Viewing Inventory Data and Faults

This chapter contains the following topics:

Viewing Rack-Mount Server Details

Perform this procedure when you want to view the details for a rack mount server, such as memory, CPUs, and PSUs used in the server.

Note You can also select **Rack Groups** and perform the procedure to view the rack-mount server details.

Before you begin

Ensure that the server is already added as a Rack Account under a Rack Group.

Step 1 Choose **Systems** > **Inventory and Fault Status**.

Step 2 Expand **Rack Groups** and select the rack group that contains the server.

Step 3 On the selected rack group page, click **Rack Servers**.

Step 4 Double-click the server in the list to view the details, or select the server in the list and click the down arrow on the far right, then choose **View Details**.

Note You cannot see the down arrow on the far right until you select a server from the list.

The following details are available for a rack-mount server:

Tab	Description
Summary	An overview of the rack account.
CPUs	The details of the CPU used in the server.

Tab	Description
Memory	The details of the memory used in the server.
PSUs	The details of the power supply unit used in the server. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.
PCI Adapters	The details of the PCI adapters used in the server.
VIC Adapters	The details of the VIC adapters used in the server. Select any of the VIC Adapters listed and click **View Details** to view information such as **External Ethernet Interfaces** and **VM FEXs**.
Network Adapters	The details of the network adapters used in the server. Select any of the Network Adapters listed and click **View Details** to view information on **External Ethernet Interfaces**.
Storage Adapters	The details of the storage adapters used in the server. Select any of the Storage Adapters listed and click **View Details** to view information such as **Controller Info** and **Physical Drives**, and **Virtual Drives**. See, Viewing Smart Information for SSD, on page 3.
FlexFlash Adapters	The details of the FlexFlash adapters used in the server. Select any of the FlexFlash Adapters listed and click **View Details** to view information such as **Controller Info** and **Physical Drives**. If you are upgrading Cisco IMC Supervisor from a previous version, you must run the inventory by going to **Systems** > **Physical Accounts** > **Rack Accounts** > **Inventory**, or wait for the periodic inventory to run, for the FlexFlash details to appear in the report. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.
Communication	The information on the protocol, such as HTTP, HTTPS, SSH, IPMI Over LAN, NTP, and SNMP.
Remote Presence	The details of vKVM, Serial Over LAN, and vMedia.
Faults	The details of the faults logged in the server.
Users	The details about users under **Default Group**. You can also view the strong password policy and password expiration details that you have set while creating a user policy and password expiration policy respectively. See, User Policy and Password Expiration Policy. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.
Cisco IMC Log	The details of the Cisco IMC logs for the server. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.
System Event Log	The details of the server logs. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.

Tab	Description
TPM	Information on the TPM inventory.
BIOS	Details about the BIOS settings and Boot Order for the server. Select the server and click on **View BIOS Settings**, **View Boot Settings**, or **View Boot Order**.
Fault History	Historical information on the faults that occurred on the server.
Tech Support	Details about the tech-support log files, such as the file name, destination type, and status of the upload are displayed in the **Tech Support** table. An option to export the tech-support log files to a remote server or on the local Cisco IMC Supervisor appliance is available. For more information about exporting, see Exporting Technical Support Data to a Remote Server. **Note** Not applicable for Cisco UCS S3260 dense storage rack server.
Host Images	Details of an image such as name, size, MD5 checksum, last modified time, and if the image is mapped are displayed. You can select an image and click **Map Image**, **Unmap Image**, and **Delete Image** to perform the various actions. **Note** Host image mapping is applicable only for E-Series servers.
Associated Hardware Profiles	Details of policies that are associated to a hardware profile.

Step 5 Click the **Back** button on the far right to return to the previous window.

Viewing Smart Information for SSD

Perform this procedure when you want to view smart information for a Solid State Drive (SSD) under Storage Controller.

Before you begin

Ensure that the server is already added as a Rack Account under a Rack Groups.

Step 1 Choose **Systems** > **Inventory and Fault Status**.

Step 2 Expand **Rack Groups** and select the rack group that contains the SSD drive.

Step 3 On the selected rack group page, click **Rack Servers**.

Note You can also select any sub groups under **Rack Groups**.

Step 4 Double-click the server that contains SSD in the list.

Step 5 On the Rack Server page, click **Storage Adapters**.

Step 6 Double-click the SSD drive and click **Controller Info**.

The following Controller Settings are available:

- **Enable Copyback on SMART**
- **Enable Copyback to SSD on SMART Error**

Step 7 Double-click the SSD drive and click **Physical Drives**.

Step 8 Double-click the SSD physical drive and click **View Smart Information**.

The following details are available for a SSD drive:

Tab	Description
Power Cycle Count field	Number of power cycles that the drive went through from the time it was manufactured.
Power on Hours field	Total number of hours that the drive is in the 'Power On' mode.
Percentage Life Left field	The number of write cycles remaining in a solid state drive (SSD). For instance, if an SSD is capable of 100 write cycles during its life time, and it has completed 15 writes, then the percentage of life left in the drive is 85%. Each percentage range is represented in a different color. For instance, green for 75% to 100% and red for 1 to 25%. **Note** You can see a bar graph added for SSDs in **SSD - Percentage Life Left** under **Controller Info**.
Wear Status in Days field	The number of days an SSD has gone through with the write cycles. SSD vendors provide a finite number of writes per day on the SSD, based on which, you can calculate the total number of years the SSD would continue to work.
Operating Temperature field	The current temperature of the drive at which the selected SSD operates at the time of selection.
Percentage Reserved Consumed field	The total capacity (out of the percentage reserved for it)consumed by the SSD.
Time of Last Refresh field	Time period since the drive was last refreshed.

Step 9 Click **Close**.

Note On the Storage Adapter page, click **Controller Info** to view the controller settings such as **Percentage LIFE LEFT**, **Enable Copy back on SMART**, and **Enable Copy back to SSD on SMART Error**.

Overview of Controller Drive Security

Self-Encrypting Drives (SEDs) are used for encrypting data while writing it onto the drives and decrypting them before reading the data. This ensures that the data on the drives are secure. Cisco IMC Supervisor supports enabling security at the controller, physical drive, and virtual drive level for this feature.

The controller level security has two options, Remote Key Management and Local Key Management. For Remote Key Management, the Security KeyId and the Security Key are retrieved from the KMIP server. In

case of Local Key Management, the Security KeyId and the Security Key are either provided by you or provided as a suggestion from the CIMC server. These parameters are used to secure data on the drives.

The physical drive level security can have the SED drives in locked and foreign locked state. The locked state indicates that the drives have been locked with the security key of the controller in this server. The foreign locked state indicates that the drives are locked with the security key of another controller but the drives are placed in this controller. Unlocking the foreign locked drives require the security key of that controller. Once unlocked you can perform any security related operations on the drive.

Note Cisco IMC Supervisor supports only Local Key Management and not Remote Key Management. See, Viewing Controller Drive Security Details, on page 5.

Viewing Controller Drive Security Details

Perform this procedure when you want to view the controller drive security details under **Controller Info**, **Physical Drives**, and **Virtual Drives**.

Before you begin

The M4 rack-mount server or the UCS S3260 storage server must have SED connected in it.

Step 1 Choose **Systems** > **Inventory and Fault Status**.

Step 2 Expand **Rack Groups** and select the sub rack group.

Step 3 Click **Rack Servers**.

Step 4 Double-click the server.

Step 5 On the Rack Server page, **Storage Adapters**.

Step 6 Double-click the selected server or click **View Details**.

Step 7 On the Storage Adapter page, click **Controller Info**.
The following details are available for a SSD drive:

Tab	Description
Power Cycle Count field	Number of power cycles that the drive went through from the time it was manufactured.
Power on Hours field	Total number of hours that the drive is in the Power On mode.
Percentage Life Left field	The number of write cycles remaining in a solid state drive (SSD). For instance, if an SSD is capable of 100 write cycles during its life time, and it has completed 15 writes, then the percentage of life left in the drive is 85%. Each percentage range is represented in a different color. For instance, green for 75% to 100% and red for 1 to 25%. **Note** You can see a bar graph added for SSDs in **SSD - Percentage Life Left** under **Controller Info**.

Tab	Description
Wear Status in Days field	The number of days an SSD has gone through with the write cycles. SSD vendors provide a finite number of writes per day on the SSD, based on which, you can calculate the total number of years the SSD would continue to work.
Operating Temperature field	The current temperature of the drive at which the selected SSD operates at the time of selection.
Percentage Reserved Consumed field	The total capacity (out of the percentage reserved for it) consumed by the SSD.
Time of Last Refresh field	Time period since the drive was last refreshed.

Step 8 On the Storage Adapter page, click **Physical Drives**.
Details such as the controller name, physical drive number, status, health, serial number, firmware, FDE capable, FDE enabled, Secured, Locked, Foreign Locked and so on are displayed.

Step 9 On the Storage Adapter page, click **Virtual Drives**.
Details such as the virtual drive number, name, status, health, size, RAID level, Boot drive, FDE capable, FDE enabled and so on are displayed.

Step 10 Click **Submit**.

Viewing Fault Details for a Rack Mount Server

Perform this procedure when you want to view the fault details of a rack mount server such as the reason for the issue and the recommended steps to resolve the issue.

Before you begin

The server is already added as a Rack Account under a Rack Group.

SUMMARY STEPS

1. Choose **Systems** > **Inventory and Fault Status**.
2. On the Rack Groups page, click **Faults**.
3. Double-click the server from the list to view the details. You can also click the server from the list, click the down arrow on the far right and choose **View Details**.
4. Click **Close**.

DETAILED STEPS

Step 1 Choose **Systems** > **Inventory and Fault Status**.

Step 2 On the Rack Groups page, click **Faults**.

Step 3 Double-click the server from the list to view the details. You can also click the server from the list, click the down arrow on the far right and choose **View Details**.

Note You cannot see the down arrow on the far right till you select the server from the list.

The following details are available for a rack mount server:

Tab	Description
Explanation	Brief reason for the issue.
Recommendation	Steps to resolve the issue.

Step 4 Click **Close**.

Summary Reports for a Rack Group

The Inventory and Fault Status for Rack Groups page contains a list of Rack Groups. When you select groups under **Rack Groups**, a **Summary** report is available in the selected rack group page which displays the following reports:

- **Faults**—represents the overall fault count for selected rack groups. The fault counts are categorized based on their severity such as Critical, Major, Warnings, Minor, and Info.
- **Server Health**—represents the overall health status of the server. The overall server health status can be in any of the states such as Good, Memory Test In Progress, Moderate Fault, and Severe Fault.

Note The Moderate Fault and Severe Fault correlates to faults with severity as Major and Critical respectively. However, note that the sever health status will be determined based on the status reported by CIMC and this may not always have a direct mapping to the fault severities stated above. Other factors such as the fault type and associated components influence the overall server health status.

- **Chassis Health**—represents the health status of the chassis. The health status can be in any of the states such as Good, Memory Test In Progress, Moderate Fault, and Severe Fault.
- **Firmware Versions**—represents the overall server count of the firmware versions that are managed for the selected rack groups.
- **Server Models**—represents the overall server count of the models that are managed for the selected rack groups.
- **Power State**—represents the overall server count of the power state which is managed for the selected rack groups. The power states can either be On or Off.
- **Server Connection Status**—represents the overall server count of the connection status of servers for the selected rack groups. The connection status can either be Success or Failed.
- **Overview**—represents the total number of servers and number of critical faults.

Adding Email Alert Rules for Server Faults

You can create one or more email rules. For each rule, an email alert is sent when faults that match the conditions specified in alert rule are met. Perform the following procedure to receive email alerts for such faults.

Step 1 Choose **Administration** > **System**.

Step 2 Click **Email Alert Rules**.

Note The **Email Alert Rules** table displays details of an alert rule such as the email alert rule name, the alert scope, the servers and server groups you have selected for an alert rule and so on.

Step 3 Click **Add**.

Step 4 On the **Add Email Alert Rule** page, complete the following:

Field	Description
Name	Enter a unique name for the rule.
Alert Scope	Choose **System** for receiving all system level alerts for new faults discovered on any server. Choose **ServerGroup** for receiving email alerts for new faults discovered on a server which is part of the specified Rack Group. Choose **Server** for receiving email alerts for new faults discovered on a specified server.
Server Groups	If you choose the Alert Level as **ServerGroup**, this option is displayed. **a.** Click **Select**. **b.** Check one or more rack server groups in the **Select** dialog box and click **Select**. The selected server group names for which email alerts will be sent are listed next to this field.
Servers	If you choose the Alert Level as **Server**, this option is displayed. **a.** Click **Select**. **b.** Check one or more servers in the **Select** dialog box and click **Select**. The selected server names for which email alerts will be sent are listed next to this field.
Email Addresses field	The email addresses of the intended recipients of the email alert. You can enter multiple email addresses, separated by a comma.

Field	Description
Severity	Perform the following procedure to select fault severity levels for which email alerts will be sent to the email addresses configured in the **Email Addresses** field. **a.** Click **Select...**. **b.** Check one or more severity levels from the list and click **Select**. **Note** The selected values will be displayed next to the **Select...** button.
Enable Alert check box	Check this check box to enable email alerts to the configured email address.
Send alert for all faults every 24 hours check box	Check this check box to send email alerts once every 24 hours. This email alert will contain all active and open faults based on the configured email alert rule.

Note
- You can modify and delete the email alert rules. The **Edit** and **Delete** options are visible only when you select a rule. Click **Edit** and modify the required fields displayed or click **Delete** and confirm deletion.
- You can select multiple rules concurrently and click **Delete** to delete them.
- The number of email alerts sent are based on the number of rules you have created.
- If you have a system level rule present in 1.0 or 1.0.0.1, when you upgrade to 1.1, you can see that the name of the rule by default is added as **system-default**. You cannot modify the **Alert Level** field for this group, but you can delete this system level rule.