C H A P T E R 5

System Information

When you click the **System Information** button in the navigation pane, you are taken to the System Information Summary page. The navigation bar across the top contains links to this section's subpages.

- **System Info** links to Summary Information
- **Enviro Info** links to Environmental Information
- **Network Info** links to Network Information
- **Network Services** links to Network Services
- **Network Stats** links to Network Statistics
- **Problems** links to Summary of System Problems
- **Event Log** links to Event Log
- **Multi View** links to Multiple View HTML Builder
- **Key** links to Icon Key

Summary Information

Clicking **System Information** takes you to the Summary Information page, which displays information about the storage system's main unit.

📝 **Note**   Only the main unit's information is displayed.

The displayed information includes the following:

Field Label	Description
System	The storage unit's family model (CPS-SS-4RU).
System ID	The unit's unique system identifier.
System Mode	Displays the controller failover configuration.
Active Controllers	Displays the number of active RAID Controllers in the system.
Enclosure Type	Displays the physical attributes of the system, including its U-height.
Host fibre/SAS/10Ge iSCSI connection	Displays the configuration of the Fibre Channel, SAS-to-Host, or 10GbE iSCSI connection.

Field Label	Description
Host iSCSI connection	Displays the configuration of the iSCSI connection.
System Time	Displays the current date and time according to the unit's internal clock.
Controller Status	Displays the current status of each RAID Controller (Up or Down) as well as which controller is primary (Master or Slave, see RAID Array Ownership, page 6-4)
Controller up time	Displays the total amount of time that each RAID Controller has been running continuously.
Firmware revision	Displays the firmware version that each RAID Controller is running.
Boot Loader revision	Displays the revision number of the boot loader.
Emergency revision	Displays the version number of code used for alternative system booting. Booting the system into Emergency mode allows you to upload a main firmware file if the main firmware gets corrupted during upload or if it contains a bug that prevents the normal uploading of new firmware.
Controller Serial Number	Displays the serial number of each RAID Controller.
Cache	Indicates the total cache size in megabytes (MB), whether the cache is enabled, its mirroring status, its streaming mode, and its FUA status.

Environmental Information

Clicking **System Information > Enviro Info** takes you to the Environmental Information page, which displays the values of various environmental sensors throughout the unit. Each item displays its status (**OK** or **FAULT**) and related information, if any. The information is arranged by component, and different units will display this information in different arrangements.

If an expansion unit is attached to the main unit, a **Next Enclosure >** link is displayed. Click it to be taken to the Environmental Information page for the expansion unit.

For power supply units (**PSU 0** and **PSU 1**), the following information is displayed:

- **State**: The overall status of the power supply unit.
- **Temperature**: The current temperature of the power supply unit.
- **Blower***N*: The current RPMs of the designated PSU fan.
- For CPS-SS-4RU and CPS-SS-4RU-EX units, the following additional information is displayed:
  - **3V3/12V Current**: The electrical current being supplied from each output of the PSU.
  - **PSU Power**: The power of the PSU in Watts.

For RAID Controllers and Expansion Controllers (**Controller 0** and **Controller 1**), the following information is displayed:

- *XX* **rail voltage**: The voltage of each rail in the Controller.
- **CPU core voltage**: The core voltage of the Controller's central processing unit (CPU).
- For CPS-SS-4RU-EX expansion units, the following additional information is displayed:
  - **Controller temperature**: The current temperature of the Expansion Controller.
- For CPS-SS-4RU units, the following additional information is displayed:

  – **Pcb/CPU/SAS/EXP temperature**: The current temperature of the printed circuit board, CPU, expansion port controller, and expander in the RAID Controller.

  – **Battery status**: The charge status of the cache battery.

For CPS-SS-4RU units, the following information for the active drive drawers (**Pod _N_**) is displayed:

* **Power Module A/B**: The status of power modules A and B in the active drive drawer.

* **Front Panel Blower 0**: The current RPMs of the fan in the front of the active drive drawer.

* **Rear Blower 0/1**: The current RPMs of the fan in the back of the active drive drawer.

* **Power Pod Internals**: The status of internal power components in the active drive drawer.

* **Pod Temp (Exp A B)**: The current temperature of each expander (A and B) in the active drive drawer.

* **Pod Temp (Pcb A B)**: The current temperature of each printed circuit board (A and B) in the active drive drawer.

For CPS-SS-4RU-EX expansion units, the following information for the active drive drawers (**Pod _N_**) is displayed:

* **Power Module A/B**: The status of power modules A and B in the active drive drawer.

* **Front Panel Blower 0**: The current RPMs of the fan in the front of the active drive drawer.

* **Rear Blower 0/1**: The current RPMs of the fan in the back of the active drive drawer.

* **Pod Temp (Back/Front)**: The current active drive drawer temperature, as measured at the front and the back of the drawer, respectively.

If a **FAULT** occurs in a field-replaceable module, refer to the unit's Hardware Manual for instructions on how to replace the module. If a **FAULT** occurs in a component that is not field-replaceable, contact Technical Support for instructions (see Chapter 12, "Technical Support").

Network Information

Clicking **System Information > Network Info** takes you to the Network Information page, which displays LAN information for both the management and iSCSI network ports. This information is arranged by RAID Controller and then by port.

On CPS-SS-4RU units, the Management Console connection is provided by the dedicated Management port.

✎
Note   SAS drives are not supported with the Cisco Video Surveillance Storage System. iSCSI is supported on Cisco Video Surveillance Systems (VSM) deployed as a Virtual Machine for VSM releases 7.2 or higher.

Regardless of the unit being examined, this page provides the same information about each port:

Field Label	Description
Port Status	Displays the current speed and duplex setting for the port. If the port is not active, "Link Down" is displayed.
IP address assignment	Indicates whether the port's IP address is assigned automatically ("DHCP") or manually ("Static IP").
Port IP address	Displays the current IP address of the port.

Field Label	Description
Subnet mask	Displays the current subnet mask.
Gateway IP address	Displays the configured gateway IP address.
Primary DNS IP address	Displays the IP address of the primary domain name service (DNS) server. This setting only applies to the management port (**Net 0** or **Management**).
Secondary DNS IP address	Displays the IP address of the secondary (backup) DNS server. This setting only applies to the management port (**Net 0** or **Management**) and is not required.
Hostname	Displays the default or user-assigned host name of the port.
Ethernet address	Displays the physical ethernet (MAC) address of the port.
Port Mode	Displays the speed and duplex configuration settings for the port, either automatic or fixed.
Jumbo Frames	Indicates whether or not jumbo frame usage has been enabled for the iSCSI port. This setting does not apply to the **Management** port on a CPS-SS-4RU.

These settings can be configured or changed as follows:

- For CPS-SS-4RU units, the settings for the **Management** port are configured on the Configure Network Settings page (see Configure Network Settings, page 11-1).

Network Services

Clicking **System Information > Network Services** takes you to the Network Services page, which provides information about various network and system services. It displays the following information:

E-Alerts

E-Alerts	
Item	Contents
When to send E-alerts	Indicates when alert emails are sent: on errors; on warnings and errors; on information, warnings, and errors; or for all events. It can also be set to Disabled, meaning that no email alerts are sent.
Send automatic status emails	Indicates how often status emails are sent: every day, every two days, every four days, weekly, or monthly. It can also be set to Disabled, meaning that no email status updates are sent.
Recipient email address *N*	The email addresses that alerts and statuses are sent to.
Sender email address	The email address that alerts and statuses are sent from.
Friendly name	The user-defined "friendly" name of the system.
SMTP server	The IP address or DNS name of the SMTP email server.
Current emailer status	Indicates how many emails are queued to be sent.

SNMP Traps

SNMP Traps	
Item	**Contents**
IP address *N* for SNMP traps	The IP address that SNMP traps will be sent to. One or two IP address can be specified.
Community string	The SNMP password. By default, this is "public".
Trap version	The type of SNMP trap that is sent: SNMPv1 (abbreviated "1") or SNMPv2c (abbreviated "2c").
Test String	Text that is sent to test the SNMP trap.
When to send SNMP traps	Indicates when SNMP traps are sent: on errors; on warnings and errors; on information, warnings, and errors; or for all events. It can also be set to Disabled, meaning that no SNMP traps are sent.

SNMP trap settings are configured on the SNMP/SYSLOG Settings page (see SNMP/SYSLOG Settings, page 11-2).

Time Server

Time Server	
Item	**Contents**
Auto set time and date	Indicates whether the time and date are configured to be automatically updated by a time server.
Timer Server Protocol	The method by which the time server updates the unit's time and date: Daytime or SNTP.
Selected time server	The IP address of the time server.
Daytime server date and time format	The date and time format used by the Daytime time server. Not applicable if an SNTP time server is used.
Retrieved daytime server data	The retrieved data from the Daytime time server. Not applicable if an SNTP time server is used.

Time server settings are configured on the Configure Time and Date page (see Configure Time and Date, page 11-3).

Security

Security	
Item	**Contents**
ADMIN account login	Indicates whether or not a password is required for the ADMIN account. If a password is required, but the default password has not been changed, "Password is default" is displayed.

USER account login	Indicates whether or not a password is required for the USER account. If a password is required, but the default password has not been changed, "Password is default" is displayed.
GUI mode	Indicates the current Management Console restrictions. If there are none, "Full GUI access" is displayed.

Security settings are configured on the Password Configuration page (see Security Settings, page 11-4).

SSL

SSL	
Item	Contents
SSL certificate	Indicates the type of SSL certificate currently in use, and also provides a download link for the current certificate.
SSL mode	Indicates what kinds of browser connections are allowed for the storage unit: "HTTP only", "HTTPS only", and "HTTPS or HTTP".
Certificate mode	Indicates the current certificate mode.

SSL settings are configured on the SSL Configuration page (see SSL Configuration, page 11-5).

GUI Settings

GUI Settings	
Item	Contents
Webpage refresh	The current page auto-refresh setting.
Colored array text	Indicates whether different arrays are displayed with different colored text.
JavaScript enhancements	Indicates whether JavaScript is currently being used in the GUI.
JavaScript RAID icon info	Indicates whether JavaScript is being used for RAID icon help.
Reduce scrolling by using submenus	Indicates whether optional submenus are being used in the GUI.
Reduce scrolling by showing less info	Indicates whether pages are displayed with reduced information.

GUI settings are configured on the GUI Settings page (see GUI Settings, page 11-6).

Network Statistics

Clicking **System Information > Network Stats** takes you to the Network Statistics page, which displays information about network packets. The information is arranged by controller and port. The information provided for each controller and port is as follows:

- **Transmitted Packets**: The number of packets transmitted by the port.
- **Transmitted Errors**: The number of transmission errors reported by the port.
- **Received Packets**: The number of packets received by the port.
- **Received Errors**: The number of reception errors reported by the port.

Summary of System Problems

Clicking **System Information > Problems**, the "Failure" indicator in the upper right corner of any page, or the **Problem Summary** button on the Home page takes you to the Summary of System Problems page, which displays a list of any current problems that the unit is experiencing.

Each problem that the unit is experiencing is listed, with a **Number** indicating its order of occurrence and a **Description** that gives a summary of the problem and the component that it is related to.

Clicking the **Beacon** button causes the LEDs on the front of the unit to flash for one minute. This can help in locating a specific unit in a large installation where multiple Cisco Video Surveillance Storage System units are located.

Clicking the **Silence Alarm** button causes the audible alarm on the unit to stop sounding.

Note   If further problems occur, the audible alarm will sound again.

More information about each problem can be obtained by going to the information page for the indicated component (see Chapter 4, "RAID Information" and other sections in this chapter).

Event Log

Clicking **System Information > Event Log** takes you to the Event Log page, which displays the event log for the unit. This log can be used to find information about configuration changes, data errors, hardware failures, and other events experienced by the storage unit (and expansion unit, if present).

Event log entries follow a standard format:

- Event number: The reference number for the event, in reverse order of occurrence (event 0000 is the most recent event).
- Controller number: The RAID Controller that the event is related to.
- Event date: The date and time of the event's occurrence, in "dd-mmm-yyyy at hh:mm:ss" format.
- Event type: The broad category that the event falls into:

    – Errors (**E**) are serious problems that likely require user intervention and may compromise data. Examples include a failed disk, a RAID Controller going offline, or a fan problem.

    – Warnings (**W**) are problems that may indicate an imminent failure, but are themselves unlikely to compromise data. Examples include excessive temperature, firmware errors, or disk block failures.

    – Information (**I**) events indicate items of interest to the user. Examples include RAID array creation or deletion, verification scan start and stop, or a new disk being inserted.

    – System (**S**) events are lower-level information events. Examples include port status, IP address changes, or RAID array initialization messages.

- Port number: For events that pertain to a particular port, the number of the port.
- Event description: A brief description of the event.

The event log can be filtered and formatted using the controls under **Display Options**:

- **Filter by Controller**: Show events for **Controller 0**, **Controller 1**, or both RAID Controllers.
- **Filter by Date**: Show events from the last day, week, or month; or show all entries.
- **Filter by Importance**: Show only error events (**E**); errors and warnings (**E** & **W**); errors, warnings, and information events (**E**, **W**, **I**); or all events (**E**, **W**, **I**, **S**).
- **Date Format**: Show dates in one of three formats:

    – **dd-mmm-yyyy at hh:mm:ss** (international format, the default)

    – **dd/mm/yyyy hh:mm:ss** (European format)

    – **mm/dd/yyyy hh:mm:ss** (North American format)

- **Show event icons**: Display icons for each event category at the beginning of each event entry. Icons are color coded: pink for system events, blue for information events, yellow for warnings, and red for errors. This option is deselected by default.

Note   If Show event icons is selected, the Event type is not displayed after the Event date.

- **Show controller colours**: Display events for Controller 0 in black and events for Controller 1 in blue. This option is selected by default.

General Configuration

Clicking the **General Configuration** link on the Event Log page displays a text-based summary of the current system configuration.

Volume and Host Access

Clicking the **Volumes & Host Access** link displays a text-based volume mapping and host access summary.

Disk Configuration

Clicking the **Disk Configuration** link displays a text-based summary of disk information.

Download Event Log Files

You can download the Event Log, General Configuration, Volumes & Host Access, and Disk Information files in text format by clicking the **Download log/config dump as text** link. You can download them as an HTML file by clicking the HTML link in parentheses next to it.

Multiple View HTML Builder

Clicking **System Information > Multi View** takes you to the Multiple View HTML Builder page. From this page, you can create an HTML page that displays a summary of multiple Cisco Video Surveillance Storage System units. You can do this in several ways:

- You can enter an IP address range in the **From IP address** and **To IP address** fields and click the **Scan A Range** button.
- You can scan the entire subnet for Cisco Video Surveillance Storage System units by clicking the **Scan The Subnet** button.
- You can enter the IP addresses of up to sixteen individual Cisco Video Surveillance Storage System units and up to four discrete IP address ranges, then click the **Build Multiple View Page** button.

Whichever method you choose, a link page is displayed after the button is clicked. Depending on the number of Cisco Video Surveillance Storage System units being displayed, this page may take as much as a few minutes to be displayed. Click the **Click here to display the multiple view page** to view an HTML page with a summary of all of the units you asked to have displayed.

Note Alternatively, you can right-click the **Click here to display the multiple view page** and select **Save Target As** or **Save Link As** to save the HTML summary to your computer.

The multiple view page shows a summary of each scanned device. This summary includes RAID status, fan status, PSU status, overall status, system type, unit serial number, firmware revision, total storage capacity, the number of configured arrays, the number of spare disk drives, and the time and date of the scan. Clicking the IP address or the summary takes you to the Login page for that unit.

Icon Key

Clicking **System Information > Key** takes you to the Key page, which displays a legend of the various icons used throughout the Cisco Video Surveillance Storage System Management Console.

System Health Monitoring

The CPS-SS-4RU allows the health of a system to be monitored in four different ways:

- The automated email health notification function can be enabled when a unit is deployed.
- The system provides visual clues through LEDs and the Web GUI.
- An audio alarm is available to determine the overall health of the system.
- The systems logs contain a running total of all events that have occurred on the unit related to power, such as supplies, network, and thermals.