

# Configure CIMC on FMC and Troubleshoot Common Issues

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## Introduction

This document describes the configuration of CIMC (Cisco Integrated Management Controller) on FMC and how to troubleshoot common issues.

## Prerequisites

It is important to note that the CIMC can only be configured on a physical FMC.

Some FMCs come with an outdated version of CIMC, and the only way to upgrade it is by applying the BIOS Hotfix: Cisco\_Firepower\_Mgmt\_Center\_BIOSUPDATE\_XXX\_EN-11.sh.REL.tar (On version 6.2.3, the filename is: Sourcefire\_3D\_Defense\_Center\_S3\_BIOSUPDATE\_623\_EL-7.sh.REL.tar).

The hotfix is identified as 7.4 (to the exception on 6.2.3, which is identified as 7.1), however, the device is not going to upgrade to that version, is only affecting the BIOS and CIMC version. The bug that further explains about why it is being detected as 7.1 is Cisco bug ID [CSCwd47327](#). This also applies to 7.4.

Adobe has deprecated flash-based content since 2020-12-31, with this accessing any page with Flash is not longer be possible.

The upgrade is necessary as old CIMC versions require Flash, this would mean that the release trains earlier than 3.1(3a), which includes the 2.2(x) release train are Java-based, therefore, it needs to be upgraded to be accessible again through the GUI. This information can be verified at [Specific Releases of UCS Manager Affected by Adobe Flash End-of-Life](#).

## Requirements

- Physical access to the FMC.
- USB Keyboard
- VGA Monitor

## Components Used

- FMC 2600

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Configure

1. As initially stated, it is important to ensure that the CIMC is on a version that does not require Flash. The only way for this, is by accessing through the GUI. Therefore, the recommendation is to upgrade if you have not applied the BIOSUPDATE before, otherwise, you can skip to step 6.



*Flash-based CIMC version*

## Cisco Integrated Management Controller (Cisco IMC) Information

Hostname: CIMC-FMC-2600-2  
IP Address: [REDACTED]  
MAC Address: A4:88:73:5A:92:18  
Firmware Version: 4.1(1f)

*HTML5 CIMC Version*

2. To upgrade, you must look for the file `Cisco_Firepower_Mgmt_Center_BIOSUPDATE_XXX_EN-11.sh.REL.tar`, this is under the base version (with the exception of 6.2.3).

For example:

if you are running version 7.0.3, you must look on 7.0.0:

Search...

Expand All Collapse All

7.0.0

7.0.5

7.0.4

7.0.3

7.0.2.1

7.0.2

7.0.1.1

7.0.1

7.0.0.1

**7.0.0**

6.7 >

6.6 >

6.4 >

## Firepower Management Center 2600

Release 7.0.0

My Notifications

Related Links and Documentation

Release Notes for 7.0.0

7.0.0 Documentation

File Information	Release Date	Size	
<b>Firepower Management Center BIOS Update Hotfix EN</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_BIOSUPDATE_700_EN-11.sh.REL.tar <a href="#">Advisories</a>	17-Jan-2024	519.79 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center BIOS Update Hotfix EL</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_BIOSUPDATE_700_EL-7.sh.REL.tar <a href="#">Advisories</a>	13-Dec-2021	517.53 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center install package</b> Cisco_Firepower_Mgmt_Center-7.0.0-94-Restore.iso <a href="#">Advisories</a>	26-May-2021	2450.83 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center upgrade</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_Upgrade-7.0.0-94.sh.REL.tar <a href="#">Advisories</a>	26-May-2021	2027.59 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>

BIOSUPDATE on 7.0.0

If you are running version 6.6.7, you must look on 6.6.0:

Search...

Expand All Collapse All

7.0.0.1

7.0.0

6.7 >

6.6 >

6.6.7.1

6.6.7

6.6.5.2

6.6.5.1

6.6.5

6.6.4

6.6.3

6.6.1

6.6.0.1

**6.6.0**

6.4 >

## Firepower Management Center 2600

Release 6.6.0


My Notifications

Related Links and Documentation

Firepower Hotfix Release Notes

Release Notes for 6.6.0

Documentation Roadmap

 We recommend upgrading to our Suggested Release, as indicated by a **gold star** for each product, to take advantage of resolved issues. For details, see the release notes.

File Information	Release Date	Size	
<b>Firepower Management Center BIOS Update Hotfix EN</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_BIOSUPDATE_660_EN-11.sh.REL.tar <a href="#">Advisories</a>	17-Jan-2024	519.79 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center BIOS Update Hotfix EL</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_BIOSUPDATE_660_EL-7.sh.REL.tar <a href="#">Advisories</a>	13-Dec-2021	517.53 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center install package</b> Cisco_Firepower_Mgmt_Center-6.6.0-90-Restore.iso <a href="#">Advisories</a>	06-Apr-2020	2652.96 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>
<b>Firepower Management Center upgrade</b> <b>Do not untar</b> Cisco_Firepower_Mgmt_Center_Upgrade-6.6.0-90.sh.REL.tar <a href="#">Advisories</a>	06-Apr-2020	2087.93 MB	<a href="#">+</a> <a href="#">🛒</a> <a href="#">📄</a>

BIOSUPDATE on 6.6.0

If you are running version 6.2.3, you can safely look for 6.2.3:

File Information	Release Date	Size	
<b>Firepower Management Center BIOS Update Hotfix EL</b> <b>Do not untar</b> Sourcefire_3D_Defense_Center_S3_BIOSUPDATE_623_EL-7.sh.REL.tar <a href="#">Advisories</a>	13-Dec-2021	517.53 MB	
Firepower Management Center upgrade from 6.1.0 or 6.2.0 to 6.2.3 Sourcefire_3D_Defense_Center_S3_Upgrade-6.2.3-113.sh <a href="#">Advisories</a>	01-Jun-2020	1835.84 MB	
Firepower Management Center upgrade from 6.2.1 or 6.2.2 to 6.2.3 <b>Do not untar</b> Sourcefire_3D_Defense_Center_S3_Upgrade-6.2.3-113.sh.REL.tar <a href="#">Advisories</a>	01-Jun-2020	1835.86 MB	
Firepower Management Center system software Sourcefire_Defense_Center_M4-6.2.3-113-Restore.iso <a href="#">Advisories</a>	01-Jun-2020	2327.92 MB	
Firepower Management Center 6.2.3 Hotfix - Local Malware Certificate <b>Do not untar</b> Hotfix_Local_Malware_Cert-6.2.3.999-4.sh.REL.tar <a href="#">Advisories</a>	15-Nov-2018	0.89 MB	
Firepower Management Center 6.2.3 Hotfix H Sourcefire_3D_Defense_Center_S3_Hotfix_H-6.2.3.999-5.sh.REL.tar <a href="#">Advisories</a>	28-Sep-2018	5.95 MB	

*BIOSUPDATE on 6.2.3*

**3. Upload the file to the FMC through System > Updates:**

Product Updates	Rule Updates	Geolocation Updates		
Currently running software version: <b>7.0.4</b> Currently installed VDB version: <b>build 370 ( 2023-08-21 08:59:13 )</b>				
Available Updates	Readiness History			
Type	Version	Date	Reboot	
Cisco Vulnerability And Fingerprint Database Updates	370	Mon Aug 21 09:01:06 UTC 2023	No	
Cisco Firepower Mgmt Center Hotfix EL	7.1.0-7	Mon Nov 8 14:50:06 UTC 2021	Yes	
Cisco FTD SSP FP2K Upgrade	7.0.4-55	Sun Aug 7 20:06:38 UTC 2022	Yes	

*Upload Hotfix*

**4. Once the file is uploaded, you proceed to click on "install" and install the Hotfix:**

**5. Once the upgrade finishes, the CIMC no longer requires Flash.**

**6. Now, reboot the FMC in order to configure CIMC.**

- a. Through the GUI, go to System > Configuration > Process and choose Reboot Management Center:**

- Access List
- Access Control Preferences
- Audit Log
- Audit Log Certificate
- Change Reconciliation
- Console Configuration
- DNS Cache
- Dashboard
- Database
- Email Notification
- External Database Access
- HTTPS Certificate
- Information
- Intrusion Policy Preferences
- Language
- Login Banner
- Management Interfaces
- Network Analysis Policy Preferences
- **Process**
- REST API Preferences
- Remote Storage Device
- SNMP
- Session Timeout
- Time
- Time Synchronization
- UCAPL/CC Compliance
- User Configuration
- Vulnerability Mapping
- Web Analytics

Name	
Shutdown Management Center	➤ Run Command
Reboot Management Center	➤ Run Command
Restart Management Center Console	➤ Run Command

*Reboot FMC GUI*

**b.** Through CLI, do "system reboot":

```

> system reboot
This command will reboot the system. Continue?
Please enter 'YES' or 'NO': YES

The system is going down for reboot NOW!
```

*Reboot FMC CLI*

**7.** Now, it starts booting, you can check the CIMC IP assigned at "Cisco IMC IPv4", this can be modified later. Initially, can be shown as 0.0.0.0:

```
Cisco Systems, Inc.  
Configuring and testing memory..
```

```
Cisco IMC IPv4 : 0.0.0.0  
MAC ADDR : A4:88:73:5A:92:18
```

*CIMC IP*

8. Once it reaches the menu to access BIOS and CIMC Configuration, press F8:



```
Copyright (c) 2020 Cisco Systems, Inc.
```

```
Press <F2> BIOS Setup : <F6> Boot Menu : <F7> Diagnostics
```

```
Press <F8> CIMC Setup : <F12> Network Boot
```

```
BIOS Version : C220M5.4.1.1c.0.0404202345
```

```
Platform ID : C220M5
```

```
Processor(s) Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz
```

```
Total Memory = 64 GB Effective Memory = 64 GB
```

```
Memory Operating Speed 2400 Mhz
```

```
M.2 SWRAID configuration is not detected. Switching to AHCI mode.
```

```
Cisco IMC IPv4 Address : 0.0.0.0
```

```
Cisco IMC MAC Address : A4:88:73:5A:92:18
```

```
Entering CIMC Configuration Utility ...
```

92

*Enter CIMC Setup*

9. The CIMC configuration is shown as below:

```

Cisco IMC Configuration Utility Version 2.0 Cisco Systems, Inc.
*****
NIC Properties
NIC mode                               NIC redundancy
Dedicated:      [X]                    None:          [X]
Shared LOM:     [ ]                    Active-standby: [ ]
Cisco Card:
  Riser1:       [ ]                    Active-active:  [ ]
  Riser2:       [ ]                    VLAN (Advanced)
  MLOm:         [ ]                    VLAN enabled:   [ ]
Shared LOM Ext: [ ]                    VLAN ID:        650
                                           Priority:        0
IP (Basic)
IPV4:           [X]                    IPV6:           [ ] IPV4 and IPV6:   [ ]
DHCP enabled    [ ]
CIMC IP:        [REDACTED]
Prefix/Subnet:  255.255.255.0
Gateway:        10.0.0.1
Pref DNS Server: 8.8.8.8
Smart Access USB
Enabled         [ ]
*****
<Up/Down>Selection  <F10>Save  <Space>Enable/Disable  <F5>Refresh  <ESC>Exit
<F1>Additional settings

```

*CIMC IP Configuration*

- a. For the NIC Mode you can choose Dedicated in order to use the interface that is labeled as "M" on the FMC.
  - b. For the NIC redundancy, you can choose None.
  - c. VLAN you can leave it as disabled, as it can cause connectivity issue unless you know how to configure external devices.
  - d. For IP, you can choose IPv4, IPv6 or IPv4 and IPv6 based on how you would like to set up the configuration.
  - e. If you have DHCP server for this, you can enable it, otherwise configure the IP.
  - f. Once you have finished the network configuration you can use F10 to save.
- For more information regarding NIC modes, check [Setting Up the System With the Cisco IMC Configuration](#).
- h. Now, press F1 for hostname and password configuration.

```
Cisco IMC Configuration Utility Version 2.0 Cisco Systems, Inc.
*****
Common Properties
  Hostname:      IMC-FMC-2600-2
  Dynamic DNS:   [X]
  DDNS Domain:
FactoryDefaults
  Factory Default:      [ ]
Default User(Admin)
  Enter New Default User password:
  Re-Enter New Default User password:
Port Properties
  Auto Negotiation:      [X]
                               Admin Mode      Operation Mode
  Speed[1000/100/10Mbps]:      Auto          1000
  Duplex mode[half/full]:      Auto          full
Port Profiles
  Reset:                  [ ]
  Name:
*****
<Up/Down>Selection  <F10>Save  <Space>Enable/Disable  <F5>Refresh  <ESC>Exit
<F2>PreviousPageettngs
```

*CIMC Password and save settings*

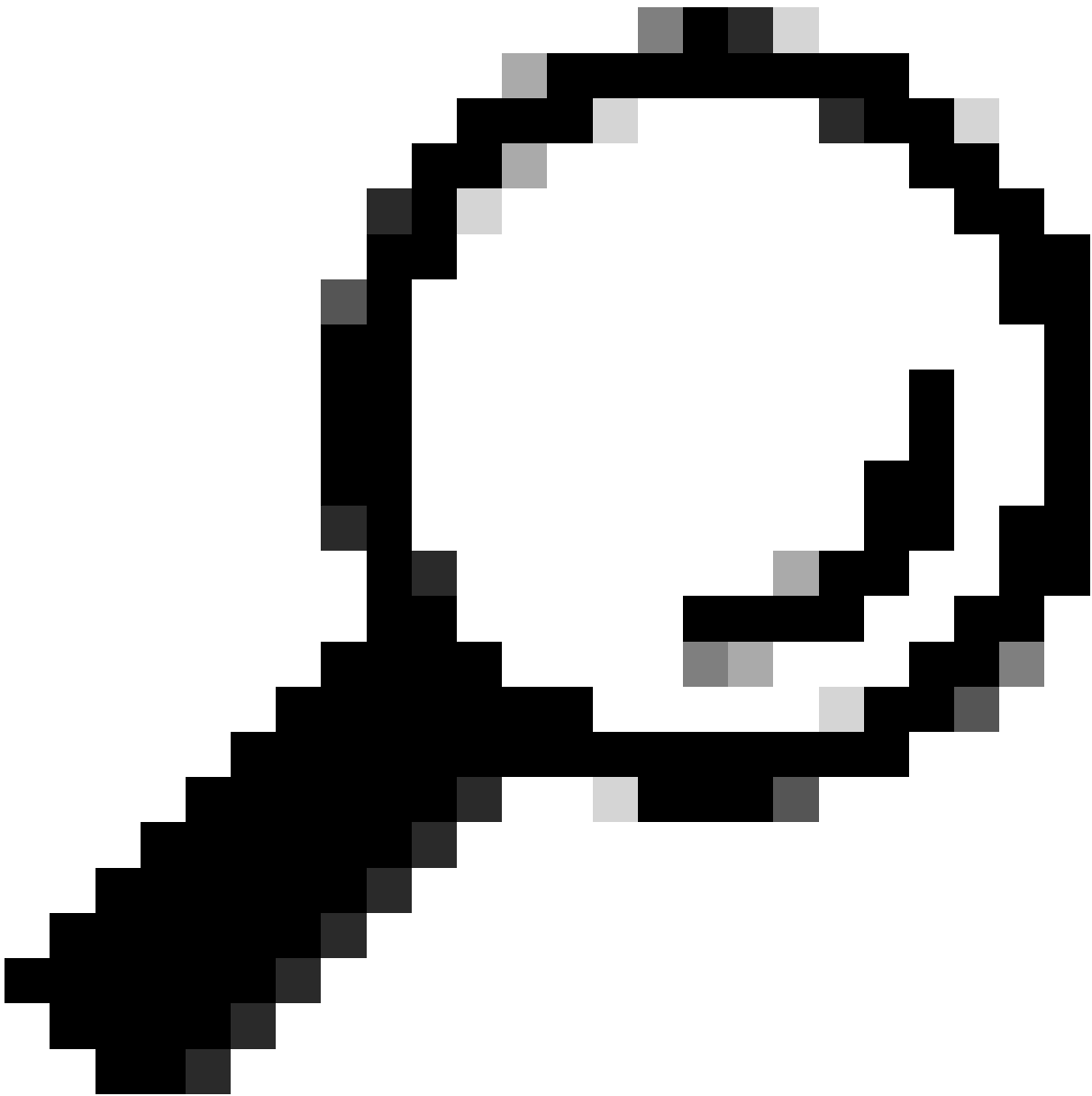
- a. Here, you can set the Hostname as you wish.
- b. For default user, you can set the password as desired.
- c. Once you are done, press F10 and the ESC.

## Default passwords

If you have used factory reset or the CIMC is requesting a password you can try one of the following:

Cisco12345  
password  
Cisco  
p@ssw0rd.

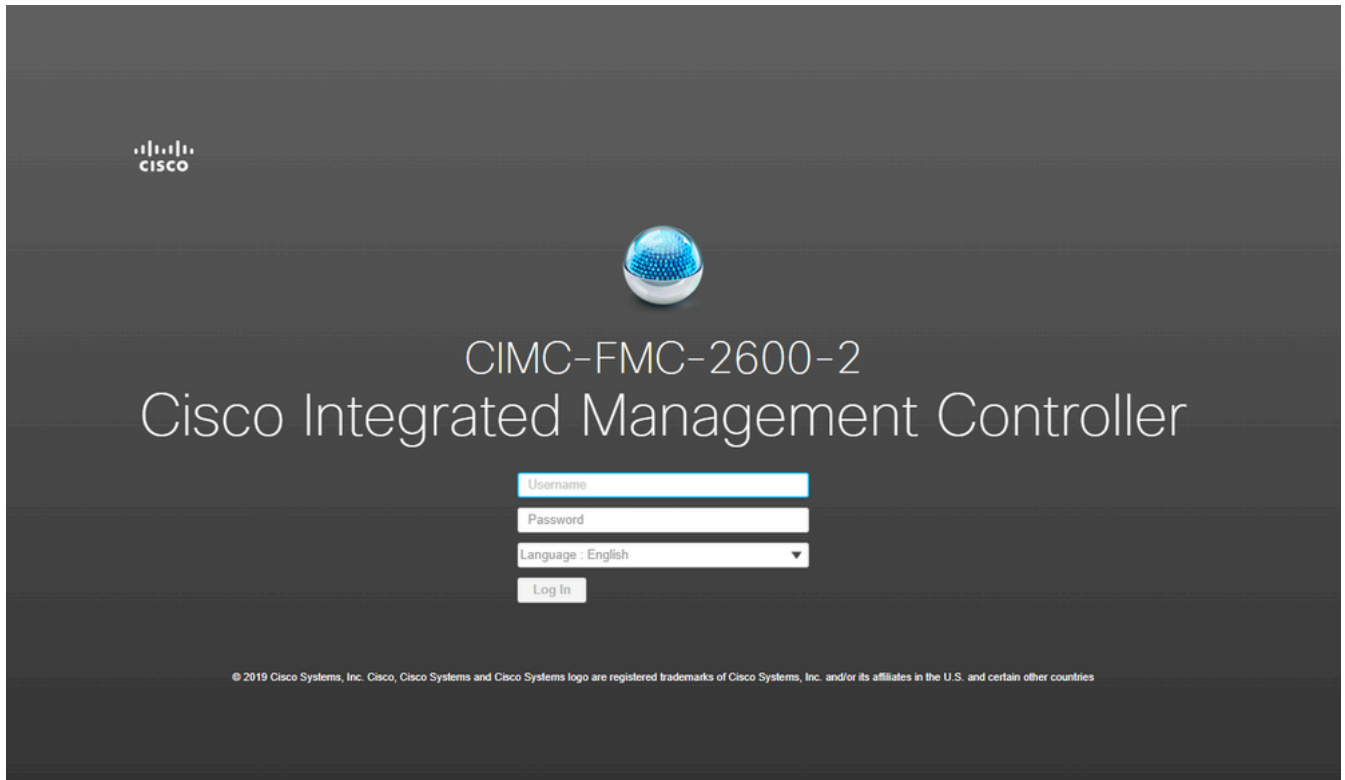




**Tip:** Make sure to have NUM LOCK on the Keyboard disabled.

---

You must now, be able to access the CIMC GUI:



*CIMC GUI*

## Troubleshoot

There is a known issue in which if the FMC is rebooted, it may go into a CLI called "startup.nsh":

*Press ESC in 0 seconds to skip startup.nsh or any other key to continue.*

*Shell> \_*

In order to exit from this shell, type "exit" and the next thing to happen is to automatically boot the image.

In this situation, it is a matter of boot order that can be checked on the CIMC. The reason for the device going to this boot is that the "EFI" component is booting first than the other components:

1. Click on the three lines at the top left and look for "COMPUTE"
2. Once you are on compute, make sure the boot order and any other configuration is as follows:

BIOS Properties

Running Version C220M5.4.1.1c.0\_M5\_FMC  
 UEFI Secure Boot   
 Actual Boot Mode Uefi  
 Configured Boot Mode   
 Last Configured Boot Order Source BIOS  
 Configured One time boot device

Save Changes

<p>Configured Boot Devices</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Basic                     <ul style="list-style-type: none"> <li>CDROM</li> <li>HDD</li> <li>Advanced</li> </ul> </li> </ul>	<p>Actual Boot Devices</p> <ul style="list-style-type: none"> <li>Cisco Firepower Management Center (NonPolicyTarget)</li> <li>Cisco EFI System Restore (NonPolicyTarget)</li> <li>UEFI: Built-in EFI Shell (NonPolicyTarget)</li> <li>UEFI: PXE IP4 Intel(R) Ethernet Controller X550 (NonPolicyTarget)</li> <li>UEFI: PXE IP4 Intel(R) Ethernet Controller X550 (NonPolicyTarget)</li> </ul>
--	--

Configure Boot Order

CIMC Boot options

3. If the issue persists, click on "Configure Boot Order", choose "EFI" and click the right arrow:

Configure Boot Order

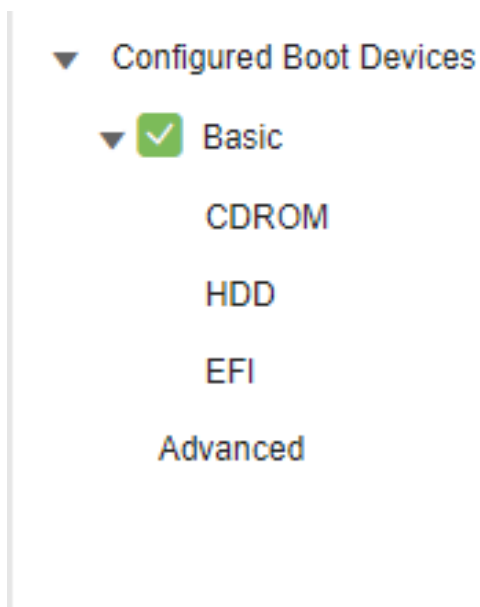
Configured Boot Level: Basic

Basic Advanced

<p>Device Types</p> <table border="1"> <thead> <tr><th>Name</th></tr> </thead> <tbody> <tr><td><input type="checkbox"/> FDD</td></tr> <tr><td><input type="checkbox"/> PXE</td></tr> <tr style="background-color: #e0f0ff;"><td><input checked="" type="checkbox"/> EFI</td></tr> </tbody> </table>	Name	<input type="checkbox"/> FDD	<input type="checkbox"/> PXE	<input checked="" type="checkbox"/> EFI	<p>&lt;&lt;</p> <p>&gt;&gt;</p>	<p>Boot Order</p> <table border="1"> <thead> <tr><th>Name</th></tr> </thead> <tbody> <tr><td><input type="checkbox"/> CDROM</td></tr> <tr><td><input type="checkbox"/> HDD</td></tr> </tbody> </table> <p style="text-align: right;">Down</p> <p style="text-align: right;">Up</p>	Name	<input type="checkbox"/> CDROM	<input type="checkbox"/> HDD
Name									
<input type="checkbox"/> FDD									
<input type="checkbox"/> PXE									
<input checked="" type="checkbox"/> EFI									
Name									
<input type="checkbox"/> CDROM									
<input type="checkbox"/> HDD									

Save Changes Close

**4.** Make sure that it is the last item and click on "Save changes" and then "Close":



*CIMC Boot configuration changed*

**5.** Now, you can reboot the appliance and it must not show the previous shell anymore.