S3X60 Server Node Hardware Management

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Cisco UCS S3260 Server Node Management

You can manage and monitor all Cisco UCS S3260 server nodes in a Cisco UCS domain through Cisco UCS Manager. You can perform some server management tasks, such as changes to the power state, from the server and service profile.

The remaining management tasks can only be performed on the server.

If a server slot in a chassis is empty, Cisco UCS Manager provides information, errors, and faults for that slot. You can also re-acknowledge the slot to resolve server mismatch errors and rediscover the server in the slot.

Booting a Server from the Service Profile

Before you begin

Associate a service profile with a server or server pool.

SUMMARY STEPS

1. UCS-A# **scope org** *org-name*
2. UCS-A /org # **scope service-profile** *profile-name*
3. UCS-A /org/service-profile # **power up**
4. UCS-A /org/service-profile* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope org** *org-name*	Enters organization mode for the specified organization. To enter the root organization mode, type / as the *org-name* .
Step 2	UCS-A /org # **scope service-profile** *profile-name*	Enters organization service profile mode for the specified service profile.
Step 3	UCS-A /org/service-profile # **power up**	Boots the server associated with the service profile.
Step 4	UCS-A /org/service-profile* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example boots the server associated with the service profile named ServProf34 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServProf34
UCS-A /org/service-profile # power up
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

Acknowledging a Server

Perform the following procedure to rediscover the server and all endpoints in the server. For example, you can use this procedure if a server is stuck in an unexpected state, such as the discovery state.

SUMMARY STEPS

1. UCS-A# **acknowledge server** *chassis-num* / *server-num*
2. UCS-A*# **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **acknowledge server** *chassis-num* / *server-num*	Acknowledges the specified server.
Step 2	UCS-A*# **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example acknowledges server 1 in chassis 3 and commits the transaction:

```
UCS-A#  acknowledge server 3/1
UCS-A* # commit-buffer
UCS-A #
```

Power Cycling a Server

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **cycle** {**cycle-immediate** | **cycle-wait**}
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **cycle** {**cycle-immediate** | **cycle-wait**}	Power cycles the server. Use the **cycle-immediate** keyword to immediately begin power cycling the server; use the **cycle-wait** keyword to schedule the power cycle to begin after all pending management operations have completed.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example immediately power cycles server 1 in chassis 3 and commits the transaction:

```
UCS-A#  scope server 3/1
UCS-A /chassis/server # cycle cycle-immediate
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Shutting Down a Server

When you use this procedure to shut down a server with an installed operating system, Cisco UCS Manager triggers the OS into a graceful shutdown sequence.

Before you begin

Associate a service profile with a server or server pool.

SUMMARY STEPS

1. UCS-A# **scope org** *org-name*
2. UCS-A /org # **scope service-profile** *profile-name*
3. UCS-A /org/service-profile # **power down**
4. UCS-A /org/service-profile* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope org** *org-name*	Enters organization mode for the specified organization. To enter the root organization mode, type **/** as the *org-name*.
Step 2	UCS-A /org # **scope service-profile** *profile-name*	Enters organization service profile mode for the specified service profile.
Step 3	UCS-A /org/service-profile # **power down**	Shuts down the server associated with the service profile.
Step 4	UCS-A /org/service-profile* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example shuts down the server associated with the service profile named ServProf34 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServProf34
UCS-A /org/service-profile # power down
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

Performing a Hard Reset on a Server

When you reset a server, Cisco UCS Manager sends a pulse on the reset line. You can choose to gracefully shut down the operating system. If the operating system does not support a graceful shutdown, the server is power cycled. The option to have Cisco UCS Manager complete all management operations before it resets the server does not guarantee the completion of these operations before the server is reset.

Note If you are trying to boot a server from a power-down state, you should not use **Reset**.

If you continue the power-up with this process, the desired power state of the servers become out of sync with the actual power state and the servers might unexpectedly shut down at a later time. To safely reboot the selected servers from a power-down state, click **Cancel**, then select the **Boot Server** action.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset** {**hard-reset-immediate** | **hard-reset-wait**}
3. UCS-A /server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **reset** {**hard-reset-immediate** | **hard-reset-wait**}	Performs a hard reset of the server. Use the: • **hard-reset-immediate** keyword to immediately begin hard resetting the server. • **hard-reset-wait** keyword to schedule the hard reset to begin after all pending management operations have completed.
Step 3	UCS-A /server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example performs an immediate hard reset of server 1 in chassis 3 and commits the transaction:

```
UCS-A#  scope server 3/1
UCS-A /chassis/server # reset hard-reset-immediate
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Resetting a Cisco UCS S3260 Server Node to Factory Default Settings

You can now reset a Cisco UCS S3260 Server Node to its factory settings. By default, the factory reset operation does not affect storage drives. This is to prevent any loss of data. However, you can choose to reset these devices to a known state as well.

The following guidelines apply to Cisco UCS S3260 Server Nodes when using scrub policies:

- For Cisco UCS S3260 Server Nodes, you cannot delete storage by using the scrub policy.
- Cisco UCS S3260 Server Nodes do not support FlexFlash drives.
- For Cisco UCS S3260 Server Nodes, you can only reset the BIOS by using the scrub policy.

Important Resetting storage devices will result in loss of data.

Perform the following procedure to reset the server to factory default settings.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset factory-default** [**delete-flexflash-storage** | **delete-storage** [**create-initial-storage-volumes**]]
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **reset factory-default** [**delete-flexflash-storage** | **delete-storage** [**create-initial-storage-volumes**]]	Resets server settings to factory default using the following command options: • **factory-default**—Resets the server to factory defaults without deleting storage **Note** This operation resets the BIOS. • **delete-flexflash-storage**—Resets the server to factory defaults and deletes flexflash storage **Note** This operation is not supported on Cisco UCS S3260 Server Nodes. • **delete-storage**—Resets the server to factory defaults and deletes all storage • **create-initial-storage-volumes**—Resets the server to factory defaults, deletes all storage, sets all disks to their initial state
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits any pending transactions.

Example

The following example resets the server settings to factory default without deleting storage, and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset factory-default
UCS-A /chassis/server* # commit-buffer
```

The following example resets the server settings to factory default, deletes flexflash storage, and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset factory-default delete-flexflash-storage

UCS-A /chassis/server* # commit-buffer
```

The following example resets the server settings to factory default, deletes all storage, and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset factory-default delete-storage
UCS-A /chassis/server* # commit-buffer
```

The following example resets the server settings to factory default, deletes all storage, sets all disks to their initial state, and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset factory-default delete-storage create-initial-storage-volumes
UCS-A /chassis/server* # commit-buffer
```

Removing a Server from a Chassis

SUMMARY STEPS

1. UCS-A# **remove server** *chassis-num* / *server-num*
2. UCS-A*# **commit-buffer**
3. Go to the physical location of the chassis and remove the server hardware from the slot.

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **remove server** *chassis-num* / *server-num*	Removes the specified server.
Step 2	UCS-A*# **commit-buffer**	Commits the transaction to the system configuration.
Step 3	Go to the physical location of the chassis and remove the server hardware from the slot.	For instructions on how to remove the server hardware, see the *Cisco UCS Hardware Installation Guide* for your chassis.

Example

The following example removes server 1 in chassis 3 and commits the transaction:

```
UCS-A#  remove server 3/1
UCS-A* # commit-buffer
UCS-A #
```

What to do next

If you physically re-install the blade server, you must re-acknowledge the slot for the Cisco UCS Manager to rediscover the server.

For more information, see Acknowledging a Server, on page 2.

Decommissioning a Server

SUMMARY STEPS

1. UCS-A# **decommission server** *chassis-num* / *server-num*
2. UCS-A*# **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **decommission server** *chassis-num* / *server-num*	Decommissions the specified server.
Step 2	UCS-A*# **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example decommissions server 1 in chassis 3 and commits the transaction:

```
UCS-A# decommission server 3/1
UCS-A* # commit-buffer
UCS-A #
```

Recommissioning a Server

SUMMARY STEPS

1. UCS-A# **recommission server** *chassis-num* / *server-num*
2. UCS-A*# **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **recommission server** *chassis-num* / *server-num*	Recommissions the specified server.
Step 2	UCS-A*# **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example recommissions server 1 in chassis 3 and commits the transaction:

```
UCS-A# recommission server 3/1
UCS-A* # commit-buffer
UCS-A #
```

Turning On the Locator LED for a Server

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **enable locator-led** [**multi-master** | **multi-slave**]
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified chassis.
Step 2	UCS-A /chassis/server # **enable locator-led** [**multi-master** | **multi-slave**]	Turns on the server locator LED. The following command options are not applicable to Cisco UCS S3260 Server Nodes: • **multi-master**—Turns on the LED for the master node only. • **multi-slave**—Turns on the LED for the slave node only.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example turns on the locator LED on server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # enable  locator-led
UCS-A /chassis/server* # commit-buffer
```

```
UCS-A /chassis/server #
```

The following example turns on the locator LED for the master node only on server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope chassis 3/1
UCS-A /chassis/server # enable locator-led multi-master
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Turning Off the Locator LED for a Server

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **disable locator-led** [**multi-master** | **multi-slave**]
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis mode for the specified chassis.
Step 2	UCS-A /chassis/server # **disable locator-led** [**multi-master** | **multi-slave**]	Turns off the server locator LED. The following command options are not applicable to Cisco UCS S3260 Server Nodes: • **multi-master**—Turns off the LED for the master node only. • **multi-slave**—Turns off the LED for the slave node only.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example turns off the locator LED on server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope chassis 3/1
UCS-A /chassis/server # disable locator-led
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

The following example turns off the locator LED for the master node on server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope chassis 3/1
UCS-A /chassis/server # disable locator-led multi-master
```

```
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Resetting All Memory Errors

Use this procedure to reset all correctable and uncorrectable memory errors encountered by .

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset-all-memory-errors**
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **reset-all-memory-errors**	Performs a reset of the memory cards.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example performs an immediate hard reset of server 1 in chassis 3 and commits the transaction:

```
UCS-A#  scope server 3/1
UCS-A /chassis/server # reset-all-memory-errors
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Resetting IPMI to Factory Default Settings

Perform the following procedure if you need to reset IPMI to factory default settings.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset-ipmi**
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.

	Command or Action	Purpose
Step 2	UCS-A /chassis/server # **reset-ipmi**	Resets IPMI settings to factory default.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits any pending transactions.

Example

The following example resets the IPMI settings to factory default and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset-ipmi
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Resetting the CIMC for a Server

Sometimes, with the firmware, troubleshooting a server might require you to reset the CIMC. Resetting the CIMC is not part of the normal maintenance of a server. After you reset the CIMC, the CIMC reboots the management controller of the blade server.

If the CIMC is reset, the power monitoring functions of Cisco UCS become briefly unavailable until the CIMC reboots. Typically, the reset only takes 20 seconds; however, it is possible that the peak power cap can exceed during that time. To avoid exceeding the configured power cap in a low power-capped environment, consider staggering the rebooting or activation of CIMCs.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **scope cimc**
3. UCS-A /chassis/server/cimc # **reset**
4. UCS-A /chassis/server/cimc* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified chassis.
Step 2	UCS-A /chassis/server # **scope cimc**	Enters chassis server CIMC mode
Step 3	UCS-A /chassis/server/cimc # **reset**	Resets the CIMC for the server.
Step 4	UCS-A /chassis/server/cimc* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example resets the CIMC for server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # scope cimc
UCS-A /chassis/server/cimc # reset
UCS-A /chassis/server/cimc* # commit-buffer
UCS-A /chassis/server/cimc #
```

Resetting the CMOS for a Server

Sometimes, troubleshooting a server might require you to reset the CMOS. Resetting the CMOS is not part of the normal maintenance of a server.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset-cmos**
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified chassis.
Step 2	UCS-A /chassis/server # **reset-cmos**	Resets the CMOS for the server.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example resets the CMOS for server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset-cmos
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Resetting KVM

Perform the following procedure if you need to reset and clear all KVM sessions.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **reset-kvm**
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **reset-kvm**	Resets and clears all KVM sessions.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits any pending transactions.

Example

The following example resets and clears all KVM sessions and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # reset-kvm
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Issuing an NMI from a Server

Perform the following procedure if the system remains unresponsive and you need Cisco UCS Manager to issue a Non-Maskable Interrupt (NMI) to the BIOS or operating system from the CIMC. This action creates a core dump or stack trace, depending on the operating system installed on the server.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **diagnostic-interrupt**
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **diagnostic-interrupt**	
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits any pending transactions.

Example

The following example sends an NMI from server 1 in chassis 3 and commits the transaction:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # diagnostic-interrupt
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Recovering a Corrupt BIOS

On rare occasions, an issue with a server may require you to recover the corrupted BIOS. This procedure is not part of the normal maintenance of a server. After you recover the BIOS, the server boots with the running version of the firmware for that server.

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-num* / *server-num*
2. UCS-A /chassis/server # **recover-bios** *version*
3. UCS-A /chassis/server* # **commit-buffer**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-num* / *server-num*	Enters chassis server mode for the specified chassis.
Step 2	UCS-A /chassis/server # **recover-bios** *version*	Loads and activates the specified BIOS version.
Step 3	UCS-A /chassis/server* # **commit-buffer**	Commits the transaction to the system configuration.

Example

The following example shows how to recover the BIOS:

```
UCS-A# scope server 3/1
UCS-A /chassis/server # recover-bios S5500.0044.0.3.1.010620101125
UCS-A /chassis/server* # commit-buffer
UCS-A /chassis/server #
```

Health LED Alarms

The server health LED is located on the front of each server. Cisco UCS Manager allows you to view the sensor faults that cause the blade health LED to change color from green to amber or blinking amber.

The health LED alarms display the following information:

Name	Description
Severity column	The severity of the alarm. This can be one of the following: • Critical - The server health LED blinks amber. This is indicated with a red dot. • Minor - The server health LED is amber. This is indicated with an orange dot.
Description column	A brief description of the alarm.

Name	Description
Sensor ID column	The ID of the sensor that triggered the alarm.
Sensor Name column	The name of the sensor that triggered the alarm.

Viewing Health LED Status

SUMMARY STEPS

1. UCS-A# **scope server** *chassis-id* / *server-id*
2. UCS-A /chassis/server # **show health-led expand**

DETAILED STEPS

	Command or Action	Purpose
Step 1	UCS-A# **scope server** *chassis-id* / *server-id*	Enters chassis server mode for the specified server.
Step 2	UCS-A /chassis/server # **show health-led expand**	Displays the health LED and sensor alarms for the selected server.

Example

The following example shows how to display the health LED status and sensor alarms for chassis 1 server 3:

```
UCS-A# scope server 1/3
UCS-A /chassis/server # show health-led expand
Health LED:
    Severity: Normal
    Reason:
    Color: Green
    Oper State: On

UCS-A /chassis/server #
```