



# Upgrading to Next Gen Intel Xeon Processors

This section describes upgrade scenarios and procedures.

- [Upgrade Scenario 1: UCS Manager and Firmware Earlier Than Minimum Version, on page 1](#)
- [Upgrade Scenario 2: UCS Manager and Firmware Already At Minimum Version, on page 3](#)
- [Upgrade Scenario 3: Blade Server RMA; BIOS on Replacement Server Earlier Than the Minimum Version, on page 4](#)

## Upgrade Scenario 1: UCS Manager and Firmware Earlier Than Minimum Version



---

**Note** This procedure requires server downtime.

---

This scenario assumes the following conditions:

- The Cisco UCS Manager software is earlier than 4.0(4).
- The M5 server is at a BIOS/Cisco IMC version earlier than 4.0(4).
- The M5 server is using CPUs earlier than Second Generation Intel Xeon Scalable processors.

- 
- Step 1** Upgrade the Cisco UCS Manager software to 4.0(4) or later.  
Use the procedures in the appropriate Cisco UCS Manager upgrade guide (depending on your current software version): [Cisco UCS Manager Upgrade Guides](#) .
- Step 2** Use Cisco UCS Manager to upgrade and activate the server Cisco IMC firmware to 4.0(4).  
Use the procedures in the GUI or CLI [Cisco UCS Manager Firmware Management Guide](#) for your release.
- Step 3** Use Cisco UCS Manager to upgrade and activate the server BIOS to 4.0(4) or later.  
Use the procedures in the GUI or CLI [Cisco UCS Manager Firmware Management Guide](#) for your release.
- Step 4** Disassociate the blade server in UCS Manager.
- Step 5** Power off the blade server and then remove it from the chassis.

**Step 6** Replace the CPUs with the Second Generation Intel Xeon Scalable processors.

Use the CPU replacement procedure in the Installation and Service Note for your server:

- [Cisco UCS B200 M5](#)
- [Cisco UCS B480 M5](#)

**Step 7** Reinsert the blade server to the chassis.

**Step 8** Wait for Cisco UCS Manager to automatically discover and associate the server.

**Note** At this point, the Health LED of the server shows a critical fault and Cisco UCS Manager reports a generic error message: `WILL_BOOT_FAULT: Sensor failure asserted`. This is because a board controller activation is required, as described in the next steps.

**Step 9** Perform a board controller activation by using the Cisco UCS Manager CLI interface. Use the following sequence of commands:

**Note** The `show image` command in the sequence below lists the board controller versions available for the server. Always activate the latest board controller image version when you use the `activate firmware` command.

**Note** The server automatically reboots after it executes the `commit buffer` command.

```
# scope server <chassis/server>
# scope boardcontroller
# show image
# activate firmware <boardcontroller latest version>.0 force
# commit-buffer
```

**Step 10** Do not continue with the next step until board controller activation completes. Verify that the activation is complete by using the `show version` command to see that `Activate-Status` returns `Ready`. This process takes a few minutes to complete successfully.

```
# show version
Boardcontroller:
Running-Vers: x.0
Package_Vers:
Activate-Status: Ready
```

**Step 11** Use the Cisco UCS Manager GUI to clear the `WILL_BOOT_FAULT` and reset the server CIMC:

- a) In the Navigation pane, click the **Equipment** tab.
- b) On the Equipment tab, expand **Equipment > Chassis > Chassis number > Servers**, then choose your server.
- c) In the Work pane, click the **General** tab.
- d) In the Actions area, click **Recover Server**.
- e) In the Recover Server dialog, click **Reset CIMC (Server Controller)**, then click **OK**.

Wait for Cisco IMC to reboot and for Cisco UCS Manager to do a shallow discovery of the server. This process takes two to three minutes. At the end of the process, the `WILL_BOOT_FAULT` is cleared.

# Upgrade Scenario 2: UCS Manager and Firmware Already At Minimum Version



**Note** This procedure requires server downtime.

This scenario assumes the following conditions:

- The Cisco UCS Manager software is already at 4.0(4) or later.
- The M5 blade server is at a BIOS/Cisco IMC already at 4.0(4) or later.
- The M5 server is using CPUs earlier than Second Generation Intel Xeon Scalable processors.

**Step 1** Disassociate the blade server in UCS Manager.

**Step 2** Power off the blade server and then remove it from the chassis.

**Step 3** Replace the CPUs with the Second Generation Intel Xeon Scalable processors.

Use the CPU replacement procedures in the Installation and Service Note for your server:

- [Cisco UCS B200 M5](#)
- [Cisco UCS B480 M5](#)

**Step 4** Reinsert the blade server to the chassis.

**Step 5** Wait for Cisco UCS Manager to automatically discover and associate the server.

**Note** At this point, the Health LED of the server shows a critical fault and Cisco UCS Manager reports a generic error message: `WILL_BOOT_FAULT: Sensor failure asserted`. This is because a board controller activation is required, as described in the next steps.

**Step 6** Perform a board controller activation by using the Cisco UCS Manager CLI interface. Use the following sequence of commands:

**Note** The `show image` command in the sequence below lists the board controller versions available for the server. Always activate the latest board controller image version when you use the `activate firmware` command.

**Note** The server automatically reboots after it executes the `commit buffer` command.

```
# scope server <chassis/server>
# scope boardcontroller
# show image
# activate firmware <boardcontroller latest version>.0 force
# commit-buffer
```

**Step 7** Do not continue with the next step until board controller activation completes. Verify that the activation is complete by using the `show version` command to see that `Activate-Status` returns `Ready`. This process takes a few minutes to complete successfully.

```
# show version
Boardcontroller:
Running-Vers: x.0
Package_Vers:
Activate-Status: Ready
```

**Step 8** Use the Cisco UCS Manager GUI to clear the `WILL_BOOT_FAULT` and reset the server CIMC:

- In the Navigation pane, click the **Equipment** tab.
- On the Equipment tab, expand **Equipment > Chassis > Chassis number > Servers**, then choose your server.
- In the Work pane, click the **General** tab.
- In the Actions area, click **Recover Server**.
- In the Recover Server dialog, click **Reset CIMC (Server Controller)**, then click **OK**.

Wait for Cisco IMC to reboot and for Cisco UCS Manager to do a shallow discovery of the server. This process takes two to three minutes. At the end of the process, the `WILL_BOOT_FAULT` is cleared.

## Upgrade Scenario 3: Blade Server RMA; BIOS on Replacement Server Earlier Than the Minimum Version

This scenario is unique to a field-service situation in which an M5 server that is already running Second Generation Intel Xeon Scalable processors must be replaced via a returned materials authorization (RMA), but the only replacement server available is running a BIOS earlier than 4.0(4) (servers kept in service depots can become downline from the current release).



**Note** This procedure requires server downtime.

This scenario assumes the following conditions:

- The UCS 5108 Chassis is already running Cisco UCS Manager 4.0(4) or later.
- The replacement M5 server is using Second Generation Intel Xeon Scalable processors (after the processors are transferred from the defective M5 server to the replacement server).
- The replacement M5 server is using a BIOS/Cisco IMC version earlier than 4.0(4).

**Step 1** Disassociate the defective blade server in UCS Manager.

**Step 2** Power off the defective blade server and then remove it from the chassis.

**Step 3** Transfer the Second Generation Intel Xeon Scalable processors from the defective server to the replacement server.

Use the CPU replacement procedures in the Installation and Service Note for your server:

- Cisco UCS B200 M5
- Cisco UCS B480 M5

**Step 4** Install the replacement server to the chassis that is running UCS Manager 4.0(4) or later.

**Note** The server does not boot and discovery of the server hangs waiting for BIOS POST to complete because the BIOS is at an earlier version that does not support Second Generation Intel Xeon Scalable processors.

**Step 5** Use the Cisco UCS Manager CLI to upgrade the BIOS. Use the following sequence of commands:

**Note** The `show image` command in the sequence below lists the firmware versions available for the server. Always activate the latest firmware image version when you use the `update firmware` command.

**Note** The server automatically reboots after it executes the `commit buffer` command.

```
# scope server <chassis/server>
chassis/server# scope bios
chassis/server/bios# show image
chassis/server/bios# update firmware <server model>.<firmware version>
chassis/server/bios# commit-buffer
```

**Step 6** Wait for the update to complete. Check the status of the update and wait a few minutes until the following command returns `Status: Ready`.

```
chassis/server/bios# show update status
Status: Ready
```

**Step 7** Activate the new BIOS:

```
chassis/server/bios# activate firmware <server model>.<firmware version>
Warning: When committed this command will reset the endpoint
chassis/server/bios# commit-buffer
chassis/server/bios# exit
```

**Step 8** Power-cycle the server to get discovery out of the hang state:

```
chassis/server# cycle cycle-immediate
commit buffer
```

Cisco UCS Manager can now complete auto-discovery of the server.

**Step 9** Use UCS Manager to upgrade and activate the server Cisco IMC and BIOS.

Use the procedures in the GUI or CLI [Cisco UCS Manager Firmware Management Guide](#) for your release.

**Step 10** Wait for the server to be discovered and associated by Cisco UCS Manager.

**Step 11** Perform a board controller activation by using the Cisco UCS Manager CLI interface. Use the following sequence of commands:

**Note** The `show image` command in the sequence below lists the board controller versions available for the server. Always activate the latest board controller image version when you use the `activate firmware` command.

**Note** The server automatically reboots after it executes the `commit buffer` command.

```
# scope server <chassis/server>
# scope boardcontroller
# show image
# activate firmware <boardcontroller latest version>.0 force
# commit-buffer
```

**Step 12** Do not continue with the next step until board controller activation completes. Verify that the activation is complete by using the `show version` command to see that `Activate-Status` returns `Ready`. This process takes a few minutes to complete successfully.

```
# show version
Boardcontroller:
Running-Vers: x.0
Package_Vers:
Activate-Status: Ready
```

**Step 13** Use the Cisco UCS Manager GUI to clear the `WILL_BOOT_FAULT` and reset the server CIMC:

- a) In the Navigation pane, click the **Equipment** tab.
- b) On the Equipment tab, expand **Equipment > Chassis > Chassis number > Servers**, then choose your server.
- c) In the Work pane, click the **General** tab.
- d) In the Actions area, click **Recover Server**.
- e) In the Recover Server dialog, click **Reset CIMC (Server Controller)**, then click **OK**.

Wait for Cisco IMC to reboot and for Cisco UCS Manager to do a shallow discovery of the server. This process takes two to three minutes. At the end of the process, the `WILL_BOOT_FAULT` is cleared.

**Step 14**

---