the minimum required items necessary for setup.**

1. Strand NVR
2. Strand USB Key (optional)
3. Monitor, Keyboard and Mouse
4. Network Switch (POE if utilizing POE compliant camera options)
5. Strand Compatible Cameras and manufacturer installation disk (brands/models identified as Strand compliant)
6. CAT5e or better Patch Cables
7. USB Resource Key
8. Strand Compliant Network Cameras

## Default Settings

### STRAND NVR DEFAULT SETTINGS

Hostname:	Strand
nic0:	10.20.20.10
Subnet Mask:	255.255.255.0
Default Gateway:	10.20.20.1
Default DNS:	10.20.20.1
Default Admin User ID:	admin
Default Admin Password:	Password1 (password is case sensitive)
Default Time Zone:	US Eastern

---

### DEFAULT CAMERA IP ADDRESSES

Default Camera 1 IP:	10.20.20.21
Default Camera 2 IP:	10.20.20.22
Default Camera 3 IP:	10.20.20.23
Default Camera 4 IP:	10.20.20.24* (for each subsequent camera add +1 to the last digit on the IP address)

**EXAMPLE:**

Default Camera 3 IP:	10.20.20. <u>25</u>
Default Camera 4 IP:	10.20.20. <u>26</u>

**For technical assistance call Strand at 877.877.7110  
www.strandusa.com**

## Launch NVR



---

### To Launch Strand NVR using factory default settings:

⇒ Power on Strand NVR. The following screens will appear in sequence. No action is required.

- Intel screen will appear
- Blue screen (above) with Strand System option menu will appear
- System defaults to Launch Strand NVR
- System will launch automatically in 30 seconds
- Blue launch bar will appear at bottom of screen
- Blank black screen will appear for several seconds
- Blue screen with message 'Waiting for Web Server to Start' will appear
- Blue screen with Java image will appear

⇒ Strand Login Screen will be shown

**NOTE: Strand NVR Factory Default Settings will not reflect the accurate date and time. To configure date and time see Section 1b**

## Login Page

The image shows the login page for a Strand NVR. At the top, there is a blue rectangular banner with a white wavy line graphic and the text "strand" in white, with "surveillance evolved" in smaller text below it. Below the banner, the text "Please Enter UserId and Password." is displayed. Underneath this text are two input fields: "User Id:" followed by a text box, and "Password:" followed by a text box. Below the password field is a "Login" button.**To Launch Strand NVR using factory default settings:**

⇒ Enter DEFAULT User ID and Password (case sensitive)

**USER ID: admin**

**PASSWORD: Password1**

⇒ Click Login



---

**To Launch Strand NVR using factory default settings:**

- ⇒ Strand Splash page is displayed
- ⇒ Strand NVR launch is complete

**If no NVR hardware customization is necessary, proceed to Section 2a for Strand Software Configuration.**

**To customize any Strand NVR hardware configuration settings refer to Section 1b.**





# Section 1b

---

## Strand NVR Hardware Configuration: Customized Settings

# Contents

This manual provides a guide to set up all functions within the Strand NVR.

**Section 1b: Strand NVR Hardware Configuration: Customized Settings**

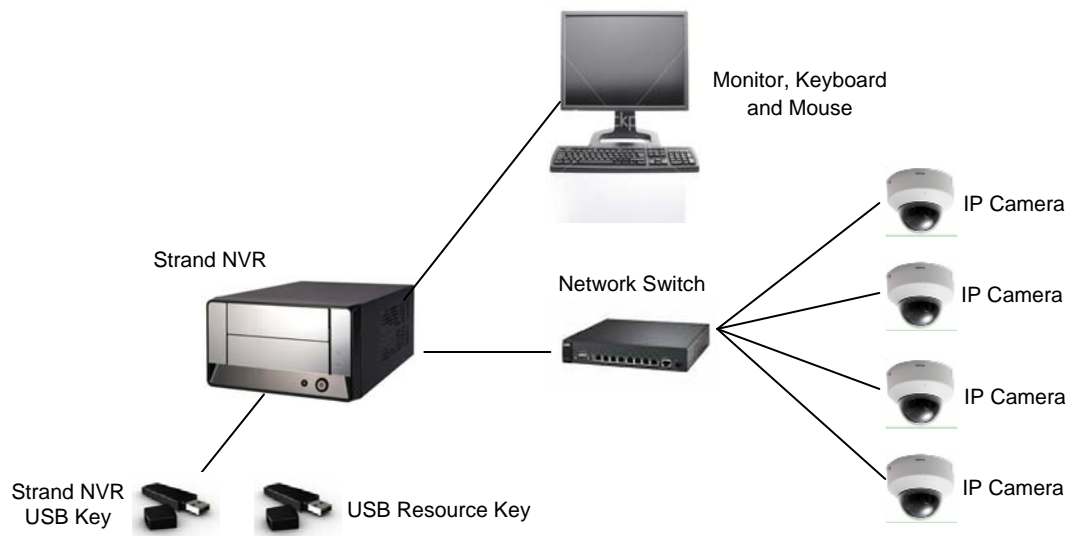
- Hardware Configuration System Components.....105
- Modify Strand NVR Settings .....106
- Default Admin Password .....107
- License Key Information .....108
- Network Settings.....109
  - Host Name.....110
  - nic0 address .....111
  - Gateway Address .....112
  - DNS Server Address .....113
  - NTP Server Address.....114
- Enterprise Configuration .....115
- Applying Network Settings.....116
- Test Settings with Ping .....117
- Remote Help Portal .....118
- Return to Main Menu .....119
- Prepare System Hard Drives ..... 120—122
- Set Time Zone .....123
- Set Date/Time..... 124—125
- Admin Password.....126
- Run Graphical Console.....127
- Verify Media.....128
- Commit Changes .....129

## Hardware Configuration System Components

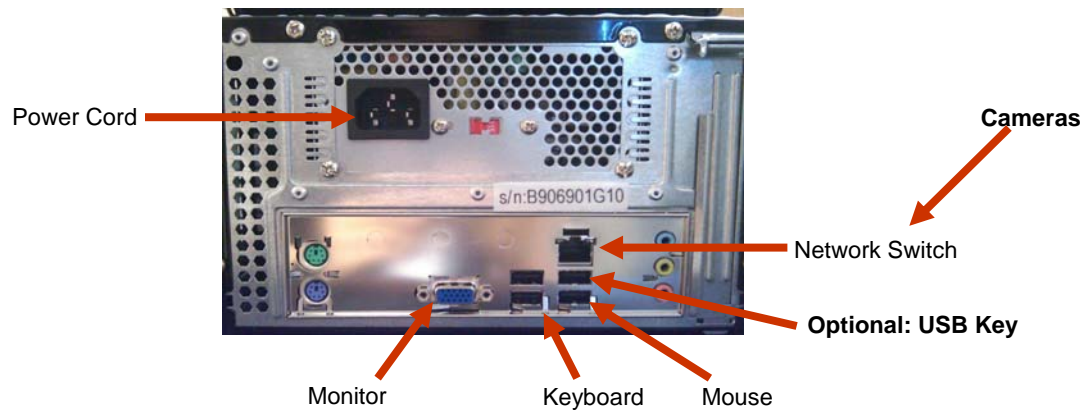
This NVR configuration is for Strand NVR Series applications as well as Strand compatible server applications.

Figure 1

### STRAND NVR CONFIGURATION



### Example: Strand C-2 NVR



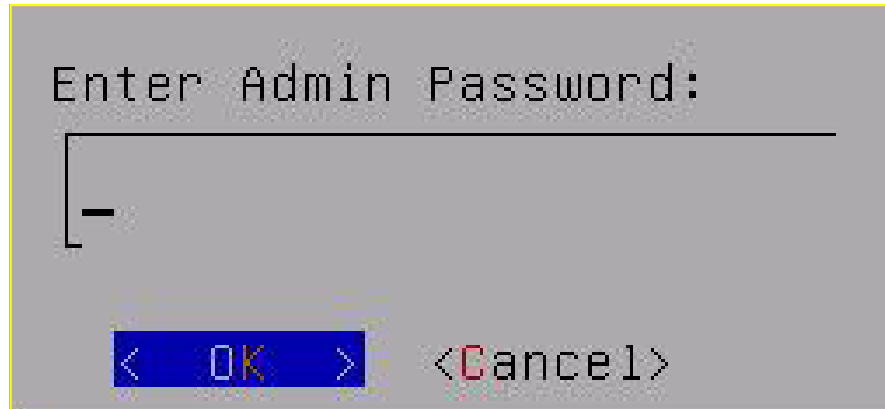
## Modify Strand NVR Settings



### To Launch Strand NVR and configure customized settings:

- ⇒ Power on Strand NVR
- ⇒ Intel screen will appear
- ⇒ Blue screen (above) with Strand System option menu will appear
- ⇒ **Select Modify Strand NVR Settings using the arrow keys on the keyboard (this must be done within 30 seconds)**
- ⇒ Press Enter
  - Launch bar will appear at bottom of screen
  - Preparing to enter setup screen will appear
- ⇒ Admin login screen will be shown

## Enter Default Admin Password



---

### Enter Admin Password:

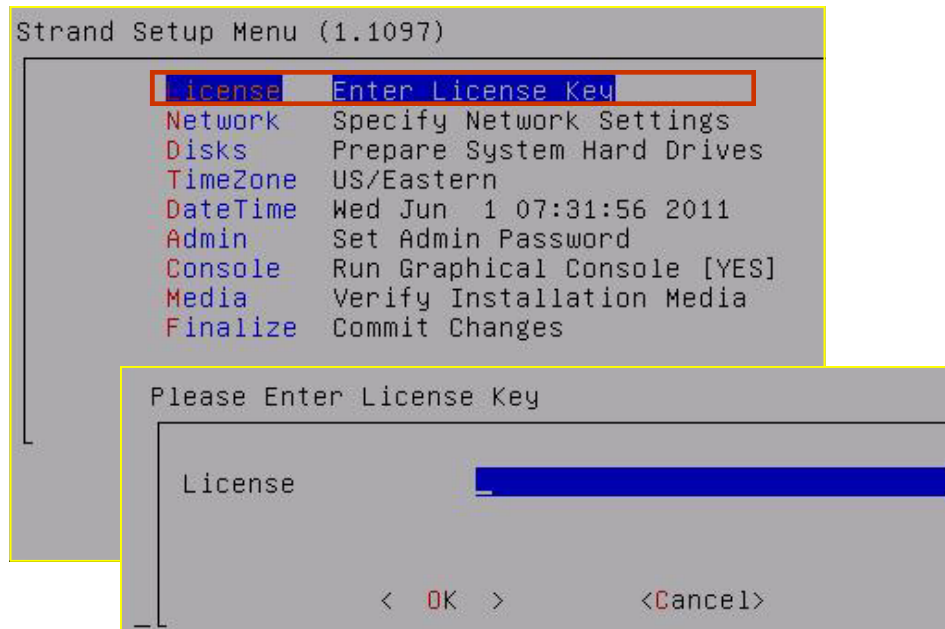
Password may be changed through the Strand Setup Menu.

- ⇒ In the space provided enter Strand default Admin password shown below (case sensitive):

**Password1**

- ⇒ Use arrow key to select OK
- ⇒ Press Enter

## Enter License Key



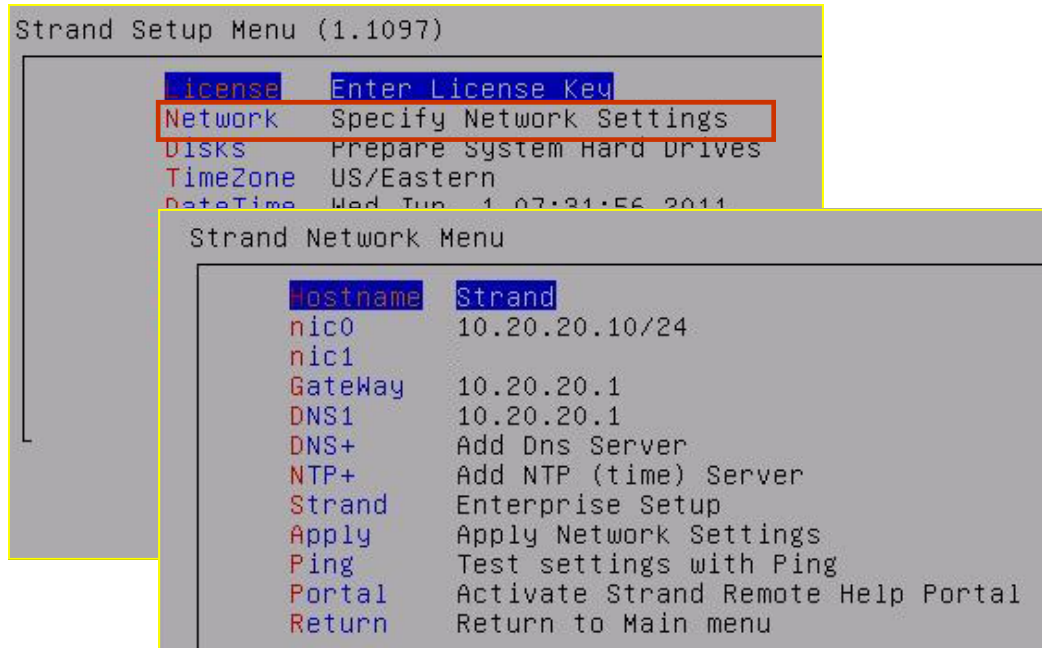
### Strand Setup Menu

#### License—Enter License Key:

- ⇒ After logging into the system the Strand Setup Menu will appear on the screen
- The License Key is preconfigured on a Strand NVR and does not need to be entered at this time

NOTE: Strand NVRs are preconfigured with a NVR License Key number. If using a Strand approved server enter the NVR License Key number provided by Strand.

## Specify Network Settings

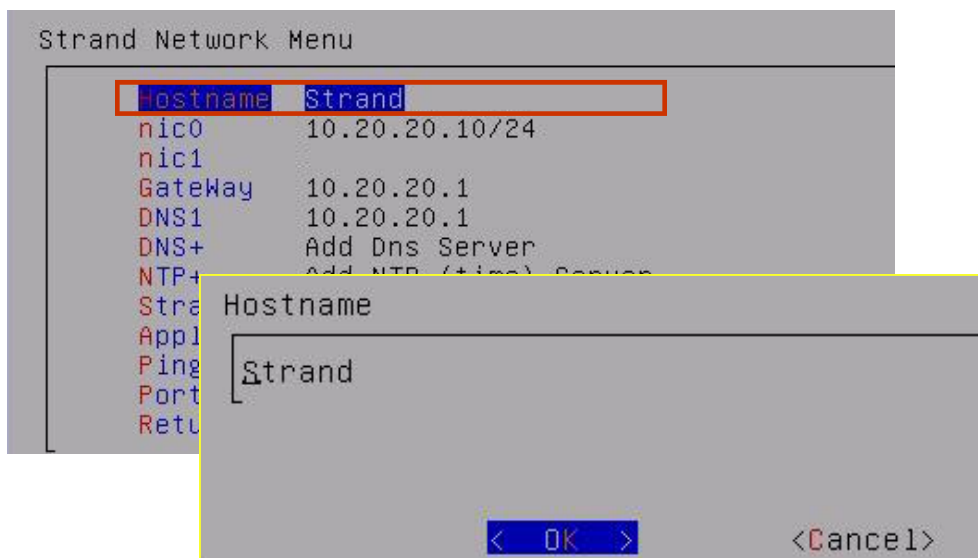


### Strand Setup Menu

#### Network—Specify Network Settings

- ⇒ The **Strand Setup Menu** will be displayed on the screen
- ⇒ Arrow to select **Network/Specify Network Settings**
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Proceed to Strand Network Menu

## Set Hostname



### Input Host Name:

**IF HOSTNAME IS CHANGED DEFAULT NVR LICENSE KEY NUMBER WILL NEED TO BE REAPPLIED!**

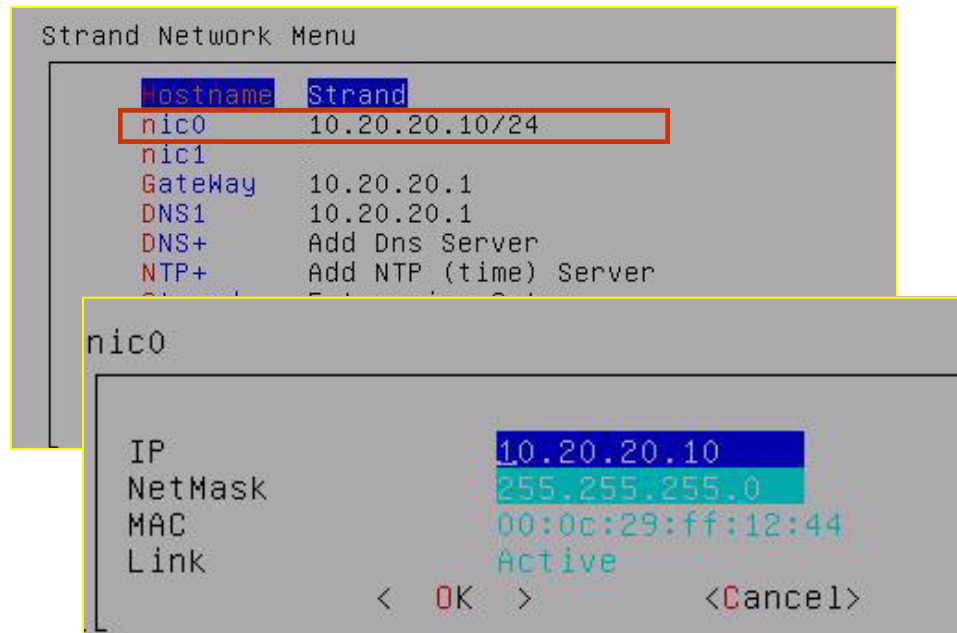
- ⇒ From the Strand Network Menu the default hostname 'Strand' will appear in the space next to Hostname

### To change the hostname:

- ⇒ Select **Hostname** and tab to select OK and press enter
- ⇒ Enter selected Hostname in the space provided (letters only—no numbers, spaces, special characters, dashes or underscores)
- ⇒ Tab to select OK and press Enter
- ⇒ New hostname is applied
- ⇒ Return to Main Network Menu

**Note:** If the hostname is changed the pre-installed camera licenses become invalid and a new camera license request will need to be downloaded and emailed to [support@strandusa.com](mailto:support@strandusa.com).

## Input nic0 address



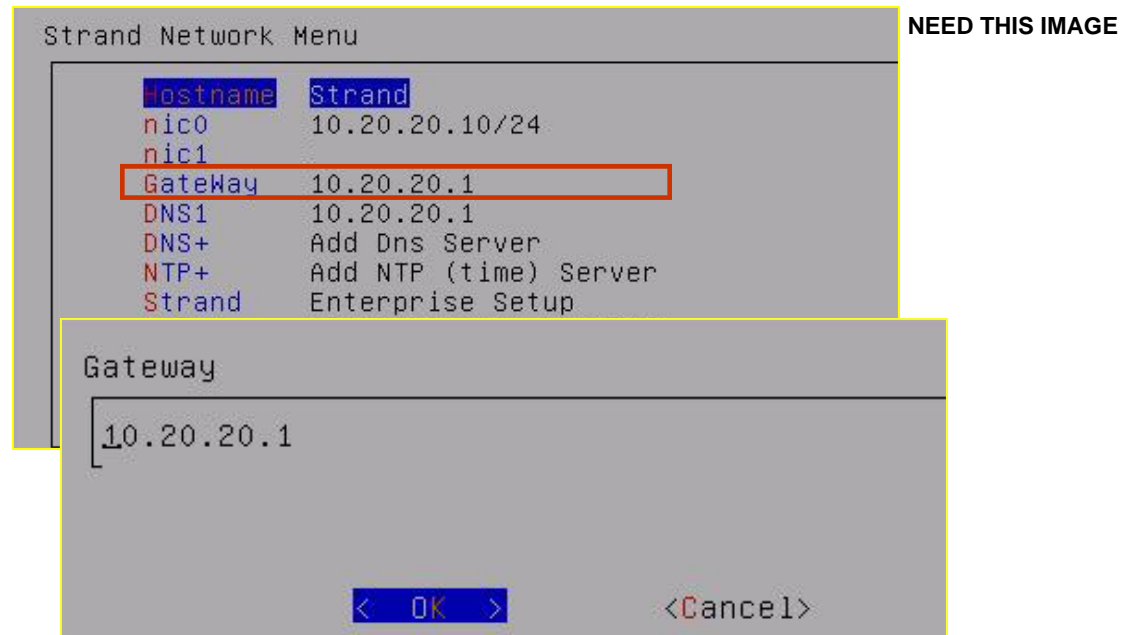
### Input Network Interface Card (NIC) address:

- ⇒ From the **Strand Network Menu**
- ⇒ Arrow key to select **nic0** (network interface card) and press **Enter**
- ⇒ Enter the nic0 IP address and the NetMask address
- ⇒ Tab to select OK and press Enter
- ⇒ OPTIONAL: Repeat process for nic1
- ⇒ Return to Strand Network Menu

**Note:** NIC is a computer hardware component that connects a computer to a computer network.



## Input GateWay Address



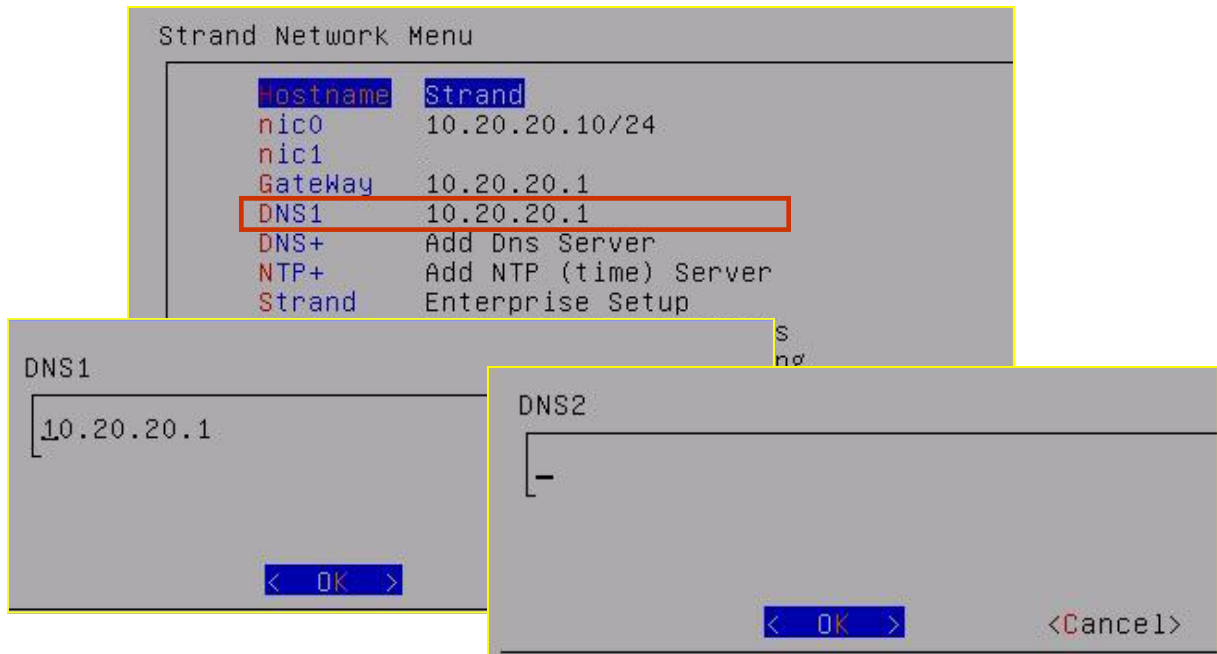
### Input Gateway address:

From the **Strand Network Menu**

- ⇒ Arrow down to select **GateWay** and press **Enter**
- ⇒ Input the Gateway address in the space provided
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Return to Strand Network Menu

**Note:** Gateway is the IP address of the switch. Contact switch manufacturer to obtain switch IP address.

## Add DNS Server

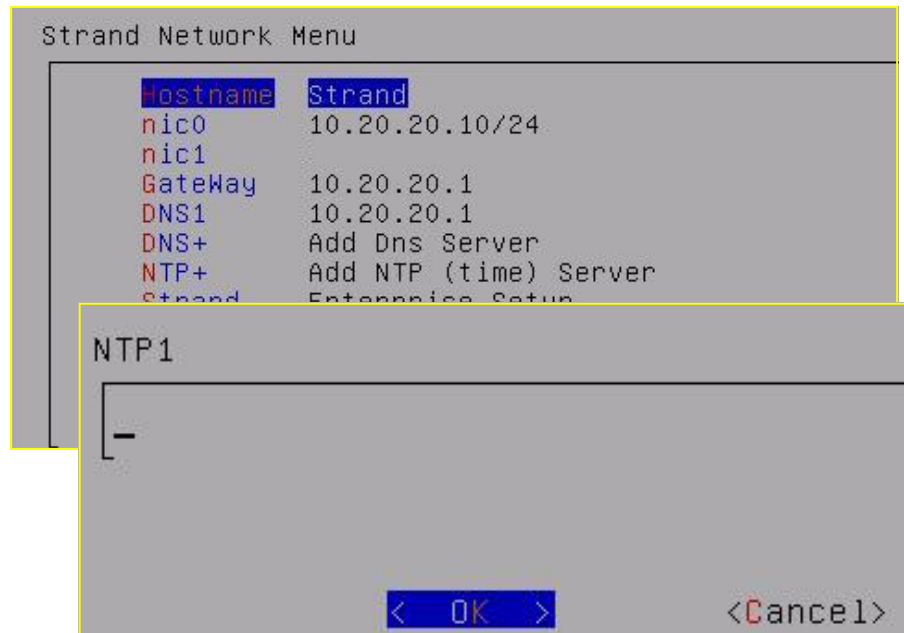


### Input Domain Name System (DNS) address:

- ⇒ From the **Strand Network Menu**
- ⇒ Arrow down to select **DNS+** and press Enter
- ⇒ Input the DNS in the space provided. **(If DNS is not available enter the same number as the Gateway. )**
- ⇒ Select OK and press Enter
- ⇒ To enter additional DNS Server addresses, repeat the process
- ⇒ Select OK and press Enter
- ⇒ Return to the Strand Network Menu

**Note:** DNS is a service that stores, translates, and retrieves the numerical address equivalents of familiar host names that you use everyday (such as the "[www.4teachers.org](http://www.4teachers.org)" in <http://www.4teachers.org>).

## Add NTP



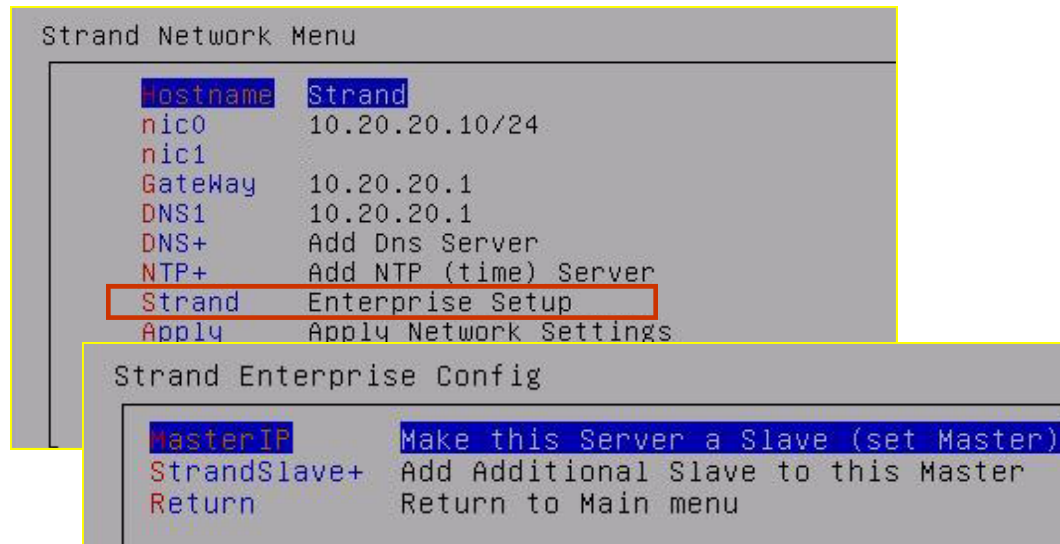
### Input Network Time Protocol (NTP) Server Address (OPTIONAL):

- ⇒ From the Strand Network Menu
- ⇒ Arrow to select **NTP+**
- ⇒ Input the NTP server address in the space provided
- ⇒ Select **OK** and press **Enter**
- ⇒ To enter additional NTP server addresses, repeat the process
- ⇒ Return to the Strand Network Menu

**NOTE:** The **NTP** is a protocol for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks

**If there is no NTP server, the system will function, based on the assumption that the NVR BIOS clock is set to GMT.**

## Custom Enterprise Setup



### Strand Enterprise Configuration—CUSTOMIZED FEATURE:

Strand Enterprise Setup allows set up of a customized Master/Slave relationship between multiple Strand servers. **Enterprise Configuration** allows servers to be linked as one on a network.

If only one Strand server is being set up on the network, this section does not need to be completed

Strand offers this customized **Enterprise Configuration** as an additional function and will design the configuration based on your network. Please contact Strand Technical Support at 877.877.7110 to set up an appointment to determine the best configuration for your network.

## Apply Network Settings

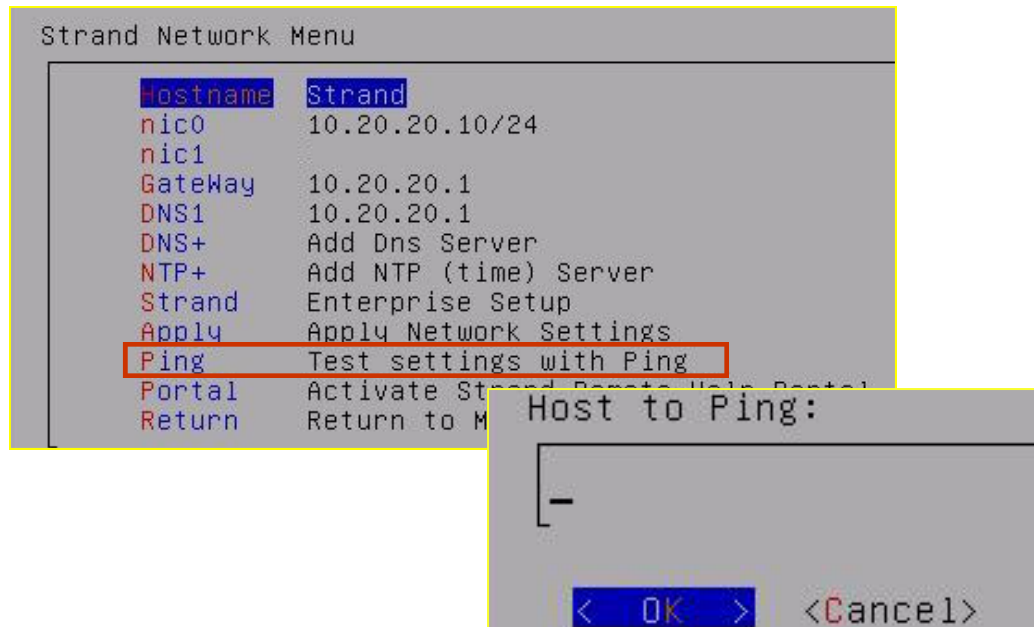
```
Strand Network Menu
-----
Hostname Strand
nic0      10.20.20.10/24
nic1
GateWay   10.20.20.1
DNS1      10.20.20.1
DNS+      Add Dns Server
NTP+      Add NTP (time) Server
Strand    Enterprise Setup
Apply     Apply Network Settings
Ping      Test settings with Ping
Portal    Activate Strand Remote Help Portal
Return    Return to Main menu
```

Network Settings Activated

### Apply Network Settings:

- ⇒ From the Strand Network Menu arrow down to select **Apply:**  
**Apply Network Settings** and press **Enter**
- ⇒ The message "Network Settings Activated" will be displayed
- ⇒ Select **OK** and press **Enter**
- ⇒ Network settings have been activated
- ⇒ Return to Strand Network Menu

## Test settings with Ping



### Test Settings with Ping (OPTIONAL):

- ⇒ From the Strand Network Menu arrow to select **Ping: Test settings with Ping** and press **Enter**
- ⇒ Enter the IP address of a known device on the network (ie: camera, encoder, PC or other device that is connected to the network)
- ⇒ Select **OK** and press **Enter**
- ⇒ Information will be shown on whether the Ping was successful. System will time out if the test was unsuccessful.
- ⇒ If Ping times out contact the network administrator
- ⇒ If Ping was successful select **Exit** and press Enter
- ⇒ Return Strand Network Menu

**NOTE:** Test settings with Ping is to troubleshoot and verify that the server is able to 'speak' to other hardware on the network.

## Activate Strand Remote Portal

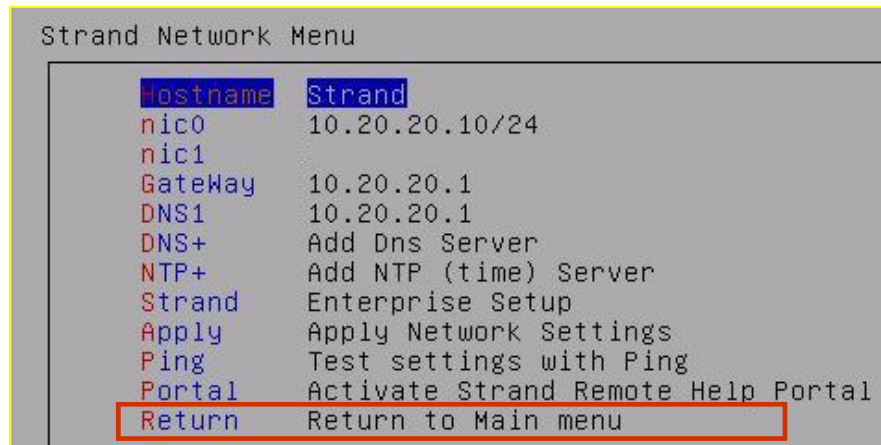


**Activate Strand Remote Help Portal (OPTIONAL—Do not activate the Strand Remote Help Portal unless instructed by Strand Technician):**

- ⇒ Arrow to select **Portal: Activate Strand Remote Help Portal** and press **Enter**
- ⇒ The message 'Attempting to activate portal' will be displayed
- ⇒ 'Activate Portal OK and Pin number' will be shown
- ⇒ The Remote Portal is now active and accessible remotely. If message "Activate Portal Failed" is displayed, call Strand for assistance
- ⇒ Arrow down and select **Return to the Strand Network Menu**

**NOTE:** Activating Strand Remote Help Portal allows Strand technicians to remotely access a server through the internet. The system must be connected to an active internet connection before beginning this process.

## Return to Main Setup Menu

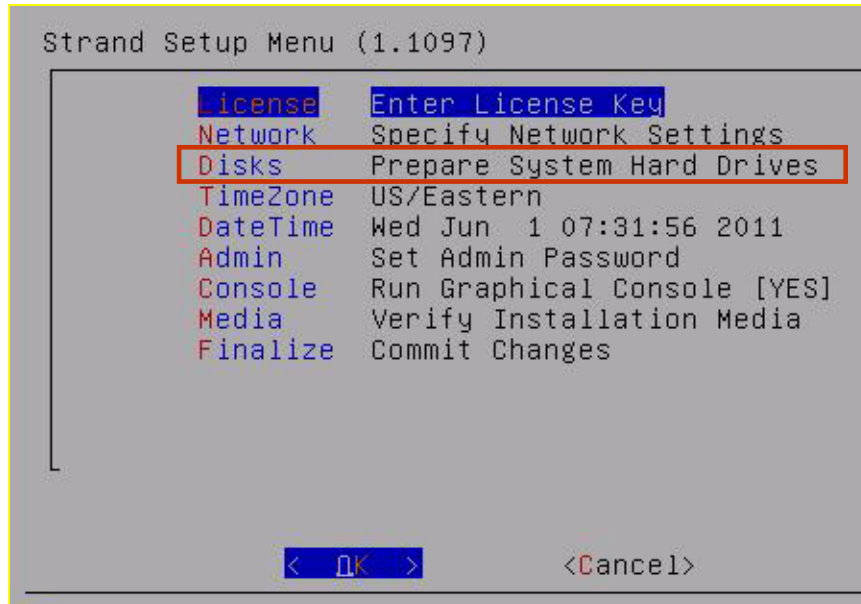


### Return to Main Setup Menu:

- ⇒ The Strand Network Menu tasks have been completed
- ⇒ Arrow to select **Return: Return to Main Menu**
- ⇒ Select **OK** and press **Enter**
- ⇒ **Return to the Strand Setup Menu**



## Prepare System Hard Drives



**Return to the Strand Setup Menu to prepare the hard drives for selected storage methodology.**

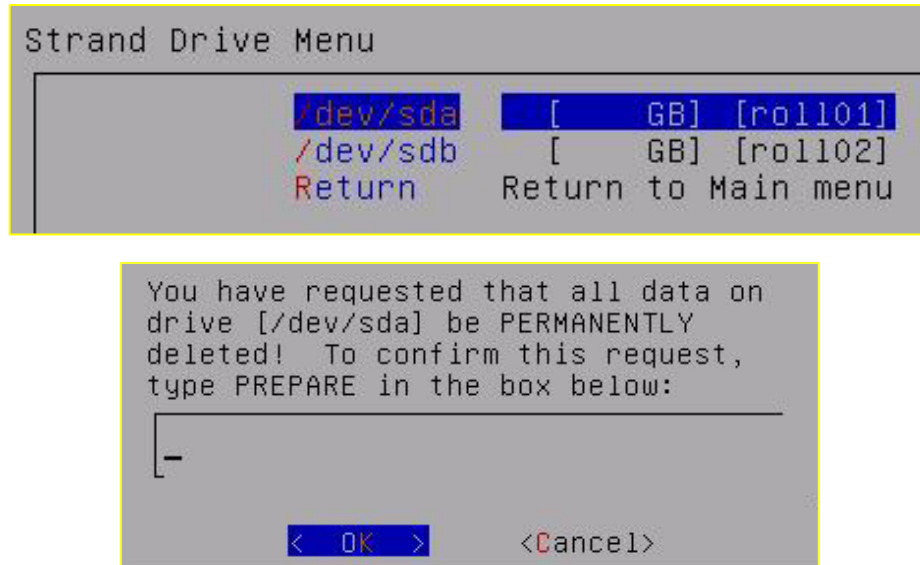
There are two types of Strand storage:

**Chronology Storage**—Camera storage pools are automatically assigned (default—nothing needs to be done for this type of storage)

**Variable Storage**—Camera storage pools are configured based upon multiple storage variables. **Advanced setup required.**

**STOP! The Strand NVR is set to Chronology Storage by default. Do not proceed with Prepare System Hard Drive unless Variable Storage is to be initiated.**

## Preparing System Hard Drives



### Preparing System Hard Drives—Chronology/Variable Storage:

⇒ Select **Disks: Prepare System Hard Drive** and press **Enter**

⇒ Arrow to select disk drive: `/dev/sda` and press **Enter**

**NOTE: DO NOT** ever select the drive that indicates [Bypass] as this will overwrite the Strand USB Key


⇒ The following message will be displayed

**'You have requested that all data on drive be PERMANENTLY deleted! To confirm this request type PREPARE in the box below:'**

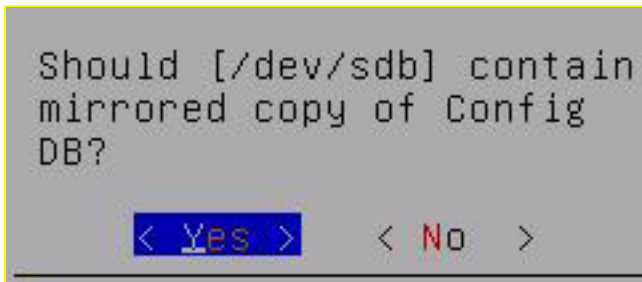
**To choose Chronology Storage Pool:** Type **PREPARE** (all caps) in the space provided, select OK and press **ENTER** - If PREPARE is selected, process is complete.

**To choose Variable Storage Pool:** Type **DELETE** (all caps) in the space provided, select OK and press **ENTER** (there is no prompt to indicate this is an option) - If DELETE is entered continue to next step.

## Preparing System Hard Drives



```
Should [/dev/sda] be made
bootable?
< Yes >    < No  >
```



```
Should [/dev/sdb] contain
mirrored copy of Config
DB?
< Yes >    < No  >
```



```
User Aborted
Request for
[/dev/sdb]
< OK >
```

### Preparing System Hard Drives:

- ⇒ 'Should [/dev/sda] be made bootable'? will be displayed. Tab to select **Yes** and press **Enter**
- ⇒ 'Should [/dev/sda] contain mirrored copy of Config DB?' will be displayed. Tab to select **Yes** and press **Enter**
- ⇒ **Repeat the above process for /dev/sdb** and, if applicable for drives dev/sdc and dev/sdd until all drives have been configured

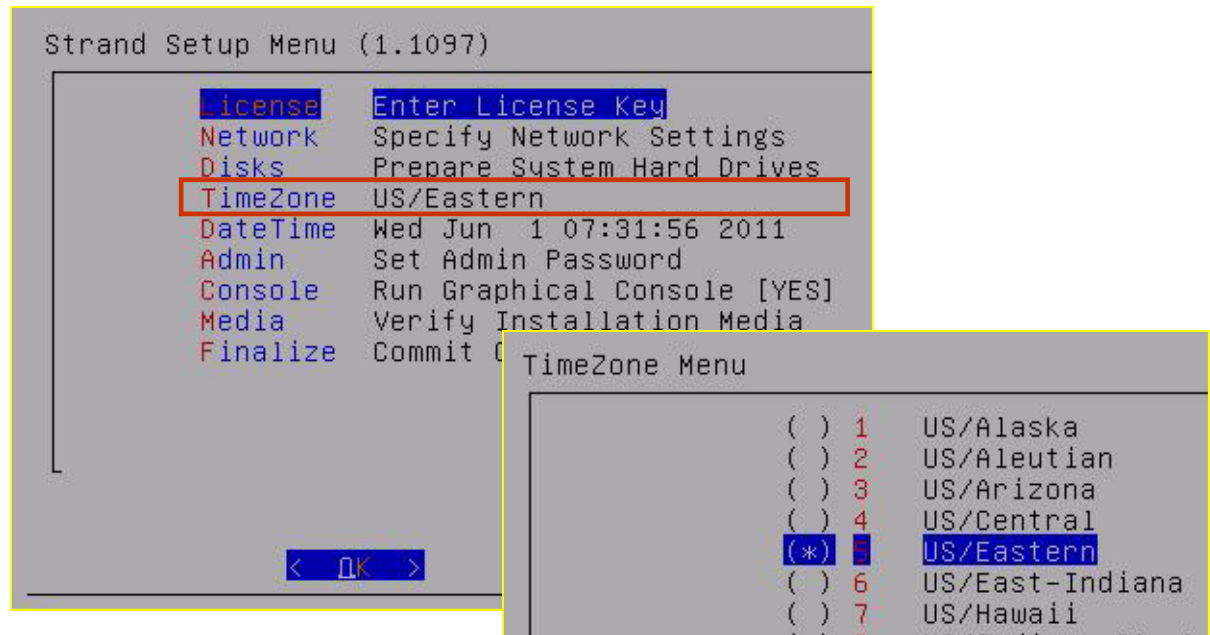
NOTE: If more than 4 hard drives are installed on the server, repeat the above steps except select **NO** when asked 'Should drive contain mirrored copy of Config DB'

- ⇒ **Return to Main Menu**

Following completion of all steps in the NVR/server configuration guide, see the **Strand—Advanced Setup Section** to customize individual camera storage parameters.

- ⇒ Return to the Strand Drive Menu

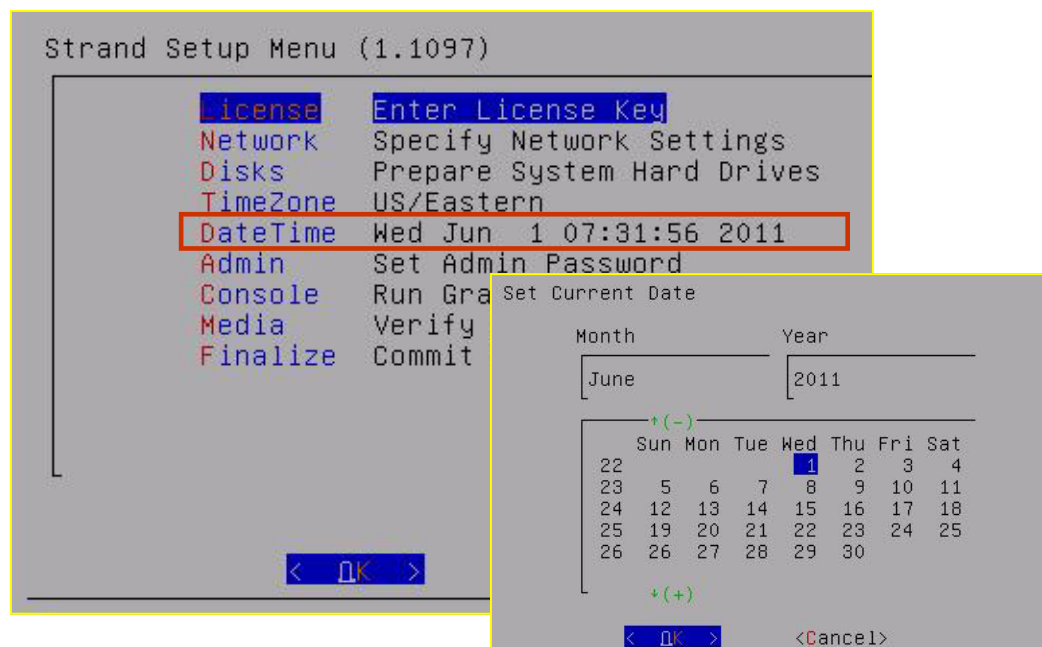
## Set Time Zone



### Set Time Zone:

- ⇒ From the Strand Setup Menu arrow to select **TimeZone**, tab to select **OK** and press **Enter**
- ⇒ Use the arrow key to navigate to the desired time zone and then click the space bar to select the time zone
- ⇒ An asterisk will appear in the parenthesis to the left of the time zone that has been selected
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Return to the main Strand Setup Menu

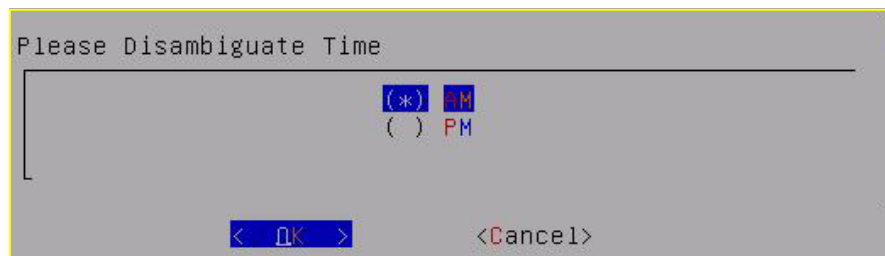
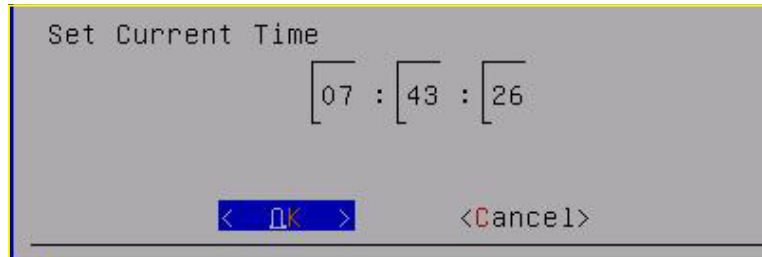
## Set Date/Time



### Set DateTime:

- ⇒ From the Strand Setup Menu arrow to **select DateTime**, tab to select **OK** and press **Enter**
- ⇒ Tab twice to place cursor in Month field
- ⇒ Arrow up or down to select month
- ⇒ Tab to place cursor in Year field
- ⇒ Arrow up or down to select year
- ⇒ Tab to place cursor in date area
- ⇒ Arrow to select date
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Return to the main Strand Setup Menu

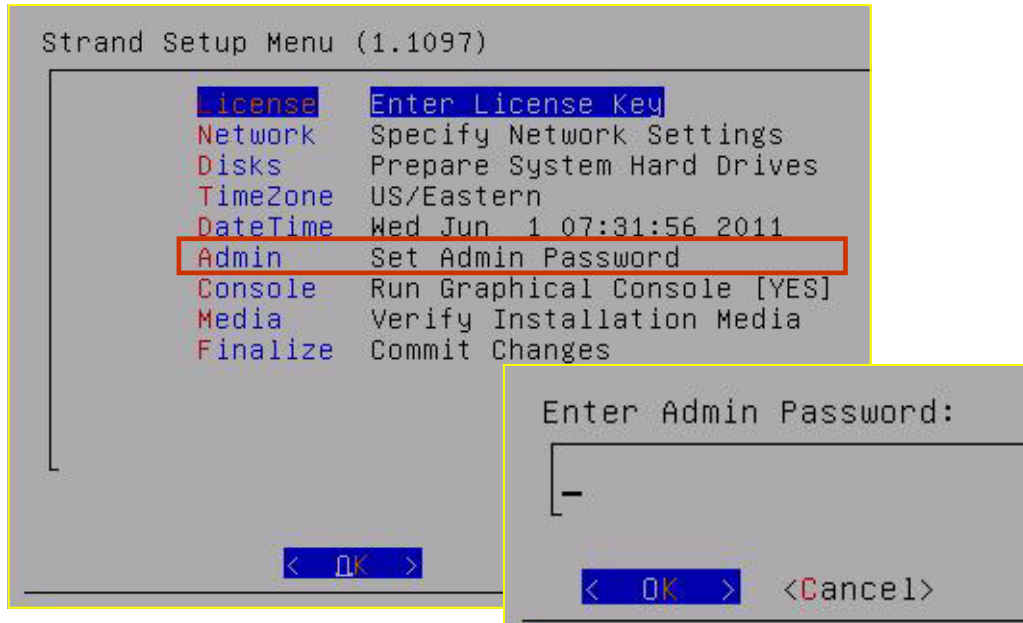
## Set Date/Time



### Set Current Time:

- ⇒ Tab to place cursor in hour field
- ⇒ Arrow up or down to select hour
- ⇒ Tab to place cursor in minute field
- ⇒ Arrow up or down to select minute
- ⇒ Tab to place cursor in second field
- ⇒ Arrow up or down to select second
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Arrow up or down to select AM or PM
- ⇒ Use space bar to place an asterisk in the AM or PM space
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Return to the main Strand Setup Menu

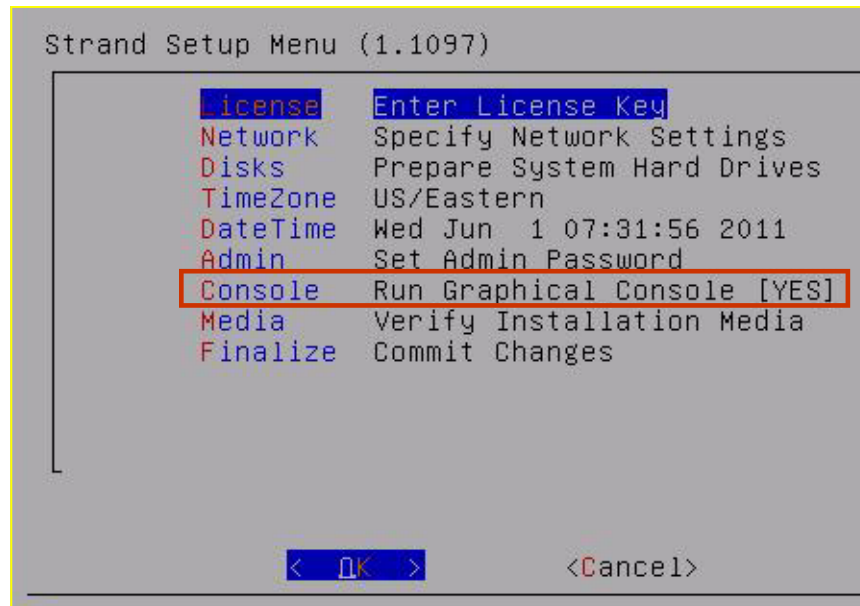
## Set Admin Password



### Set Administrative Password:

- ⇒ From the Strand Setup Menu
- ⇒ Arrow down to select **Admin: Set Admin Password**, tab to select **OK** and press **Enter**
- ⇒ Input desired Administrative Password.
- ⇒ Use a minimum of 8 characters. At least one of the 8 characters must be a number and one must be a capital letter (letters only—no numbers, spaces, special characters, dashes or underscores)
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Confirm the password by retyping it in the space provided
- ⇒ Tab to select **OK** and press **Enter**
- ⇒ Return to the main Strand Setup Menu

## Run Graphical Console



### Console—Run Graphical Console:

The Graphical Console is running if a keyboard and monitor are directly connected to the **Strand NVR**.

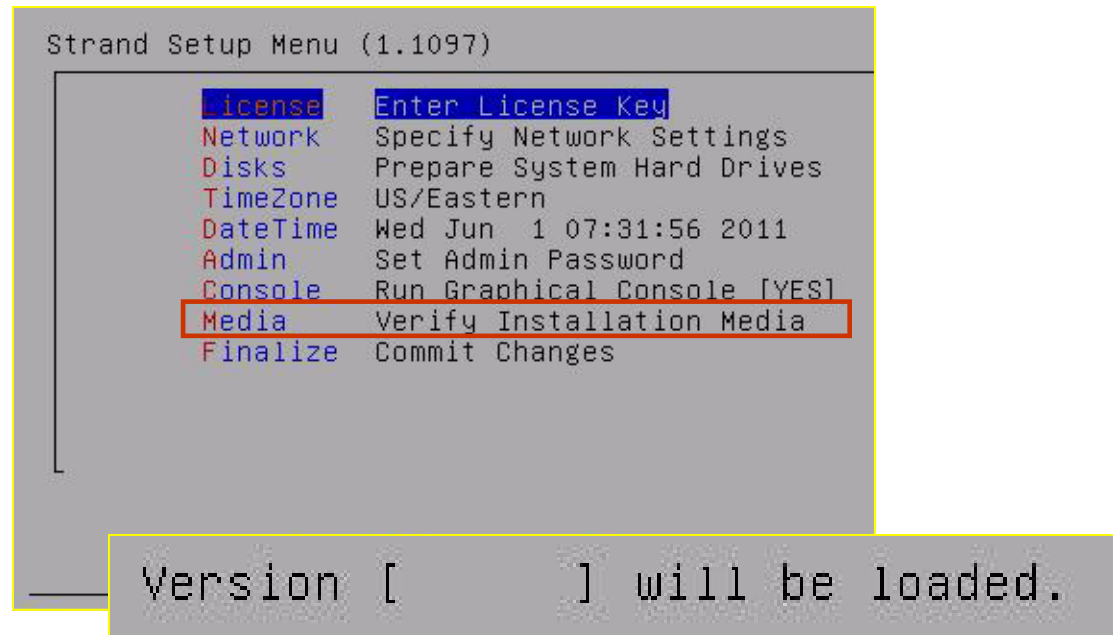
The factory default is set to YES.

No action required

**NOTE:** Graphical Console may not be compatible with a non-Strand NVR.



## Verify Installation Media

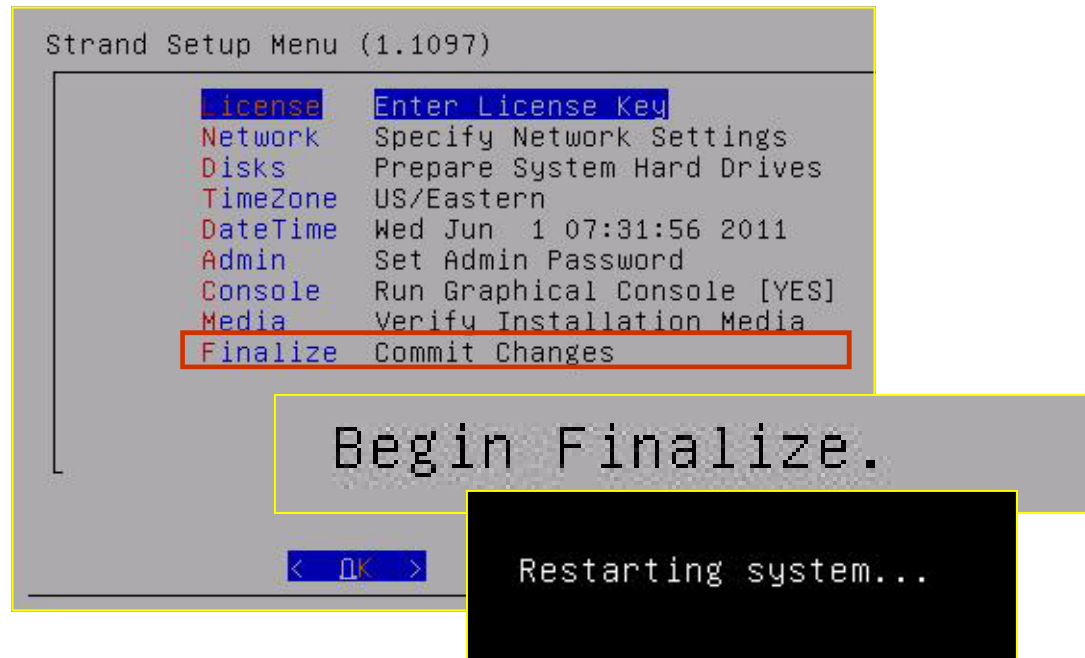


### Media/Verify Installation Media (OPTIONAL):

This function displays the current software version that is loaded on the NVR/server.

- ⇒ Arrow down to select **Media: Verify Installation Media** and tab to select **OK** and press **Enter**
- ⇒ The software version that is loaded on the system will be shown on the screen.
- ⇒ No additional steps need to be taken at this time
- ⇒ Select **OK** and press **Enter** to return to the Setup Menu

## Finalize—Commit Changes



### Finalize/Commit Changes:

- ⇒ From the Strand Setup Menu arrow to select **Finalize: Commit Changes**, tab to select **OK** and press **Enter**
- ⇒ The message 'Begin Finalize' will appear followed by
- ⇒ The message 'Restarting system'
- ⇒ System will run through the reboot process and return to the login screen

If no further Strand  
NVR Hardware  
configuration is desired,  
continue to Section 2  
Strand NVR Software  
configuration



# Section 2

Strand NVR Software Configuration:  
Advanced Setup





# Section 2

---

## Strand NVR Software Configuration: Advanced Setup

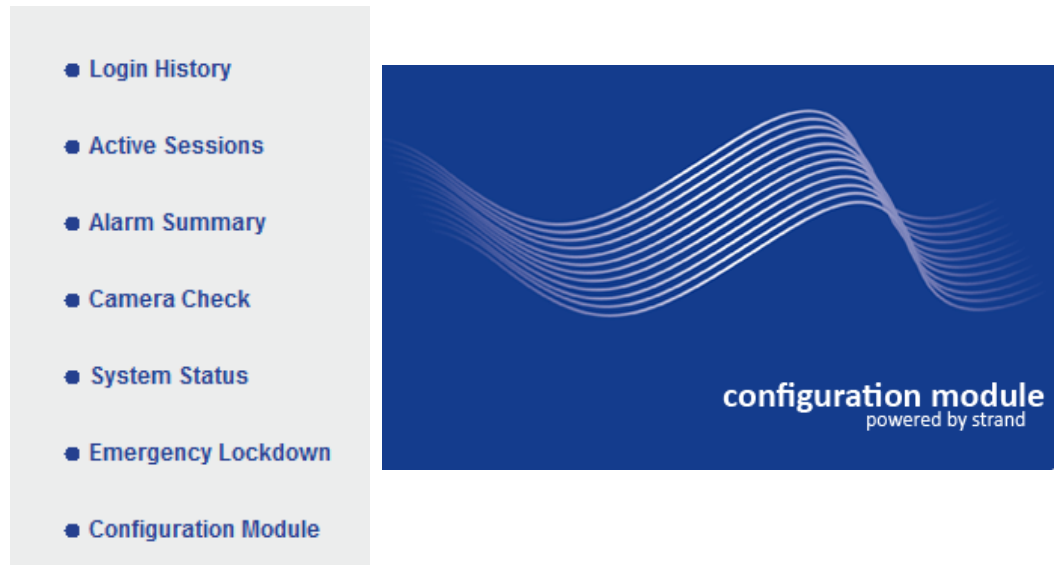
# Contents

This section provides a detailed guide for Strand NVR Software system setup.

### Section 2: NVR Software Configuration: Advanced Set-up

Login to Configuration Module .....	130
Advanced Setup Menu .....	131
Assign Camera Passwords/Credentials.....	132—133
Change Map/Floorplan Name.....	134
Add Maps/Floorplans .....	135
Set Map/Floorplan position on Toolbar .....	136
Add New Cameras to Map/Floorplan.....	137—138
Edit Existing Cameras .....	139
Camera Icon Placement on Map .....	140—141
Add New Cameras—Restart Jobs .....	142
Request Camera License .....	143—144
Save License Request.....	145
Apply Signed Camera License .....	146
System Setup Verification.....	147—148
Assign a Camera to a Different Map.....	149—150
Delete a Camera.....	151
Delete a Map .....	152
Display Capture Storage Pool .....	153
Maintain/Add/Delete Roles .....	154—155
Maintain/Add Camera Groups .....	156
Maintain Users: Add Users .....	157
Assign User Passwords.....	158
Assign User Roles .....	159
Assign Camera Groups to Users .....	160
<b>Software Version</b>	
Software Version—Menu.....	162
ISO Image Upload .....	162
Satellite Navigator.....	163—166
Raid Mirror Status.....	167
LDAP Management .....	167
Config Backup .....	168

## Login to Configuration Module



---

### Advanced Setup Login:

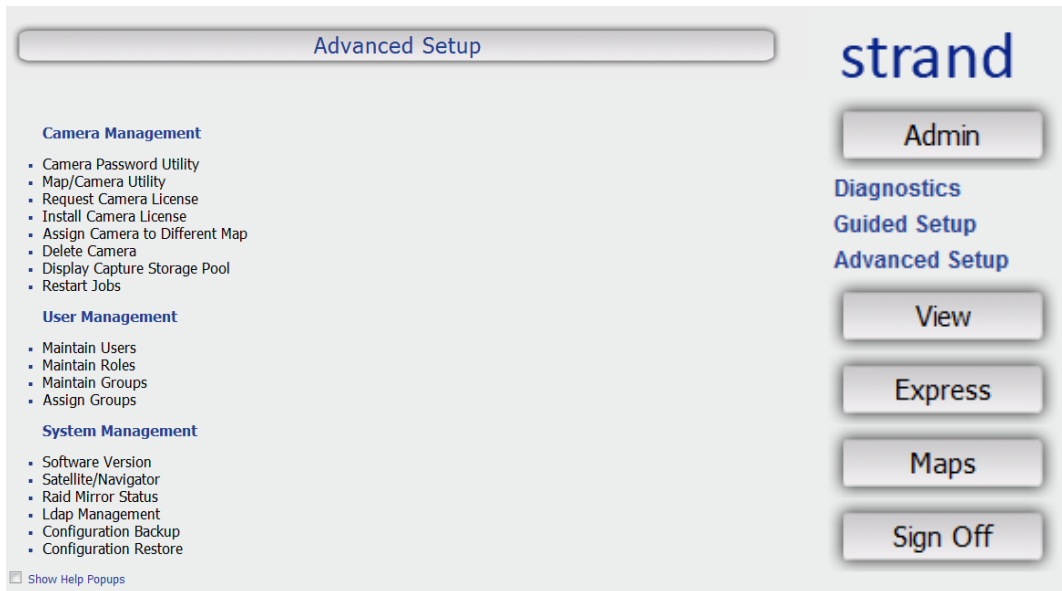
The Advanced Setup functions are accessible through the Configuration Module.

### Login to Configuration Module:

- ⇒ Go to Admin/Diagnostics/Configuration Module
- ⇒ Enter User ID and Password to access the Configuration Module



## Advanced Setup Menu



### Advanced Setup—Functions:

⇒ Click Admin/Advanced Setup

⇒ The Advanced Setup functions are displayed in the viewing area:

#### Camera Management

Camera Password Utility  
Map/Camera Utility  
Request Camera License  
Install Camera License  
Assign Camera to Different Map  
Delete Camera  
Display Capture Storage Pool  
Restart Jobs

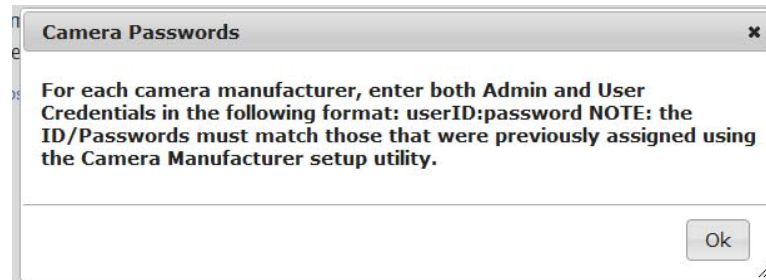
#### User Management

Maintain Users  
Maintain Roles  
Maintain Groups  
Assign Groups

#### System Management

Software Version  
Satellite/Navigator  
Raid Mirror Status  
Ldap Management  
Configuration Backup  
Configuration Restore

## Camera Management: Camera Passwords



---

**Adding Cameras/Camera Passwords:**

**STOP!**

**Follow the camera manufacturer's instructions for assigning user ID's and passwords on the cameras!**

**Camera passwords must be assigned before the cameras are set up on the Strand system. Utilize the camera manufacturer's setup utility for this process.**

The User ID and Password that was assigned using the camera manufacturer setup utility, must be an exact match to the User ID and Password that is entered into the Strand Camera Password Utility.

## Enter Camera Credentials

Password Type	Value
Acti Admin Credentials	
Acti User Credentials	
Arecont Admin Credentials	
Arecont User Credentials	
Axis Admin Credentials	
Axis User Credentials	
Digitalidview Admin Credentials	
Digitalidview User Credentials	
Dlink Admin Credentials	
Dlink User Credentials	
JVC Admin Credentials	
JVC User Credentials	
Panasonic Admin Credentials	
Panasonic User Credentials	
Pelco Admin Credentials	
Pelco User Credentials	
Sony Admin Credentials	
Sony User Credentials	
Speco Admin Credentials	
Speco User Credentials	
Toshiba Admin Credentials	
Toshiba User Credentials	
Zavio Admin Credentials	
Zavio User Credentials	

Save

Axis Admin Credentials

root:pass

Axis User Credentials

user:guest

**WARNING: Existing cameras will need to be manually updated to reflect changes made on this screen!**

### Camera Password Utility:

- ⇒ Click Camera Password Utility
- ⇒ Review "Camera Passwords" pop up box
- ⇒ For each camera manufacturer, **ADMINISTRATIVE** credentials and **USER** credentials must be entered using an ID and password that is separated by a colon
  - Example of camera Administrative Credential: **root:pass**
  - Example of camera USER Credential: **user:guest**
- ⇒ Enter Administrative and User credentials
- ⇒ Click Save at the bottom of the page
- ⇒ Return to Advanced Setup menu

## Change Map/Floorplan Name

The screenshot shows a configuration window with a table-like structure. The first row has headers: 'Map Hierarchy', 'Map Name', 'ToolBar Position', and two empty columns. Below this, there are two rows of data. The first row shows a hierarchy of '/' and an empty 'Map Name' field, with a 'Splash Image' button to its right. The second row shows a hierarchy of '/Default Map' and a 'Map Name' field containing 'Default Map', which is highlighted with a red rectangle. To the right of this field is a 'ToolBar Position' field containing '1'. Further right are three buttons: 'Add Sub Floorplan', 'Change FP Image', and 'Cameras'.

### Change Name of Map/Floorpan:

#### Admin/Advanced Setup/Map/Camera Utility

A default map will be available upon initial setup (figure 1).

- ⇒ To change the name of the Default Map put cursor in the box next to the name of the map and delete name
- ⇒ Type in new name of map
- ⇒ Click anywhere on the screen and new name will be saved

## Add Maps/Floorplans

The screenshot displays the 'Map/Camera Utility' interface. It features a table with columns for 'Map Hierarchy', 'Map Name', and 'ToolBar Position'. The table lists existing floorplans: '/', '/Default', and '/Default 2'. To the right of the table are buttons for 'Add Sub Floorplan', 'Change FP Image', and 'Cameras'. A 'Splash Image' button is also present. On the right side of the interface, there are two panels: 'Enter New Floorplan Name' with a text input field containing 'Default 2', and 'Select Image File [/Default]' with a 'Choose File' button and the text 'No file chosen'.

### Adding Maps/Floorplans:

#### To add a new map/floorplan:

- ⇒ Click **Add Sub Floorplan** button on the bar that does not list a map name
- ⇒ Enter New Floorplan Name in the space provided and Click OK
- ⇒ To attach the Floorplan image, click the Add FP Image button
- ⇒ Click Choose File

NOTE: Map files must be PNG or JPEG formats. Other formats will not be accepted

- ⇒ Select the File name from a saved map
- ⇒ Standardized maps are available for downloaded from [www.strandusa.com](http://www.strandusa.com)

## Set Position of Map/Floorplan

The screenshot shows the 'FloorPlan Maintenance' window. It has a table with columns 'Map Hierarchy', 'Map Name', and 'ToolBar Position'. The first row shows '/' in the hierarchy and 'First Floor' in the name. The 'ToolBar Position' field for this row is highlighted with a red box and contains the number '1'. Below the table, there are buttons for 'Add Sub Floorplan', 'Change FP Image', and 'Cameras'. A blue box highlights the '1' in the 'ToolBar Position' field.

Map Hierarchy	Map Name	ToolBar Position
/	First Floor	1

### Select Map Position on Toolbar:

To choose the position the map is to appear under Maps on the toolbar:

- ⇒ Click on the Toolbar Position field and change the value from the default '0' to a positive number. Map will not appear on the toolbar list unless a positive number is in the position space.
- ⇒ This number indicates the order in which the Floorplan name will appear under Maps on the toolbar (map names appear in numerical order according to the number assigned)
- ⇒ Click anywhere on the screen to save the toolbar position

## Add New Cameras

/Default	Default	1	Add Sub Floorplan	Change FP Image	Cameras
/Default 2	Default 2	2	Add Sub Floorplan	Change FP Image	Cameras

Camera Name: Axis 211

PullCode: Switch Port 23

Camera Serial: 00:40:8C:6F:28:EC

Camera IP: 192.168.10.30

Camera Num (If analog):

Camera Model: Axis 211 (fixed)

Camera Icon: Cone

Capture Group: 5fps

Motion Group: None

Add New Camera

### Adding NEW Cameras—while in the Map/Camera Utility Area:

- ⇒ Click the **Cameras** button located on the same line as the map that cameras are to be added and enter camera information in spaces provided:
  - ⇒ **Camera Name:** Enter Camera Name of your choice
  - ⇒ **Pull Code (optional):** Enter pull code identification number for the camera
  - ⇒ **Camera Serial:** Enter camera Serial Number
  - ⇒ **Camera IP:** Enter camera IP
  - ⇒ **Camera Num:** If adding an analog camera, enter the camera number
  - ⇒ **Camera Model:** Click the type of camera being added from the drop down list (if camera is not listed contact Strand)
  - ⇒ **Camera Icon:** For a Fixed camera, select the “Cone”, or for a PTZ camera select the “DOT” from the drop down list
  - ⇒ **Capture Group:** Click the frames per second (FPS) from the drop down list
  - ⇒ **Motion Group:** **STOP!** Camera manufacturer motion parameters must be installed according to camera manufacturer instructions prior to this step. Select the fps from the Motion Group drop down menu.

## Add New Cameras



### Adding Cameras to floorplan (cont.):

Once the camera information has been added:

- ⇒ Click "Add New Camera".
- ⇒ A red bar will appear at the top of the box that says 'Add Processed.'
- ⇒ A link to the camera that was added will appear in the list of cameras located below the Add New Camera button.
- ⇒ For each additional camera to be added to this floorplan, follow the same process by filling in the camera information and clicking "Add New Camera"

**Note: When adding or deleting maps and cameras the process may take a few minutes to take effect.**



## Edit Cameras

Camera Name:

PullCode:

Camera Serial:

Camera IP:

Camera Model:

Camera Icon:

Capture Group:

Motion Group:

Internal Seq: 4

Datadirs:  
C2demo:2:RollPool002 days: [9999] quota: [0]  
C2demo:1:RollPool001 days: [9999] quota: [0]

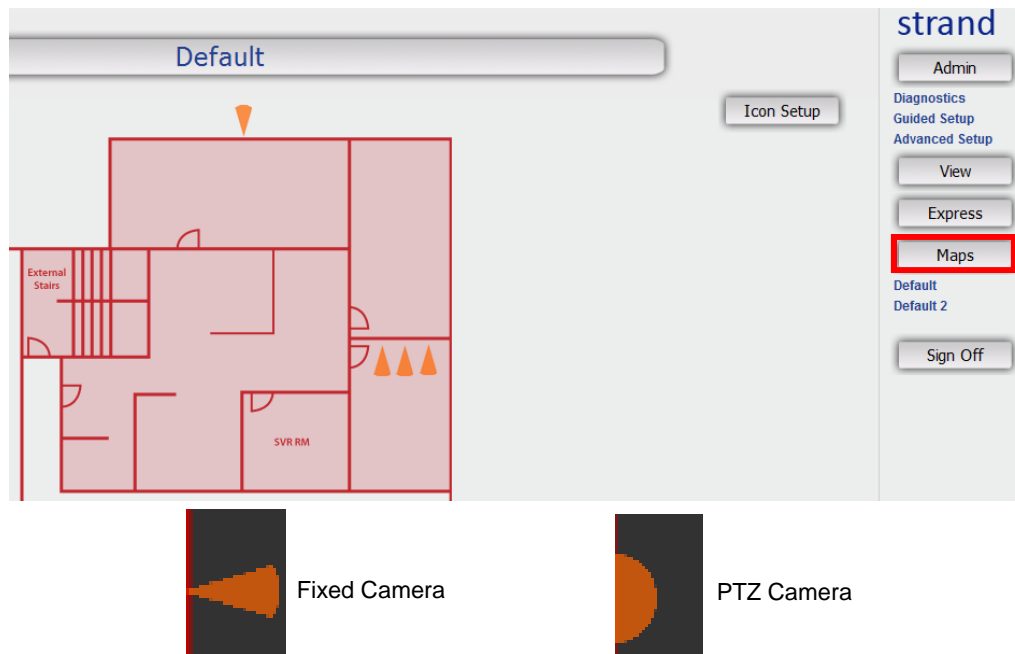
[/Default/Camera 1](#)  
[/Default/Camera 2](#)  
[/Default/Camera 3](#)  
[/Default/Camera 4](#)

Scan subnet for Cameras (may take up to a minute):

### Edit Cameras:

- ⇒ To Edit the camera name and type, go to Guided Setup/Map/Camera Utility
- ⇒ click the **Cameras** button located on the same line as the map that cameras are to be edited and enter camera information in spaces provided
- ⇒ Select camera from the list of cameras under the Add New Camera button
- ⇒ Select and apply modifications for camera
- ⇒ Click Save Changes to Existing Camera
- ⇒ Repeat process for any additional cameras to be modified

## Camera Icon Placement



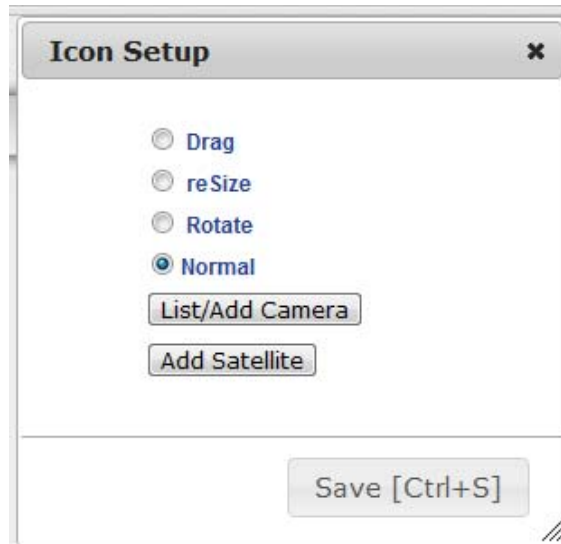
### Camera Placement/Move Camera Icon

- ⇒ After cameras are added or edited they will appear as icons on the map and will need to be placed in the desired position

### While in Live View

- ⇒ **Click the Maps button on tool bar and select the map name from the list of maps**
- ⇒ The orange triangular icons that appear in the image area represent fixed cameras and the circular icons represent PTZ cameras
- ⇒ Click the **Icon Setup** button in the top right hand corner of the image area to enable icon placement

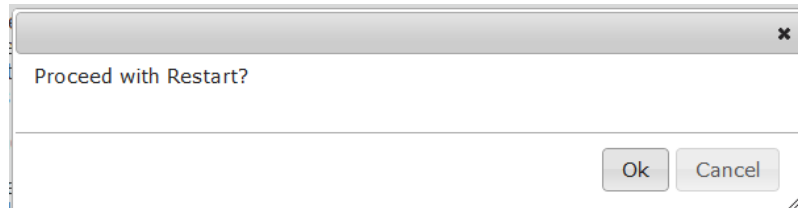
## Camera Icon Placement



**To move, resize and rotate the camera icons on the map:**

- ⇒ A box with Drag, reSize, Rotate and Normal will appear in the viewing area
- ⇒ **Click the radio button next to Drag** to enable moving camera icon
- ⇒ **Click the radio button next to Resize** to enable changing the size of camera icon
- ⇒ **Click the radio button next to Rotate** to enable changing the direction of the icon
- ⇒ **Click the radio button next to Normal when finished and** to go back to normal view
- ⇒ **Click Save** once the camera icon is in the desired position
- ⇒ Click **Guided Setup** on the toolbar to return to Guided Setup menu

## Edit/Add Cameras—Restart Jobs



### Adding/Editing Cameras—Restart Jobs:

Restart Jobs allows configuration changes to take effect. Once all cameras or additional cameras have been added or edited restarting jobs is necessary.

- ⇒ On the Toolbar go to **Admin/Advanced Setup/Restart Jobs**
- ⇒ The message **“Proceed with Restart?”** will be displayed
- ⇒ Click OK
- ⇒ Restart Requested will appear in red box in the viewing area

Allow system approximately 2 minutes to refresh. Restart is complete.

**NOTE:** Restart Jobs will occur automatically upon installing a camera license.

## Request Camera License

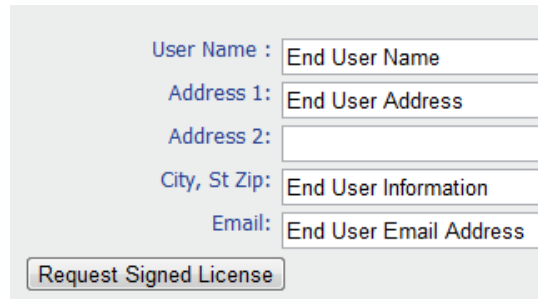


### To Request Camera License:

To begin saving archived images each camera on the system must be licensed

- ⇒ **Click Admin/Advanced Setup/Request Camera License**
- ⇒ Review the "Obtain Camera License Activation Request" Popup Box with information on how to license one or multiple cameras
- ⇒ **Click OK**

## Request Camera License



User Name :

Address 1:

Address 2:

City, St Zip:

Email:

---

### To Request a User License:

⇒ **Fill in END USER contact information** (for valid service and support, it is important that this is the End User information and not the Dealer/Integrator information):

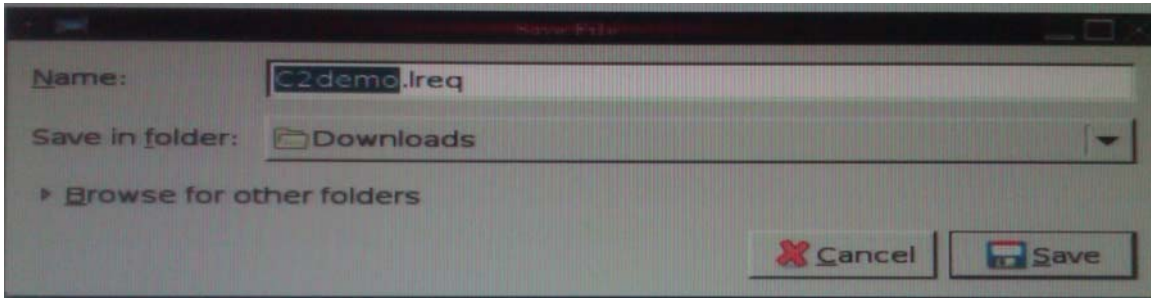
1. User Name
2. Address 1:
3. Address 2:
4. City, St Zip:
5. Email

⇒ **Click Request Signed License**

⇒ The License Request file will now be available on the PC or the NVR

⇒ Follow browser specifications to save file to USB key

## Save License Request



### Request Camera License:

- ⇒ Browse and select file to save to a USB key. **NOTE: No other license request file (Lreq file) can be on the same USB or in the same file location**
- ⇒ **DO NOT CHANGE ANY PART OF THE FILE NAME** (the file name will be have the extension .Lreq when saved to USB)
- ⇒ Using a PC with internet connectivity
  - Email the file as an attachment to **support@strandusa.com**
  - Type “**License Request**” in subject line
- ⇒ A Signed License file (Lsig) will be sent as an attachment to the email address that the request was received from
- ⇒ Open the file and save the license file to the USB key

## Apply/Install Camera License



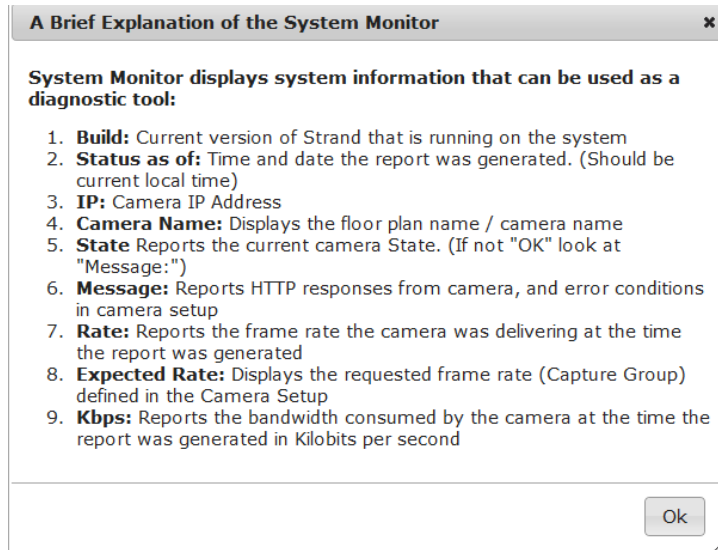
### Install Camera License:

#### To retrieve the signed license file and apply it to the NVR—

- ⇒ Click Admin/Advanced Setup/Install Camera License
- ⇒ Review the "Install Camera License" Popup box for information on how to install a camera license and click OK
- ⇒ **Click Choose File** to browse and select the saved signed license file (Lsig) that was sent via email and saved on the USB Key
- ⇒ **Click OK**
- ⇒ **"Signed License has been installed"** will appear in red box at top of page
- ⇒ Camera licenses have been applied
- ⇒ Proceed to System Verification



## System Setup Verification



### System Setup Verification:

**To verify that the system was setup properly and cameras are recording:**

- ⇒ Click Admin/Diagnostics/System Monitor
- ⇒ Read the Popup box for information regarding System Status data will appear
- ⇒ Click OK

## System Setup Verification

Phase: Capturing  
Build: 1999.0  
Status As Of: Tue Jun 14 2011 15:00:26 GMT-0500 (Central Daylight Time)

IP	Camera Name	State	Message	Rate (FPS)	Expect (FPS)	Kbps
10.0.0.105	/Default/Camera 4	OK		4.84	5.00	780
10.0.0.104	/Default/Camera 3	OK		5.31	10.00	10379
10.0.0.103	/Default/Camera 2	OK		7.75	8.00	1412
10.0.0.102	/Default/Camera 1	OK		7.75	8.00	1191
Totals: [4 Cameras]						13762

Drive	Pool	WrapCount	Oldest Archive	Newest Archive	Range (Days)
roll01	1	5	06-05-2011 14:35:46	06-14-2011 15:00:15	9.02
roll02	2	5	06-05-2011 14:32:21	06-14-2011 15:00:20	9.02

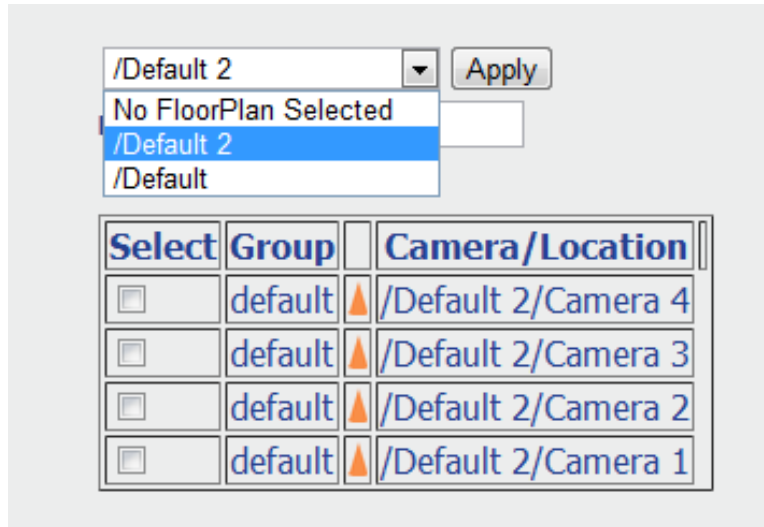
### System Setup Verification

- ⇒ Camera status will appear in the viewing area for all cameras that were edited/added
- ⇒ Camera status provides data on:
  - Camera IP address
  - Camera Name
  - State—**OK** indicates camera is online and functioning properly
  - Message—why camera is not functioning properly
  - Rate (FPS)—recorded frames per second
  - Expect (FPS) - expected recorded frames per second
  - Kbps (kilobits per second) is the bandwidth for each camera per second

NOTE: If Default cameras are highlighted in red under the Rate (FPS) column, troubleshoot to determine cause of error

OPTIONAL: Advanced functionality options are available but require

## Assign Camera to Different Map



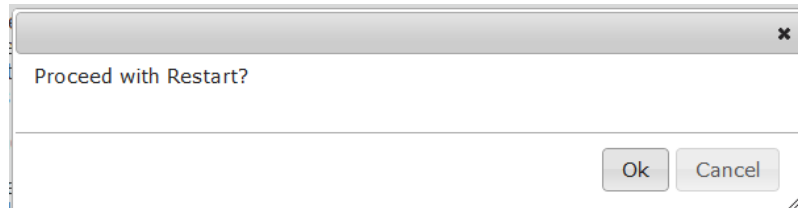
Select	Group	Camera/Location
<input type="checkbox"/>	default	/Default 2/Camera 4
<input type="checkbox"/>	default	/Default 2/Camera 3
<input type="checkbox"/>	default	/Default 2/Camera 2
<input type="checkbox"/>	default	/Default 2/Camera 1

### Assign Camera to Different Map:

To assign a camera to a different map using the same camera license number:

- ⇒ Click **Admin/Advanced Setup/Assign Camera to Different Map**
- ⇒ Use the drop down box to select the map the camera is to be assigned
- ⇒ Click the box next to the camera name that is to be moved and a check mark will appear in the box
- ⇒ **Click Apply**
- ⇒ Camera will be moved from previous map to newly selected map
- ⇒ Restart Jobs to apply new configuration

## Assign Camera



### Assigning Cameras to Different Map—Restart Jobs:

Once cameras have been moved to a different map it is necessary to restart jobs.

- ⇒ Go to Admin/Advanced Setup/Restart Jobs
- ⇒ **The message “Proceed with Restart?” will be displayed**
- ⇒ Click OK
- ⇒ Restart Requested will appear in red box in the viewing area

Allow system approximately 2 minutes to refresh. Restart is complete.

## Delete Camera

**NOTE:** When a camera is deleted, the camera license is also deleted.

Camera Model: Axis 211 (fixed)

Camera Icon: Cone

Capture Group: 8fps

Motion Group: None

Internal Seq: 28

Save Changes to Existing Camera

Datadirs:  
 C2demo:2:RollPool002 days: [9999] quota: [0]  
 C2demo:1:RollPool001 days: [9999] quota: [0]

Manage Capture Datadirs

Auto Provision

/Test Floor/Camera 1  
 /Test Floor/Camera 2

Scan subnet for Cameras (may take up to a minute):  
 Scan

### Deleting a Camera:

**Before deleting a camera from the system the cameras data directory must first be deleted:**

#### STEP1:

- ⇒ Go to **Admin/Advanced Setup/Map/Camera Utility**
- ⇒ Click the **Cameras** button
- ⇒ Select and click on the camera from the list
- ⇒ **Click Manage Capture Datadirs**
- ⇒ **Click Delete Existing Assignment**

Filter:

Select	Group	Camera/Location
<input type="checkbox"/>	Strand Team	/Columbia Office/Storage
<input type="checkbox"/>	Strand Team	/Columbia Office/Marketing office
<input checked="" type="checkbox"/>	default	/Columbia Office/Exterior east view
<input type="checkbox"/>	Strand Team	/Columbia Office/Conference room
<input type="checkbox"/>	Strand Team	/Columbia Office/Accounting
<input type="checkbox"/>	default	/Columbia Office

Delete Selected Cameras

### Deleting a Camera:

#### STEP 2:

- ⇒ **Click Admin/Advanced Setup/Delete Camera**
- ⇒ A list of all cameras and maps on the system will appear in the viewing area
- ⇒ Choose the camera with deleted date by placing a check mark in the box next to the camera name
- ⇒ **Click Delete Selected Cameras at the bottom of the screen**
- ⇒ **Camera is removed from the system**

## Delete Map

**NOTE: When a camera is deleted, the camera license is also deleted.**

Host	Datadir	Days	Size
C2demo:1	RollPool001	9999	0
C2demo:2	RollPool002	9999	0

Change Existing Assignment

Return to Camera Mtc

Delete Existing Assignment

### Deleting a Map:

- ⇒ To delete a map all cameras must first be deleted off of the map
- ⇒ **See Delete Camera for information on how to delete cameras from a map**
- ⇒ **Select Admin/Advanced Setup/Delete Camera**

Filter:

Select	Group	Camera/Location
<input type="checkbox"/>	Strand Team	/Columbia Office/Storage
<input type="checkbox"/>	Strand Team	/Columbia Office/Marketing office
<input checked="" type="checkbox"/>	default	/Columbia Office/Exterior east view
<input type="checkbox"/>	Strand Team	/Columbia Office/Conference room
<input type="checkbox"/>	Strand Team	/Columbia Office/Accounting
<input type="checkbox"/>	default	/Columbia Office

Delete Selected Cameras

### Deleting a Map:

- ⇒ A list of all cameras and maps on the system will appear in the viewing area
- ⇒ Choose the map that is not associated with any cameras by putting a check mark in the box next to the map name
- ⇒ **Click Delete Selected Cameras at the bottom of the screen**
- ⇒ **The map is then removed from the system**

## Display Capture Storage Pool

Data Location	Size	Assigned	Free	Drive Serial
C2demo:1 /archive/roll01	1393			9VS2HBQQ
C2demo:2 /archive/roll02	1394			9VS2HLRQ

### Display Capture Storage Pool:

To view a summary of storage usage for each hard drive:

- ⇒ Select **Admin/Advanced Setup/Display Capture Storage Pool**
- ⇒ **A list of hard drives will be shown**
- ⇒ The size of the hard drive, assigned space and free space will be displayed along with the hard drive serial number.

## User Management: Maintain Roles

### Advanced Setup

⇒ While in Advanced Setup it is recommended to setup the users, roles and groups in the following order:

1. **Maintain Roles**—assign specific functionality to individual users
2. **Maintain Groups**—allow individual users to view specific cameras or groups of cameras
3. **Maintain Users**—add, delete and make changes to users
4. **Assign Groups**—assign groups to each user

Capability	■ admin	■ admin_init
view archive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
view live	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
view alarm log	<input type="checkbox"/>	<input checked="" type="checkbox"/>
view dispatch command	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
view event log	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
view capture summary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
add users	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
delete users	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
system config	<input type="checkbox"/>	<input checked="" type="checkbox"/>
alter priority	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ptz control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ptz schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apply		
Cancel		
Add New Role		

### Maintain Roles:

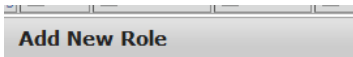
⇒ Roles are created to allow privileges for specific functionality to individual users or groups of users

⇒ **Click Admin/Advanced Setup/Maintain Roles**

⇒ To add a new role, **Click Add New Role** at the bottom of the screen



## Add/Delete Roles



**Add New Role**

Role Name:



**Modify Role [New Role]**

Rename:

### Add/Delete Role:

- ⇒ Enter the name of the New Role in the space provided
- ⇒ Click OK
- ⇒ The new column will be placed in alphabetical order
- ⇒ **Click on the box next to the function** to add the functionality to the role.
- ⇒ Click Apply
- ⇒ To Delete a role, right click on the role name
- ⇒ Enter the name of the role to be deleted in the space provided
- ⇒ Click OK

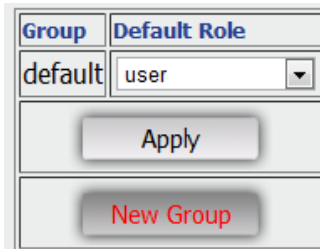
Capability	
view archive	<input checked="" type="checkbox"/>
view live	<input checked="" type="checkbox"/>
view alarm log	<input type="checkbox"/>
view dispatch command	<input checked="" type="checkbox"/>
view event log	<input checked="" type="checkbox"/>
view capture summary	<input checked="" type="checkbox"/>
add users	<input checked="" type="checkbox"/>
delete users	<input checked="" type="checkbox"/>
system config	<input type="checkbox"/>
alter priority	<input type="checkbox"/>
ptz control	<input checked="" type="checkbox"/>
ptz schedule	<input checked="" type="checkbox"/>

### Role Capabilities:

12 different functions are available for each role

- ⇒ Place a check mark in the box next to functionality to add it to each role
- ⇒ Click Apply to activate functionalities

## Maintain (Camera) Groups



Group	Default Role
default	user

Apply

New Group

### Maintain Camera Groups:

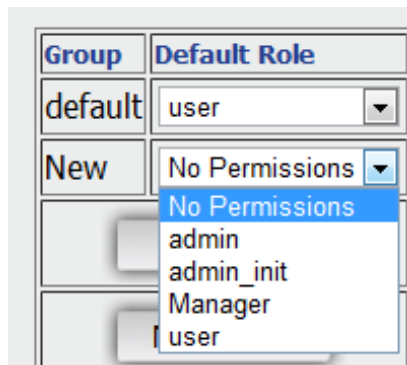
- ⇒ Specific cameras, or groups of cameras, are assigned to each Group.
- ⇒ **Click Admin/Advanced Setup/Maintain Groups**
- ⇒ **Click New Group**
- ⇒ Type Group Name in the space provided
- ⇒ **Click OK**



Add New Group

Group Name:

Ok Cancel



Group	Default Role
default	user
New	No Permissions

- No Permissions
- admin
- admin\_init
- Manager
- user

### Maintain Camera Groups:

- ⇒ Select the desired Role for that group of cameras from the drop down menu next to the camera group name.
- ⇒ **Click Apply to save changes**

## Maintain Users: Add Users

ID	Full Name	Level	Priority	User Timeout	Video Timeout
admin	Admin	98	98	0:20	0:05

user:   
 user name:   
 user expires:   
 pass expires:   
 lvl:   
 user pri:   
 user timeout:   
 video timeout:

### Maintain Users:

⇒ Once Groups and Roles are set, users will need to be entered into the system

⇒ **Click Admin/Advanced Setup/Maintain Users**

⇒ A list of current users will appear in the viewing area

⇒ **Click Add New User**

⇒ Enter user information in the spaces provided

⇒ 'User' is the User ID that will be used to access the system.

⇒ User Name is typically the user's first and last name

user:   
 user name:   
 user expires:   
 pass expires:   
 lvl:   
 user pri:   
 user timeout:   
 video timeout:

### Maintain Users:

⇒ 'Lvl' is a number from 1—99 that is assigned to each user as their level of access.

- Users with an access level less than 11 will not be allowed to access the web interface.
- Administrative users should have an access level 90 or greater.

⇒ 'User Pri' is a number from 1—99 that indicates user priority

⇒ User timeout is the time allowed for a user to remain on the system before being forced to log back in. The maximum time allowed is 7 hours and 59 minutes.

⇒ Video timeout is the time allowed for video to remain on the screen before being prompted to refresh. The maximum time allowed is 7 hours and 59 minutes.

⇒ **Click Add** to add the user

## Assign User Password

ID	Full Name	Priority	User Timeout	Video Timeout
admin	Admin	98	0:20	0:05
Remote	Remote	75	0:20	0:05
seschicago	seschicago	50	0:20	0:05

user:

user name:

user expires:

pass expires:

lvl:

user pri:

user timeout:

video timeout:

Figure 1

### Maintain Users:

⇒ To assign a password go to **Admin/Advanced Setup/Maintain Users**

⇒ A list of users will be shown

⇒ **Click on the user name** to be assigned a password

⇒ User information will appear in the viewing area

⇒ **Click Assign Password**

User Id:

New Password:

Verify New Password:

### Maintain Users:

⇒ Enter the password in the New Password and the Verify New Password spaces provided

⇒ **Click Set Password**

## Assign User Roles

user: admin

user name: Admin

user expires: 0000-00-00 00:00:00

pass expires: 0000-00-00 00:00:00

lvl: 98

user pri: 98

user timeout: 0:20

video timeout: 0:05

Update Delete

Assign Password

User Roles

### Assign User Roles:

- ⇒ After user password has been assigned
- ⇒ **Click User Roles** located under Assign Password to assign User Roles

Group	Role
default	admin_init
hidden	admin_init
Strand Team	Manager

No Permissions

admin

admin\_init

Manager

user

### Assign User Roles:

- ⇒ Choose the role from drop down list next to each group name
- ⇒ If no role is to be applied, select No Permissions
- ⇒ **Click Apply** when complete

Group	Role
default	admin_init
hidden	admin_init
Strand Team	Manager

Apply

## Assign Camera Groups

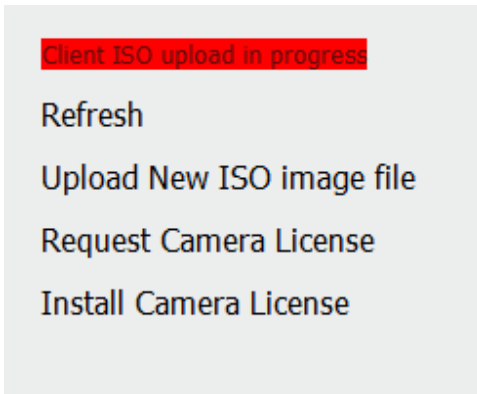
The screenshot shows the 'Assign Camera Groups' interface. At the top, there is a 'Filter...' text box. Below it is a dropdown menu currently showing 'No Group Selected', with an 'Apply' button to its right. The dropdown menu is open, showing options: 'No Group Selected', 'default', and 'New'. Below the dropdown is a table with columns 'Change', 'Group', and 'Camera/Location'. The table contains four rows. The first row has an unchecked checkbox, 'default', and '/Default'. The second row has an unchecked checkbox, 'default', an orange up arrow, and '/Default/Camera 1'. The third row has an unchecked checkbox, 'default', an orange up arrow, and '/Default/Camera 2'. The fourth row has an unchecked checkbox, 'default', an orange up arrow, and '/Default/Camera 3'. Below this table is another section with a 'New' dropdown and an 'Apply' button. Below that is another table with columns 'Change', 'Group', and 'Camera/Location'. This table contains five rows. The first row has an unchecked checkbox, an empty 'Group' field, and '/'. The second row has an unchecked checkbox, 'default', and '/Default'. The third row has a checked checkbox, 'default', an orange up arrow, and '/Default/Camera 1'. The fourth row has a checked checkbox, 'default', an orange up arrow, and '/Default/Camera 2'. The fifth row has a checked checkbox, 'default', an orange up arrow, and '/Default/Camera 3'. The sixth row has a checked checkbox, 'default', an orange up arrow, and '/Default/Camera 4'.

### Assign Camera Groups:

- ⇒ To assign cameras to specific groups
- ⇒ **Click Admin/Advanced Setup/Assign Groups**
- ⇒ Select the camera group name from the drop down list
- ⇒ **Select the box to the left of the camera** name to add the camera to the camera group that has been selected
- ⇒ Each camera can be added to **ONLY 1** camera group
- ⇒ **Click Apply** to save camera assignments
- ⇒ Repeat these steps to assign cameras to each group



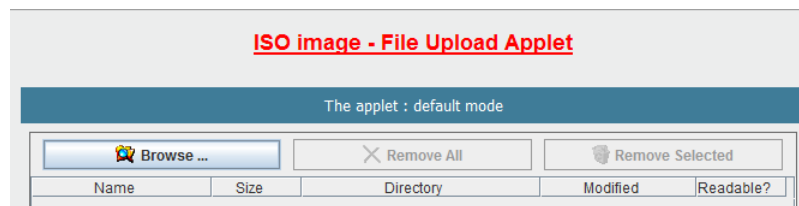
## System Management: Software Version



### Software Version

Software Version provides utilities for uploading and installing new versions of Strand. Utilities include:

- ⇒ **Refresh**—refreshes screen
- ⇒ **Upload New ISO image file**—uploads new version of software to system (see below)
- ⇒ **Request Camera License**—request camera license (this process covered in previous section)
- ⇒ **Install Camera License**—install camera license (this process covered in previous section)



### Upload New ISO Image:

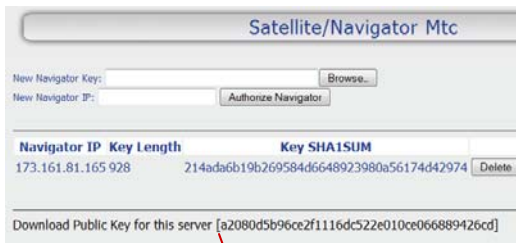
**Upload New ISO** is the process of uploading a new version of the Strand software on to a Strand system

- ⇒ **Select Admin/Advanced Setup/Software Version/Upload New ISO Image**
- ⇒ Click Browse and select the ISO image from the download location. The version of the software on the ISO image will be loaded on to the system.

NOTE: Verify that the current software version on the system has the ability to upgrade to the new version prior to uploading a new ISO image.



## Satellite/Navigator

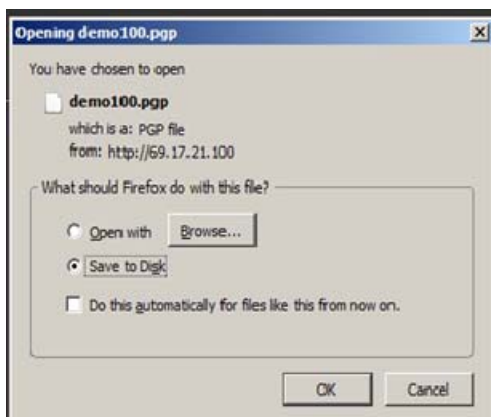


Download Public Key for this server [ebcff4b47...]

### Configuring Satellite/Navigator:

The Strand Satellite/Navigator allows access to multiple satellite sites through one central Strand 'Navigator' NVR.

- ⇒ **Log into the site that will be used as the Navigator box**
- ⇒ **Go to Admin/Advanced Setup/Satellite Navigator**
- ⇒ **Click Download Public Key link** shown at bottom of viewing area



### Configuring Satellite/Navigator:

- ⇒ Choose local drive or USB location to save download

## Satellite/Navigator: Linking Remote Site



### Configuring Satellite/Navigator:

- ⇒ After saving the download link to the Navigator NVR log out of the system
- ⇒ Enter the IP address for the remote site that will be remotely inked to the Navigator server.
- ⇒ Login with User ID and Password

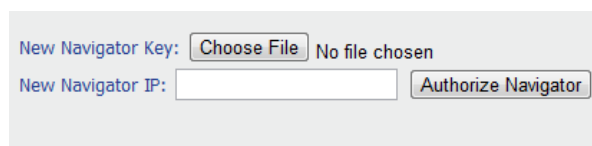


Figure 1

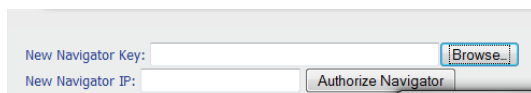


Figure 2

### Configuring Enterprise Navigator/Linking Remote Site:

- ⇒ Go to the Satellite/Navigator area through **Admin/Advanced Setup/Satellite/Navigator**
- ⇒ **Click Choose File** to locate and select the Public Key Link file that was previously saved on the local drive or USB key
- ⇒ **Click Open**
- ⇒ Type in the IP address of the Navigator Box in the 'New Navigator IP' space provided
- ⇒ **Click Authorize Navigator**

## Satellite/Navigator

user:	<input type="text" value="Remote"/>
user name:	<input type="text" value="Remote User"/>
user expires:	<input type="text"/>
pass expires:	<input type="text"/>
lvl:	<input type="text" value="90"/>
user pri:	<input type="text" value="90"/>
user timeout:	<input type="text" value="0:20"/>
video timeout:	<input type="text" value="0:05"/>
<input type="button" value="Add"/>	

### Configuring Satellite Navigator:

- ⇒ The IP address will now appear under “Navigator IP Key Length”
- ⇒ **Go to Admin/Advanced Setup/Maintain Users**
- ⇒ **Click Add New User**
- ⇒ Create a user with the name “remote”. Give the user the name remote and then complete the required “lvl” and “user pri” fields
- ⇒ **Click Add**



### Configuring Satellite Navigator:

- ⇒ Users are now able to add maps to the system. One overlaying map is added to satellite links to navigate to other remote sites. **Please refer to the adding maps portion in Guided Setup for adding floorplans/maps**
- ⇒ Example: USA is the overlaying map with satellite links to regional sites such as the state map of Florida and then the city of Orlando within the state

## Satellite/Navigator

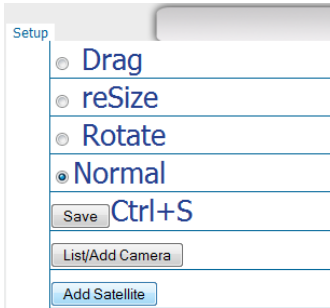


Figure 1

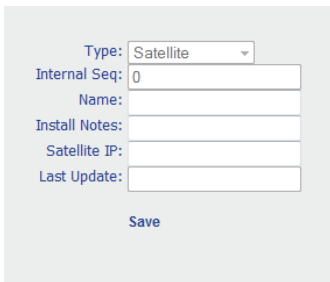
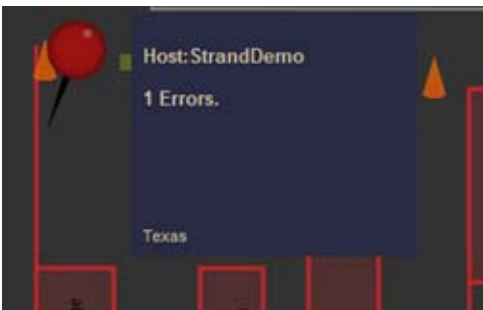


Figure 2

### Configuring Satellite Navigator:

- ⇒ To activate a link from the navigator box to the regional site
- ⇒ **Click Map** from the tool bar and choose the overlay map
- ⇒ **Click Icon Setup** in the top right hand corner of the viewing screen
- ⇒ Click **Add Satellite** at the bottom of the Setup list (figure 1)
- ⇒ Enter the information for the satellite icon in the space provided and Click Save
- ⇒ Enter the Satellite IP Address
- ⇒ **Click Save**



### Configuring Satellite Navigator:

- ⇒ After saving the Satellite site a 'Pin Icon' will appear on the map
- ⇒ Move the Pin Icon to the corresponding position on the map just as you would a camera icon
- ⇒ **Click Setup**
- ⇒ **Click Save**
- ⇒ **Configuration for that location is complete**
- ⇒ **Repeat the steps to add locations**

## Raid Mirror Status/LDAP Mgmt

```

/dev/md0:
  Version : 00.90
  Creation Time : Tue Jan 26 15:43:32 2010
  Raid Level : raid1
  Array Size : 2048192 (2000.52 MiB 2097.35 MB)
  Used Dev Size : 2048192 (2000.52 MiB 2097.35 MB)
  Raid Devices : 2
  Total Devices : 2
  Preferred Minor : 0
  Persistence : Superblock is persistent

  Update Time : Mon Sep 20 15:16:56 2010
  State : clean
  Active Devices : 2
  Working Devices : 2
  Failed Devices : 0
  Spare Devices : 0

    UUID : 6cce780b:ea3c315d:812fedd6:f8ea78b9
    Events : 0.390

   Number   Major   Minor   RaidDevice State
    -----   -----   -----   -
    0         8         2         0      active sync  /dev/sda2
    1         8        18         1      active sync  /dev/sdb2

```

Force Device Add

### Admin/Advanced Setup/Raid Mirror Status:

- ⇒ Select Admin/Advanced Setup/Raid Mirror Status to view status information for the mirrored copies of the configuration file. This is a Linux software raid mirror for only the configuration file.



Ldap is NOT enabled

Enable Ldap: ☒

Ldap.conf:

### Admin/Advanced Setup/Ldap Mgmt:

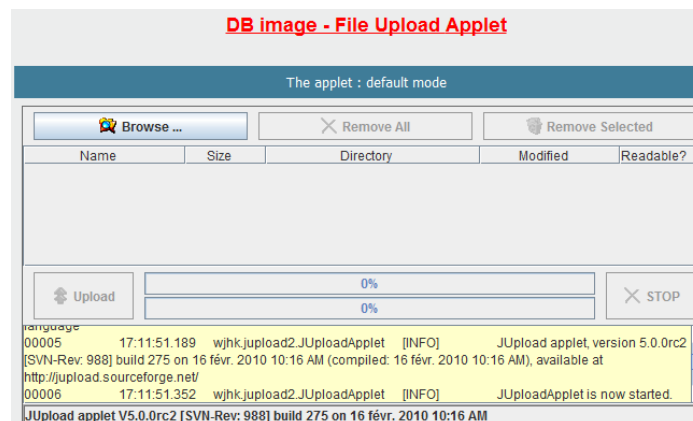
- ⇒ LDAP Mgmt allows for user authentication to be passed to an external management system.
- ⇒ Select **Admin/Advanced Setup/Ldap Mgmt** and Enable Ldap and enter the ldap configuration
- ⇒ Not all systems will utilize Ldap. If an LDAP configuration is to be setup the System Administrator will need to provide necessary information to proceed

## Config Backup/Restore

Backup requested. Download should begin shortly.

### Admin/Advanced Setup/Configuration Backup and Configuration Restore

- ⇒ Select Admin/Advanced Setup/Configuration Backup allows a copy of the configuration file to be backed up to remote media
- ⇒ The message “Backup requested. Download should begin shortly” will appear



### Admin/Advanced Setup/Configuration Restore

- ⇒ Select Admin/Advanced Setup/Configuration Restore to restore a system configuration from a previously saved configuration backup



# Appendix A

## System Troubleshooting



# System Troubleshooting

## Materials Needed

Laptop  
Camera Software  
Cross-Over Cable  
Patch Cable  
PoE Injector  
Miscellaneous Tools to Access the Camera Directly

### Checklist to troubleshoot cameras offline in Strand:

- ☐ Camera has power
- ☐ Camera is connected to the network
- ☐ Camera settings are correct directly on the camera
- ☐ Camera has live video within camera interface
- ☐ Camera settings are correct within Strand

## How to check if a camera is receiving power

When troubleshooting an IP camera always begin with verification that the camera is receiving power.

1. If the camera is powered by a commercial 12/24 volt power supply (models may vary) and there is no link light on the switch port, then check the fuses within the power supply. **Replace any bad fuses and verify link light on the switch port. If there is not a link light, then unplug the Cat5 cable directly from the camera and connect the Cat5 cable into a known working camera and a working switch port. If that camera powers up, then the cable is good and the camera needs to be replaced.**
2. If the camera is powered over PoE, then disconnect the camera from the PoE injector and replace it with another known working camera in that port. **If there is still no link light, then the issue is more than likely due to a bad port.**
3. If there is a link light for the known working camera in the original unresponsive camera switch port, then connect the original unresponsive camera into a known working port. **If there is still not a link light, then the issue is more than likely a bad camera and in some instances a bad cable.**
4. To verify that a camera needs to be replaced, go directly to the camera and unplug the Cat5 cable from the camera and plug the Cat5 cable into a known working camera and a working switch port. **If that camera powers up, then the cable is good and the camera needs to be replaced.**

## System Troubleshooting

### How to verify correct network connectivity

Verifying a camera is online at the correct IP address and on the correct subnet can be done by running a *ping* command for the camera IP address through the network. This can be done remotely if remote access is available to the network.

If the switch ports are not available remotely, then perform the following steps directly at the switch where the camera is located:

1. Use a laptop and make sure the laptop is set to obtain an IP address automatically.  
\*If the switch port does not provide a DHCP address, then consult the network configurator.
2. Trace the cable from the PoE injector/patch panel to the switch port.
3. Disconnect the camera's patch cable from the switch port.
4. Connect a patch cable from the laptop to the switch port that the camera was previously.
5. Open a DOS window and run the *ipconfig* command.
6. Verify that the laptop is receiving an DHCP address that is on the same subnet that is hosting the camera. (EX: If the camera is suppose to be on a 10.11.12.xx subnet and the laptop gets assigned an IP address of 10.11.13.xx, then that port on the switch is not set to the correct 10.11.12.xx subnet)

**If the switch port is not set to the correct subnet, then the problem is a network issue that needs to be resolved. If the switch port is set to the correct subnet and you cannot see the camera through a ping, then further troubleshooting is needed.**

### How to verify camera settings

If the camera is being diagnosed remotely, connect to the camera through a web browser at the assigned IP address while logged into the network remotely. If the camera cannot be connected to at the given IP address then support will have to be done on site.

1. While on site, set a laptop to a static IP that corresponds to the same subnet as the network that is hosting the camera.
2. Ensure that the laptop has the correct camera management software downloaded.
3. Locate the camera on the PoE power injector or patch panel in the IDF.

## System Troubleshooting

If the camera is not labeled, it can be found by using the PoE injector or patch panel:

- ⇒ Disconnect the cable that connects the switch to the PoE injector data port or patch panel.
- ⇒ If a camera is running on a PoE switch or individual power supply, then a single port PoE injector will need to be utilized. Disconnect the cable from the non-PoE switch and plug it into the DATA/Power portion of the PoE injector and connect the laptop to the DATA port of the PoE injector and continue
- ⇒ Connect a cross-over cable from the laptop to the DATA port on the PoE injector or patch panel.
- ⇒ Run the camera software to locate the camera IP address on the network.
- ⇒ Match the MAC address from the camera in the camera management software to the camera that needs to be diagnosed. (MAC addresses for cameras can be found on the Add/List Camera on the setup page in the Strand system)
- ⇒ Continue the process until the correct camera is identified.

4. Use the camera software to locate and connect to the camera. Please see the camera manufacturer's instruction guide on how to connect to cameras

- 5) To login to a camera, most cameras have an admin password that will need to be entered to access the camera. The camera password that has been set in the Strand system can be found under the Admin tab/Initial Setup/Camera Passwords. The password is written username:password. (ex: root:vpas)
- 6) Once connected to the camera, verify that the camera has the following:
  - a) Live video (*If no video is being displayed then proceed to section 4*)
  - b) Encoding in MJPEG
  - c) Correct Network Settings (IP Address, Subnet Mask, Gateway, DNS, etc...)
  - d) A secondary/viewer user and password

View the users on the camera and make sure that the passwords for the admin and viewer/secondary user are corresponding. If there is not a secondary/viewer user, then one will need to be created to correspond with the password on the Strand system. Please see the camera manufacturer's instruction guide on how to verify these settings

**If all these settings are correct then proceed to check the settings within the Strand software.**

## System Troubleshooting

### How to diagnose no video displaying directly on the camera

If you can connect to a camera directly, but do not see video, the easiest fix in most instances is to power cycle the camera.

1. Disconnect the power to the camera and give it 30 seconds, and then restore the power.
2. If the video still does not come back up, then reset the camera. The majority of IP cameras have a reset button or a function within the software that will allow for the camera to default back to the factory settings. You will have to reconfigure the cameras with all the settings required to bring the camera back online. Please see the camera manufacturer's instruction guide on how to reset a camera.

**After the camera has been reset and the video still does not come up the camera more than likely needs to be replaced.** Please see the contact the camera manufacturer for further troubleshooting and warranty inquiries.

### How to verify camera settings within Strand

If all settings are correct at the camera level, then it is possible that settings in the Strand system had been changed.

Steps may vary depending on the Strand's system version

#### Camera Passwords

1. Enter the administration setup portion of the Strand software. *Please refer to the Strand manual on how to access this portion of the software for your system version.*
2. Go to Admin/Initial Setup/Camera Passwords and verify that the passwords set on the cameras coincide with the passwords directly on the cameras.  
\*If passwords are correct and the camera is not showing video within Strand then proceed to verify the camera settings in Strand.

# System Troubleshooting

## Camera Settings in Strand Setup

1. Enter setup mode by going to Admin/Initial Setup/Enter Setup Mode.
2. Once in setup mode go to the Map and select the floor plan name that the non-responsive camera is located and click on the Setup button on the top left hand side of the screen.
3. Click on List/Add Camera.
4. Click on the camera name of the unresponsive camera.
5. Verify that all camera information at the top of the page (Camera Name, Pull Code, MAC Address, IP Address, Camera Model, etc...) are correct.
6. Verify that the data directories are assigned to the camera.
  - ⇒ While on the List/Add camera page, click on the camera name
  - ⇒ Data directories should then populate below the Save Changes to Existing Camera button.
  - ⇒ If there is no directory assigned, then click on Manage Capture Datadirs
  - ⇒ Assign a quota of days and storage based on the server capacity

## Restart Jobs

This will restart the server and refresh all pending jobs.

**Go to: Admin/Initial Setup/Restart Jobs**

It will take a few minutes for the system to come back up. There is no notification that system has restarted and connectivity is restored.

## Re-Licensing the Server

1. Go to Admin/Initial Setup/Software Version.
2. Click on User License Info and fill in the required fields.
3. Click "Request Signed License". Licensing a DNA box will generate the license and send it to the supplied email address. Licensing an Enterprise Strand system will allow for the file to be saved and then attached to an email.
4. Send the Enterprise license request to your Strand representative for it to be signed.

## System Troubleshooting

1. Once the signed license request is returned, download the file to the workstation that will be accessing the system.
2. Go to the Strand system and go to Admin/Initial Setup/Software Version.
3. Browse to the signed license file and Upload.

It will take a few minutes for the license to take effect. There is no notification that system has restarted and license has been activated.

The camera should be online and recording once all the steps to diagnose a camera have been performed.

For further assistance on resolving camera issues, contact **Strand Technical Support at 877-877-7111**.



# strand

877.877.7110

**[www.strandusa.com](http://www.strandusa.com)**

Strand Quick Start Guide: v2018