Cisco UCS Director Release Notes

Cisco UCS Director

Cisco UCS Director delivers unified, highly secure management for supported compute, network, storage, and virtualization platforms and for the industry's leading converged infrastructure solutions, which are based on the Cisco Unified Computing System (Cisco UCS) and Cisco Nexus platforms. Cisco UCS Director extends the unification of computing and network layers through Cisco UCS to provide data center administrators with comprehensive visibility and management capabilities for compute, network, storage, and virtualization. For more information, see Cisco UCS Director on Cisco.com.

Revision History

<table>
<thead>
<tr>
<th>Release</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>January 9, 2019</td>
<td>Created for Release 6.7.</td>
</tr>
<tr>
<td>6.7(1.0)</td>
<td>April 9, 2019</td>
<td>Updated to include information on Release 6.7(1.0). See the following sections:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New and Changed Features in Release 6.7(1.0), on page 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open Bugs in Release 6.7(1.0), on page 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resolved Bugs in Release 6.7(1.0), on page 25</td>
</tr>
<tr>
<td>6.7(2.0)</td>
<td>June 14, 2019</td>
<td>Updated the document to include information on Release 6.7(2.0). See the following sections:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New and Changed Features in Release 6.7(2.0), on page 17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open Bugs in Release 6.7(2.0), on page 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resolved Bugs in Release 6.7(2.0), on page 26</td>
</tr>
</tbody>
</table>
System Requirements

The system requirements for this release are available in the Cisco UCS Director installation and upgrade guides for the following:

- VMware vSphere
- Microsoft Hyper-V

Supported Browser Versions

Cisco UCS Director supports the following browsers:

- Internet Explorer 8 or higher
- Firefox 12 or higher (PC and Apple MAC)
- Safari 6 or higher
- Google Chrome 18 or higher
- Opera 12 or higher (PC and Apple MAC)

Minimum System Requirements for a Single-Node Setup

The following tables detail the minimum resource requirements for a single-node setup of Cisco UCS Director. Cisco recommends a single-node setup for installations of up to 5000 VMs.

For optimal performance, the entire memory and CPU allocations specified in the table below should be reserved. Failure to follow these specifications could affect performance. For example, 4 vCPU cores with 3000 MHz and 16G of memory must be reserved for the Cisco UCS Director VM.

The minimum memory required for the inframgr service is automatically set during deployment. To enable the inframgr service to use more than the minimum required memory, edit the inframgr.env file available in the following location:
In this file, update the MEMORY_MAX parameter to the value you want. To activate the changes, restart the `inframgr` service.

The default memory settings are MEMORY_MIN=8192m and MEMORY_MAX=8192m.

For information about minimum system requirements for a multi-node setup, see the Cisco UCS Director Multi-Node Installation and Configuration Guide.

Table 1: Minimum system requirements for a single-node installation (up to 5,000 VMs)

<table>
<thead>
<tr>
<th>Element</th>
<th>Minimum Supported Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>vCPU</td>
<td>4</td>
</tr>
<tr>
<td>Allocated Memory</td>
<td>16 GB</td>
</tr>
<tr>
<td>Reserved Memory</td>
<td>16 GB</td>
</tr>
<tr>
<td>Disk Space</td>
<td>100 GB</td>
</tr>
<tr>
<td>Disk Write I/O Bandwidth</td>
<td>4 MBps</td>
</tr>
<tr>
<td>Disk Read I/O Bandwidth</td>
<td>4 MBps</td>
</tr>
<tr>
<td>Memory Allocated for <code>inframgr</code></td>
<td>8 GB</td>
</tr>
</tbody>
</table>

Restart the Cisco UCS Director database and all Cisco UCS Director services after making these changes to the `/etc/my.cnf`.

Minimum System Requirements for a Multi-Node Setup

System Requirements for the Primary Node

<table>
<thead>
<tr>
<th>Number of VMs</th>
<th>vCPU Allocation</th>
<th>Memory Allocation (GB)</th>
<th>Memory Reservation (GB)</th>
<th>Disk Size (GB)</th>
<th>Inframgr Memory Allocation (GB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5000</td>
<td>4</td>
<td>16</td>
<td>16</td>
<td>100</td>
<td>8</td>
</tr>
<tr>
<td>5001 - 10000</td>
<td>4</td>
<td>22</td>
<td>22</td>
<td>100</td>
<td>12</td>
</tr>
<tr>
<td>10001 - 15000</td>
<td>4</td>
<td>28</td>
<td>28</td>
<td>100</td>
<td>12</td>
</tr>
<tr>
<td>15001 - 20000</td>
<td>4</td>
<td>34</td>
<td>34</td>
<td>100</td>
<td>16</td>
</tr>
<tr>
<td>20001 - 25000</td>
<td>8</td>
<td>40</td>
<td>40</td>
<td>100</td>
<td>16</td>
</tr>
<tr>
<td>25001 - 30000</td>
<td>8</td>
<td>46</td>
<td>46</td>
<td>100</td>
<td>24</td>
</tr>
<tr>
<td>30001 - 35000</td>
<td>8</td>
<td>52</td>
<td>52</td>
<td>100</td>
<td>24</td>
</tr>
<tr>
<td>35001 - 40000</td>
<td>8</td>
<td>58</td>
<td>58</td>
<td>100</td>
<td>28</td>
</tr>
<tr>
<td>40001 - 45000</td>
<td>8</td>
<td>64</td>
<td>64</td>
<td>100</td>
<td>28</td>
</tr>
</tbody>
</table>
You can configure the Inframgr memory allocation in the `/opt/infra/bin/inframgr.env` file.

### System Requirements for the Database Node

<table>
<thead>
<tr>
<th>Number of VMs</th>
<th>vCPU Allocation</th>
<th>Memory Allocation (GB)</th>
<th>Memory Reservation (GB)</th>
<th>Disk Size (GB)</th>
<th>Inframgr Memory Allocation (GB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5000</td>
<td>4</td>
<td>12</td>
<td>12</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>5001 - 10000</td>
<td>4</td>
<td>16</td>
<td>16</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>10001 - 15000</td>
<td>4</td>
<td>28</td>
<td>28</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>15001 - 20000</td>
<td>4</td>
<td>40</td>
<td>40</td>
<td>10</td>
<td>200</td>
</tr>
<tr>
<td>20001 - 25000</td>
<td>8</td>
<td>52</td>
<td>52</td>
<td>12</td>
<td>200</td>
</tr>
<tr>
<td>25001 - 30000</td>
<td>8</td>
<td>64</td>
<td>64</td>
<td>14</td>
<td>200</td>
</tr>
<tr>
<td>30001 - 35000</td>
<td>8</td>
<td>76</td>
<td>76</td>
<td>16</td>
<td>300</td>
</tr>
<tr>
<td>35001 - 40000</td>
<td>16</td>
<td>90</td>
<td>90</td>
<td>18</td>
<td>600</td>
</tr>
<tr>
<td>40001 - 45000</td>
<td>16</td>
<td>90</td>
<td>90</td>
<td>20</td>
<td>600</td>
</tr>
<tr>
<td>45001 - 50000</td>
<td>16</td>
<td>90</td>
<td>90</td>
<td>22</td>
<td>600</td>
</tr>
</tbody>
</table>

You can configure the MySQL InnoDB Buffer Pool parameter in the `/etc/my.cnf` file.

**Note**

To determine the currently configured disk read I/O bandwidth and disk write I/O bandwidth, use the **Collect Diagnostics** option from the Cisco UCS Director Shell Admin menu.
MySQL Parameters

<table>
<thead>
<tr>
<th>VMs</th>
<th>Thread Cache Size</th>
<th>Maximum Connections</th>
<th>innodb lock wait timeout</th>
<th>Query Cache Size (MB)</th>
<th>Maximum Connection Errors</th>
<th>Connection Timeout</th>
<th>innodb read I/O Threads</th>
<th>innodb write I/O Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5000</td>
<td>1000</td>
<td>1000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>5001 - 10000</td>
<td>1000</td>
<td>1000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>10001 - 15000</td>
<td>1000</td>
<td>1000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>15001 - 20000</td>
<td>1000</td>
<td>1000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>20001 - 25000</td>
<td>2000</td>
<td>2000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>25001 - 30000</td>
<td>2000</td>
<td>2000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>30001 - 35000</td>
<td>4000</td>
<td>2000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>35001 - 40000</td>
<td>4000</td>
<td>4000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>40001 - 45000</td>
<td>4000</td>
<td>4000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>45001 - 50000</td>
<td>4000</td>
<td>4000</td>
<td>100</td>
<td>128</td>
<td>10000</td>
<td>20</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>

Configure these parameters in the `/etc/my.cnf` file.

**Installation and Upgrade Notes**

Cisco UCS Director uses a standard virtual machine that is delivered in OVF format for VMware, and in VHD format for Microsoft Hyper-V. It can be hosted on VMware vSphere or vCenter, or on Microsoft Hyper-V Manager. For installation instructions, see the appropriate [Cisco UCS Director installation guide](#).

Cisco UCS Director, Release 6.7 is installed on two disks in the virtual machine (VM). The primary disk (Hard Disk 1) hosts the operating system and the Cisco UCS Director application. The secondary disk (Hard Disk 2) hosts the Cisco UCS Director database. For information on the system requirements for both these disks, see the [Cisco UCS Director installation guide](#) or the [Cisco UCS Director Upgrade Guide](#).

---

**Note**

Cisco UCS Director OVF and VHD zip files are created using zip 3.x in CentOS 6.x. For Linux systems, you can extract the zip files with unzip 6.x or higher or with the latest version of the 7-Zip archiving tool. For Windows systems, you can extract the zip files with the native Extract All in Windows Explorer for Windows 10 and Windows Server 2012 or with the latest versions of archiving tools such as 7-Zip or WinRAR.

---

Cisco UCS Director Release Notes, Release 6.7

5
After you apply the upgrade patch and complete that installation, choose the **Start Services** option of ShellAdmin to start/restart the Cisco UCS Director services and complete the patch process. The patch process is not complete until the services have started, the login screen is displayed, and the admin user can sign in.

All Cisco UCS Director services must be stopped before you perform other ShellAdmin procedures, such as apply additional patches, take a database backup, or restore a database from a backup.

**Installing Cisco UCS Director Powershell Agent and the Powershell Console**

Installing a newer version of the PowerShell Agent requires that you uninstall the older version first. To remove the older version of PowerShell Agent, stop the Cisco PSA Service first and then uninstall the agent.

For instructions on installing, see *Cisco UCS Director PowerShell Agent Installation and Configuration Guide, Release 6.7.*

Before installing Cisco UCS Director Powershell Console 6.7, you must uninstall the earlier version of the Powershell Console from the system. To install the latest version, download and double-click the `UCSDirector_PSC_6.7.2.0.exe` file.

**Supported Upgrade Paths to Cisco UCS Director, Release 6.7(3.0)**

The following are the supported upgrade paths for Cisco UCS Director, Release 6.7(3.0).

See the *Cisco UCS Director Upgrade Guide* for detailed steps on how to upgrade to Release 6.7 from your current release.

**Important**

Cisco UCS Director Release 6.7, Release 6.7(1.0), and Release 6.7(2.0) are no longer available for download. It is recommended that you upgrade immediately to release 6.7(3.0).

**Upgrade Paths from Release 6.7(x.x)**

- From Release 6.7(2.0) to Release 6.7(3.0)
- From Release 6.7(1.0) to Release 6.7(3.0)
- From Release 6.7 to Release 6.7(3.0)

**Upgrade Paths from Release 6.6(x.x)**

- From Release 6.6(2.0) to Release 6.7(3.0)
- From Release 6.6(1.0) to Release 6.7(3.0)
- From Release 6.6 to Release 6.7(3.0)

**Upgrading from Versions Prior to Release 6.6**

If you have a version prior to Release 6.6(0.0) installed, you cannot upgrade directly to Release 6.7(3.0). You must first upgrade to Release 6.6(0.0) or Release 6.6(1.0) and then upgrade to Release 6.7(3.0).
With release 6.7(x.x), the multi-node configuration in Cisco UCS Director was modified to support only one database node and one primary node. So when you upgrade from release 6.6 to release 6.7(3.0), the upgrade process will make the following changes in your environment:

- Migrates existing data from the inventory database node to the monitoring database node, and converts the monitoring database node to the database node.
- Upgrades the primary node to the current release.

For more information, see the Cisco UCS Director Multi-Node Installation and Configuration Guide, Release 6.7.

### Upgrading Optimized Multi-Node Setup to Release 6.7(3.0)

**Before you begin**

Log into the primary node and from the Shell Admin console, choose **Stop Services** to halt all services running on the primary node.

**Procedure**

1. **Step 1**
   - Login to the database node.
2. **Step 2**
   - From the Shell Admin console, choose **Apply Signed Patch** to upgrade the node to Release 6.7(3.0).
3. **Step 3**
   - Login to the primary node, and from the Shell Admin console, choose **Apply Signed Patch** to upgrade the node to Release 6.7(3.0).
4. **Step 4**
   - Choose **Start Services** to start all the services on the primary node.

### New and Changed Features

This section provides an overview of the significant new and changed features in this release. This section does not provide an exhaustive list of all enhancements included in this release.

**Note**

For information about the physical and virtual devices and software supported by Cisco UCS Director in this release, see the Compatibility Matrix for this release.

### New and Changed Features in Release 6.7

**Introduction of Base Platform Pack and System Update Manager**

This release introduces the capability to update the following components of the Cisco UCS Director software:

- Base Platform Pack—Includes basic infrastructure components such as the user interface, Shell admin console changes, and critical defect fixes.
System Update Manager—Includes the framework that helps you upgrade all connector packs and the base platform pack.

Documented in the Cisco UCS Director Administration Guide, Release 6.7.

Introduction of Optimized Multi-Node Configuration

Earlier versions of Cisco UCS Director allowed you to configure the following nodes in a multi-node configuration:

- One primary node
- One or more service nodes
- One monitoring database node
- One inventory database node

Starting with this release, the multi-node configuration in Cisco UCS Director has been modified to support only the following nodes:

- One database node
- One primary node

As a result, when you upgrade to Cisco UCS Director Release 6.7, the upgrade process will make the following changes in your environment:

- Migrates existing data from the inventory database node to the monitoring database node, and converts the monitoring database node to the database node.
- Upgrades the primary node to the current release.


Enhancement to SSL Certificates

Starting with this release, Cisco UCS Director requires a self-signed SSL certificate. When you install Cisco UCS Director Release 6.7, the system checks if there is a self-signed certificate available or not. If there is no certificate available, when the administrator user logs in to the user interface, the system prompts the user to generate the self-signed certificate.


Introduction of Read-Only Access for Orchestration Workflow Tasks

Starting with this release, administrators with read-only privileges in the system, (users such as network administrators or storage administrators), have read-only privileges to workflow information in the user interface. The Orchestration page in the administrator user interface includes new options, View and Workflow Designer. Using these options, you can view workflow task information either in a textual summary format or in a graphical representation.

All workflow task information that is displayed is read-only.

Documented in the Cisco UCS Director Administration Guide, Release 6.7.
Introduction of the Service Request Quick View Panel

The header pane of the administrator user interface has a new icon that launches the Service Request Quick View panel. It displays 25 of the most recent service requests that are in the following states:

- In-Progress
- Completed Successfully
- Failed

This feature is not available in Cisco UCS Director instances that have been cross-launched from Cisco Intersight.

Documented in the Cisco UCS Director Administration Guide, Release 6.7.

Input and Global Variable Scoping

In cases where a task or workflow input variable has the same name as a global variable, the value of the local variable is displayed. The global value is "hidden" for the duration of the workflow. This applies also to any level of nested variable substitution.

Documented in the Cisco UCS Director Orchestration Guide.

Clone a Workflow Task in the Workflow Designer

In the Workflow Designer, you can clone a task to create another instance of the task in the workflow. In contrast to a task instance created by dragging and dropping, the new task is populated with the cloned task's parameter values (except its name).

Documented in the Cisco UCS Director Orchestration Guide.

Improved Looping in Workflows

When incrementing by count, you can specify a starting index and a step increment (or decrement, if negative) in the Start Loop task.

Documented in the Cisco UCS Director Orchestration Guide.

Nested Variable Evaluation in Workflows

You can nest variable references in Orchestration workflows. References are evaluated starting with the innermost reference and evaluating outward to any number of levels.

Documented in the Cisco UCS Director Orchestration Guide.

Customize an Existing Guest VM in RHEV

You can change the host name, DNS domain, DNS server list, and NIC configuration, and use of VDC policy configuration of an existing VM under Red Hat Enterprise Virtualization (RHEV). To customize an existing VM, create an orchestration workflow containing the RHEV KVM - Guest Customization task and make the desired changes in the admin inputs, or in the user inputs when running the service request.

Documented in the Cisco UCS Director Task Library Reference 6.7.
Mount and Unmount ISO images in HyperV

You can mount and unmount ISO images on VM CD drives using the `HyperV VM Mount ISO As CD ROM` and `HyperV VM UnMount ISO From CD ROM` tasks in an orchestration workflow.

Enhancements to Tenant Management

This release introduces a provision to define globally unique identifier (GUID) for SCVMM provider, and define an alias name for the tenant. While the tenant name cannot be changed after creation, the alias name of the tenant can be changed as required.


Introduction of ACI Data Plane Policing, FHS Trust Policy, ND RA Prefix Policy, and IGMP Snoop Static Group

This release introduces the following polices:

- **ACI Data plane policing (DPP)**—This policy allows you to manage bandwidth consumption on ACI fabric access interfaces. DPP monitors the data rates for a particular interface. When the data rate exceeds user-configured values, marking or dropping of packets occurs immediately.

- **First-Hop Security (FHS) trust policy**—This policy allows you to closely control address assignment and derived operations, such as address resolution (AR), to enable a better IPv4 and IPv6 link security and management.

- **Neighbor discovery router advertisement (ND RA) prefix policy**—This policy allows you to configure the prefix carried in RA messages sent by the router.

- **IGMP snoop static group**—You can configure IGMP static group range support to specify group ranges in class maps and attach the class maps to an interface.


Extension of support for APIC account

You can perform the following tasks in an APIC account:

- Adding an EPG
- Adding a Domain to an EPG
- Adding a Static Node to EPG
- Adding a Static Path to EPG


Support for EPG Contract Master

This release introduces a provision to define an endpoint group (EPG) as a contract master for another EPG in the same tenant. To streamline associating contracts to new EPGs, you can enable EPG to inherit all the (provided and consumed) contracts from master EPG.

Enhancements to APIC Contracts

Cisco UCS Director introduces fields to define alias name, DSCP target, and tag for a contract subject during creation.

When a contract is applied to both inbound and outbound traffic while creating a contract subject, the user gets the additional fields to define the service graph, QoS priority, and target DSCP for the in-term and out-term properties. If the selected contract does not apply to both directions, the filter chain must be configured for consumer to provider and provider to consumer separately. Cisco UCS Director has the provision to define the filter chain for consumer to provider and provider to consumer.


Enhancements to External EPG

This release of Cisco UCS Director has the provision to associate one or multiple sites to EPG when you add an external EPG to the template.


Support to set AS Path to the Action Rule Profile

This release introduces support to set autonomous system (AS) path to the action rule profile. You can also append the specified AS number to the AS path of the route that is matched by the route map.


Support for IP SLA Monitoring Policy

This release has the provision to create an IP SLA monitoring policy. You can set the SLA frequency to define the interval probe time to track a packet.


Enhancements to Routed Outside

To support protocol and QoS in an external routed network, this release introduces additional fields in the following actions:

- Create a routed outside
- Add a route map or profile to an external routed network
- Add a logical node profile to an external routed network
- Add a logical node to a logical node profile of an external routed network
- Add a static route to a logical node
- Add an external network to an external routed network


Extension of support for APIC L3out tasks changes

New fields have been added to the following tasks to extend the support of L3out in the APIC account:

- Adding an external routed network in APIC account
- Adding a logical node profile to external routed network
- Adding an external network to APIC external routed network
- Adding a static route to a logical node in APIC account
- Adding a routed profile to an external routed network
- Adding a logical node to a logical node profile of an external routed network


Introduction of Logical NetFlow Monitoring Policy

This release introduces a provision to deploy and enable NetFlow policies on a per-interface basis, depending on the traffic-type or address family to be monitored (IPv4, IPv6, or Layer 2 (CE type)).


Support for IGMP interface policy and route map

Cisco UCS Director has the provision to add an IGMP interface policy and create route map policy for route redistribution or policy-based routing.


Support for route control context

This release introduces a provision to define match action rules and set action rules for a route map. Also, you can create an action rule profile which is used to define the route-map set clauses for the L3out.


Support for static route and route control profile

Cisco UCS Director has the provision to add a next hop address to a static route and to add a route control profile to a subnet and external network.


ACI Policy-Based Redirect

You can provision service appliances, such as firewalls and load balancers, as managed or unmanaged nodes without requiring a Layer 4 to Layer 7 package. Cisco Application Centric Infrastructure (ACI) policy-based redirect (PBR) simplifies the provisioning of service appliances by enabling the consumer and provider endpoint groups to be in the same virtual redirect and forwarding (VRF) instance.


Support for vzAny

The vzAny managed object provides a convenient way of associating all endpoint groups (EPGs) in a Virtual Routing and Forwarding (VRF) instance to one or more contracts, instead of creating a separate contract relation for each EPG. Cisco UCS Director has introduced actions to create and update vzAny provided and consumed contracts. Also, users can create vzAny contract interface which is used to associate an EPG from the destination tenant with the imported contract.

**Support for Subject Label and Provider/Consumer Label**

This release introduces a provision to define labels that determine which EPG consumers and EPG providers can communicate with one another. Label matching determines which subjects of a contract are used with a given EPG provider or EPG consumer of that contract. Users can define:

- vzAny provided subject label to VRF
- vzAny consumed subject label to VRF
- vzAny EPG provided any labels
- vzAny EPG consumed any labels


**Enhancements to EPG**

Cisco UCS Director has extended the support for EPG to define data plane policy, forwarding control, preferred group member, flood on encapsulation, and FHS trust control policy during creation of EPG. The following enhancements were done while adding an object to an EPG:

- Add Domain to EPG—When the VMM type domain profile is chosen, user is provided with additional fields to:
  - Define delimiter for the domain name.
  - Allow micro-segmentation which enables automatic assignment of endpoints to EPGs.
  - Enter port encapsulation for static VLAN.
  - Enable netflow to monitor IP packets that are passing through the ports.

- Add Static Node to EPG—The new fields are enabled to enter a VLAN value that is part of one of the static VLAN blocks associated with the domain, and to choose Trunk, Access (802.1p), or Access (untagged) as the traffic mode for the EPG.

- Add Static Path to EPG—While adding a static path to an EPG, users are provided with options to define the path type, encapsulation, and primary VLAN for micro-segmentation.


**Support for Loopback interface on Layer 3 Device**

From this release, you can configure loopback interface on the following Cisco network devices:

- Cisco Nexus 3000 Series switches
- Cisco Nexus 5000 Series switches
- Cisco Nexus 6000 Series switches
- Cisco Nexus 7000 Series switches
- Cisco Nexus 9000 Series switches
Documented in the *Cisco UCS Director Network Devices Management Guide, Release 6.7*.

**Enhancements to HSRP**

This release introduces support to enable the latest version (version 2) of HSRP in the interface. You can enable pre-empt and set the minimum pre-empt delay time for the local router to postpone taking over the active role. Optionally, you can set the upper and lower threshold values used by vPC to determine when to fail over to the vPC trunk.

Documented in the *Cisco UCS Director Network Devices Management Guide, Release 6.7*.

**Enhancements to SVI**

This release introduces support to choose VRF for SVI, set the ICMP redirect to notify the hosts on the data link that a better route is available for a particular destination, and to enable and configure OSPF for SVI.

Documented in the *Cisco UCS Director Network Devices Management Guide, Release 6.7*.

**Enhancements to Port Profile**

This release provides support to set maximum ports for the port profile when Vethernet is chosen as the port profile type.

Documented in the *Cisco UCS Director Network Devices Management Guide, Release 6.7*.

**Enhancements to Maintenance Policy**

This release introduces support to schedule server shutdown and to deploy storage configuration.

Documented in the *Cisco UCS Director Management Guide for Cisco UCS Manager, Release 6.7*.

**Support for Managing QOS Policy Groups**

This release introduces support to create, delete, and modify Netapp QOS policy groups. This release introduces support to create, delete, and modify NetApp QOS policy groups. The QOS policy group allows you to control the resources that can be consumed by storage objects (such as volumes, LUNs, VMDKs, or SVMs) to manage network performance. Also, provides support to associate and configure QOS policy groups with LUNs and Volumes within the same SVM.

Documented in the *Cisco UCS Director NetApp Management Guide, Release 6.7*.

**Support for Cisco UCS Director Express for Big Data in Cisco UCS Director**

The enhancements to Cisco UCS Director Express for Big Data in Cisco UCS Director include the following:

- Support for Cloudera 6.0
- Support for Splunk 7.1.3 and Splunk 7.2
- Support for MapR 6.1
- Support for SmartSense service in Hortonworks cluster
- Support for S3260 M5 Storage Server for Hadoop and Splunk distributions

Documented in the *Cisco UCS Director Express for Big Data Deployment and Management Guide, Release 3.7*. 
Create Cisco UCS and UCS Central Policies in Orchestration

This release introduces orchestration tasks to create and delete maintenance policies and quality of service (QoS) policies for both Cisco UCS Manager Manager and Cisco UCS Central. The tasks are:

- Create UCS Maintenance Policy
- Delete UCS Maintenance Policy
- Create UCS QoS Policy
- Delete UCS QoS Policy
- Create UCS Central Maintenance Policy
- Delete UCS Central Maintenance Policy
- Create UCS Central QoS Policy
- Delete UCS Central QoS Policy

Documented in the Cisco UCS Director Task Library Reference 6.7.

Manage Cisco UCS Firmware in Orchestration

This release introduces tasks to upgrade the infrastructure components in a Cisco UCS Manager account, such as the fabric interconnects, the I/O modules, and Cisco UCS Manager. The new tasks are:

- Get UCS Server Firmware Upgrade Status
- Get UCS Infra Firmware Upgrade Status
- Prepare for UCS Firmware Install
- Install UCS Infra Firmware

Documented in the Cisco UCS Director Task Library Reference 6.7.

Support for Upgrading Firmware from MicroSD cards or FlexFlash cards on Rack Mount Servers

Starting with this release, you can upgrade firmware on rack servers using ISO images from MicroSD cards (for M5 servers) or FlexFlash cards (for M4 servers).

This feature is only supported on Cisco UCS M5 or higher servers running Cisco IMC version 3.1(3a) or higher and on Cisco UCS M4 servers running Cisco IMC version 4.0(2) or higher.


Support for Scheduling Upgrades Using Host Image Mapping Profiles on Rack Mount Servers

Starting with this release, new scheduling options have been introduced in the Run Upgrade and Apply Profile screens for host image profile procedures. Using these options, you can schedule these processes to run at a later point in time.

Introduction of Power Restore Policy for Cisco UCS C-series Servers

Starting with this release, you can configure a power restore policy for Cisco UCS C-series servers. You cannot create this policy on ENCS servers.


Enhancements to Email Alerts on Faults

Starting with this release, you can configure the system to send email alerts for all open faults on Cisco UCS C-series servers, based on the configured email alert rule, irrespective of whether you have been notified previously for a fault or not. A new option Send alert for all faults every 24 hours has been introduced in the Add Email Alert Rule screen. If you select this option, the system will send email alerts every 24 hours for all open faults that match the specified alert rule.


---

Important

Cisco UCS Director Release 6.7, Release 6.7(1.0), and Release 6.7(2.0) are no longer available for download. It is recommended that you must upgrade immediately to release 6.7(3.0).

New and Changed Features in Release 6.7(1.0)

Introduced Support for New Hardware and Software Versions

This release introduces support for the following:

- EMC PowerMax
- ONTAP version 9.5

For more information, see the Cisco UCS Director Compatibility Matrix, Release 6.7.

Deprecated REST API

The userAPI/HypervVMProvisioningWithVMNetwork REST API used for provisioning a Hyper-V VM that is associated with a network group, is deprecated. All features related to hosts and cluster selection for VM provisioning are not supported. We recommend you use the HYPERV_VM_PROVISION REST API for Hyper-V VM provisioning after you upgrade from Cisco UCS Director version 6.6 or a prior version to version 6.7 or later.

Support for Cisco UCS Director Express for Big Data in Cisco UCS Director

The Local Disk Configuration policy is enhanced to support the OS disk partition value to be greater than 50 GB. We recommend that you allocate the OS disk partition value based on the available actual disk size.

---

Important

Cisco UCS Director Release 6.7, Release 6.7(1.0), and Release 6.7(2.0) are no longer available for download. It is recommended that you must upgrade immediately to release 6.7(3.0).
New and Changed Features in Release 6.7(2.0)

**Visual Representation of Device Claim Status**

The administrator interface of Cisco UCS Director now includes an icon on the menu bar to indicate the claim status of the device in Cisco Intersight. The cloud icon with a red cross mark indicates that the Cisco UCS Director device is not claimed, and the cloud icon with a green check indicates that the device is claimed.

Documented in the *Cisco UCS Director Administration Guide, Release 6.7*.

**Support for Big Data Cluster Version**

This release introduces support for Cloudera 6.1.

Documented in the *Cisco UCS Director Express for Big Data Deployment and Management Guide, Release 3.7*.

**Support for vSphere/ESXi 6.7**

This release introduces support for vSphere/ESXi 6.7 Baremetal OS installation.

Documented in the *Cisco UCS Director Bare Metal Agent Installation and Configuration Guide, Release 6.7*.

---

**Important**

Cisco UCS Director Release 6.7, Release 6.7(1.0), and Release 6.7(2.0) are no longer available for download. It is recommended that you must upgrade immediately to release 6.7(3.0).

New and Changed Features in Release 6.7(3.0)

**Support for Netflow Monitor Policy and End Point Retention Policy**

This release of Cisco UCS Director introduces:

- Logical NetFlow monitoring policy—You can create a logical NetFlow monitoring policy to associate a flow record with the monitoring policy. The monitor policy identifies packet flows for ingress IP packets and provides statistics based on these packet flows.

- Endpoint retention policy—You can create an endpoint retention policy to set the hold interval, bounce entry aging interval, local endpoint aging interval, remote endpoint aging interval, and move frequency for endpoints. You can associate an endpoint retention policy to a bridge domain during bridge domain creation.

**Enhancements to Bidirectional Forwarding Detection**

You can use Bidirectional Forwarding Detection (BFD) to detect the number of times a sub-second failure occurs in the forwarding path between the ACI fabric border leaf switches configured to support peering router connections. This release of Cisco UCS Director introduces the following policy and profile to support BFD:

- BFD Interface Policy—In Cisco UCS Director, you can enable or disable the admin, control, and echo admin state for the BFD interface policy. You can set the detection multiplier, minimum transmit interval, minimum receive interval, and echo receive interval for the BFD interface policy.
• BFD Interface Profile—In the profile, you can set if authentication is required or not for accessing the profile and choose a BFD interface policy for the profile.

Enhancements to Hot Standby Router Protocol

This release of Cisco UCS Director introduces the following policies and profiles to support Hot Standby Router Protocol (HSRP) in Cisco ACI account. The HSRP protocol acts as the gateway for the endpoints behind the Layer 2 switches.

• HSRP Interface Policy—While defining the HSRP interface policy, you can enable or disable BFD and control sourcing of hellos from the burned-in MAC address (BIA) to identify devices. You can set the minimum time to delay HSRP group initialization after an interface comes up, and set the time period to delay HSRP group initialization after the router has reloaded.

• HSRP Group Policy—In the HSRP group policy, you can enable or disable preemption for a group, set the priority for HSRP to define the active and standby routers, and choose MD5 or simple authentication method. Also, you can set the hello interval, hold interval, minimum preemption delay, the delay time for resuming the preemptive action after reloading the active HSRP leaf, the maximum amount of time allowed for the HSRP client to prevent preemption, and the timeout value for authentication.

• HSRP Interface Profile—In Cisco UCS Director, you can choose a specific version of HSRP interface policy for the logical interface profile.

• HSRP Interface Group to Interface Profile—You can define the ID, name, and type of the HSRP interface group along with the mode in which the IP address can be obtained for the group. You can provide a virtual Media Access Control (MAC) address and an IP address that is shared among a group of configured routers. You can also provide comma separated multiple IPv4 or IPv6 addresses that can be used as secondary virtual IP addresses.

Support for Dynamic Host Configuration Protocol

This release of Cisco UCS Director provides support for creating a DHCP relay policy with a unique name. A DHCP relay policy is used to dynamically assign IP address when the DHCP client and server are in different subnets. The DHCP relay profile contains one or more providers. Starting with this release, you can add providers to the DHCP relay policy at the tenant level and at the infrastructure level.

You can add a DHCP relay label to logical interface profile by assigning a DHCP policy to an infra or a tenant.

CoPP Leaf/Spine Policy Support for APIC Fabric Switch

Starting with this release, you can create and manage the APIC control plane policing (CoPP) leaf and spine policy to be applied on Cisco ACI leaf/spine switches. While creating a CoPP leaf/spine policy, choose CoPP has custom values as the type of profile if you wish to set policy for each protocol separately.

Enhancements to Routed Interface

From this release, you can configure the secondary IP address and BGP peer connectivity profile for the routed interface, routed sub-interface interface, and SVI interface.

Introduction of New REST APIs

This release introduces REST APIs for the following features:

• NetFlow Monitor Policy
• CREATE_APIC_NETFLOW_MONITOR_POLICY
• UPDATE_APIC_NETFLOW_MONITOR_POLICY
• DELETE_APIC_NETFLOW_MONITOR_POLICY

• End Point Retention Policy
  • ADD_APIC_TENANT_BRIDGE_DOMAIN
  • MODIFY_APIC_TENANT_BRIDGE_DOMAIN
  • ADD_APIC_ENDPOINT_RETENTION_POLICY
  • UPDATE_APIC_ENDPOINT_RETENTION_POLICY
  • REMOVE_APIC_ENDPOINT_RETENTION_POLICY

• BFD Interface Policy
  • CREATE_APIC_BFD_INTERFACE_POLICY
  • DELETE_APIC_BFD_INTERFACE_POLICY
  • UPDATE_APIC_BFD_INTERFACE_POLICY

• BFD Interface Profile
  • CREATE_APIC_BFD_INTERFACE_PROFILE
  • DELETE_APIC_BFD_INTERFACE_PROFILE
  • UPDATE_APIC_BFD_INTERFACE_PROFILE

• HSRP Interface Policy
  • CREATE_APIC_HSRP_INTERFACE_POLICY
  • DELETE_APIC_HSRP_INTERFACE_POLICY
  • UPDATE_APIC_HSRP_INTERFACE_POLICY

• HSRP Group Policy
  • CREATE_HSRP_GROUP_POLICY
  • DELETE_HSRP_GROUP_POLICY
  • UPDATE_HSRP_GROUP_POLICY

• HSRP Interface Profile
  • CREATE_APIC_HSRP_INTERFACE_PROFILE
  • DELETE_APIC_HSRP_INTERFACE_PROFILE
  • UPDATE_APIC_HSRP_INTERFACE_PROFILE

• HSRP Interface Group to Interface Profile
• CREATE_APIC_HSRP_INTERFACE_GROUP
• UPDATE_APIC_HSRP_INTERFACE_GROUP
• DELETE_APIC_HSRP_INTERFACE_GROUP

• DHCP Relay Policy
  • CREATE_DHCP_RELAY_POLICY
  • DELETE_DHCP_RELAY_POLICY

• DHCP Relay Policy Providers
  • ADD_PROVIDERS_TO_DHCP_RELAY_POLICY
  • DELETE_PROVIDERS_FROM_DHCP_RELAY_POLICY

• DHCP Relay Label
  • ADD_APIC_TENANT_DHCP_RELAY_LABEL_TO_INTERFACE_PROFILE
  • DELETE_APIC_TENANT_DHCP_RELAY_LABEL_FROM_INTERFACE_PROFILE

• CoPP Leaf Policy
  • APIC CoPP Leaf Policy
    • CREATE_APIC_FABRIC_COPP_LEAF_POLICY
    • DELETE_APIC_FABRIC_COPP_LEAF_POLICY
    • UPDATE_APIC_FABRIC_COPP_LEAF_POLICY
  • Associate Custom Values to Ccpp Leaf Policy
    • ASSOCIATE_CUSTOM_VALUES_TO_APIC_COPP_LEAF_POLICY

• CoPP Spine Policy
  • CREATE_APIC_FABRIC_COPP_SPINE_POLICY
  • DELETE_APIC_FABRIC_COPP_SPINE_POLICY
  • UPDATE_APIC_FABRIC_COPP_SPINE_POLICY

• Routed Interface
  • APIC_TENANT_INTERFACE_TO_LOGICAL_INTERFACE_PROFILE_CREATE
  • APIC_TENANT_INTERFACE_TO_LOGICAL_INTERFACE_PROFILE_DELETE

• Routed Interface—BGP Peer Connectivity
  • ADD_BGP_PEER_CONNECTIVITY_PROFILE_TO_INTERFACE_OF_LOGICAL_INTERFACE_PROFILE
  • REMOVE_BGP_PEER_CONNECTIVITY_PROFILE_FROM_INTERFACE_OF_LOGICAL_INTERFACE_PROFILE
  • UPDATE_BGP_PEER_CONNECTIVITY_PROFILE_FROM_INTERFACE_OF_LOGICAL_INTERFACE_PROFILE
• Routed Interface—Secondary IP Address
  • Add_APIC_TENANT_SECONDARY_ADDRESS_TO_INTERFACE
  • DELETE_APIC_TENANT_SECONDARY_ADDRESS_TO_INTERFACE

**Rename UCS Central Global Service Profile**

This release introduces support for renaming the existing UCS central global service profiles using workflow task and REST API. You can use the orchestration task **Rename UCS Central Global Service Profile** to rename the existing UCS central global service profiles. Also, you can rename the selected global service profile name in the related workflows and service request. You can view the list of renamed task by choosing **UCS Central Account** under **Multi-Domain Managers** and clicking **Renamed Global Service Profiles**.

---

**Note**

To view descriptions of these workflow tasks, see the Task Library that you can launch in the following ways:

- Choose **Orchestration > Workflows** in the user interface.
- Go to [http://IP_address/app/cloudmgr/onlinedocs/cloupiaTaskLib.html](http://IP_address/app/cloudmgr/onlinedocs/cloupiaTaskLib.html) where **IP_address** is the IP address of Cisco UCS Director.

---

**Workflow to Upgrade Firmware for Cisco UCS Manager Using Cisco UCS Director**

This release introduces support for upgrading firmware for Cisco UCS Manager using the **Upgrading Firmware on Cisco UCS Infra** workflow. You can execute the following tasks to upgrade the firmware.

- Download UCS Firmware
- Install UCS Infra Firmware
- Wait for UCS Infra Firmware to Upgrade
- Cisco UCS Director Administrator Approval for Fabric Interconnect (FI) Reboot

---

**Note**

The Cisco UCS Director administrator should approve the fabric interconnect reboot request for the Cisco UCS Manager account by choosing **Organizations > My Approvals**. Upon approval, the pending activities in the Cisco UCS Manager will be approved.

- Wait for Cisco UCS Infra Firmware to Upgrade after Primary FI Reboot
- Get Cisco UCS Infra Firmware Upgrade Status

---

**Enhancements to the Download UCS Firmware Workflow Task**

Starting with this release, the **Download UCS Firmware** workflow task has been enhanced to display the percentage of the firmware download in the workflow log.
Enhancements to the Prepare for Firmware Install Workflow Task

Starting with this release, the **Prepare for Firmware Install** workflow task has been enhanced to display the list of affected and not affected components for the chosen host firmware package in the workflow log.

Support for Cisco Hyperflex in Cisco UCS Director

The enhancements to Cisco Hyperflex in Cisco UCS Director include the following:

- Support for Cisco HX-Series Server version 3.5.2a
- Support for Cisco HX Data Platform software version 4.0.
- Support for Connection Timeout (Seconds) and Socket Read Timeout (Seconds) while adding Hyperflex accounts.

Documented in the *Cisco UCS Director HyperFlex Systems Management Guide, Release 6.7*.

Enhancement to Enable Services while Creating Logical Interface

Creating logical interface (LIF) allows you to enable services, such as Network File System (NFS), Common Internet File System (CIFS), Fibre Channel Protocol (FCP), and Internet Small Computer System Interface (iSCSI). You can perform this using user interface, workflow task, and REST API.

Documented in the *Cisco UCS Director NetApp Management Guide, Release 6.7*.

Support for VLAN Trunking for the DVPortGroup Task and API

Prior to this release, while using the Create DVPort Group workflow task or the API, you could only specify VLANs for the **VLAN Type** field and specify a VLAN ID. Starting with this release, you can specify **VLAN Trunking** as a value for the **VLAN Type** field and specify a Trunk VLAN range. You can enter either a range of VLAN IDs or list of comma separated IDs. These changes are available for the **Modify VMWare DV Port Group** workflow task and API as well.

The report on all DV port groups configured in the system now displays the following information:

- VLAN type for the group—VLAN or VLAN Trunking
- VLAN Trunk Range—Displays the VLAN Trunk Range that you had specified.

Enhancements to the Provision VM Workflow Task

Starting with this release, the output of the Provisioning VM workflow task for all VM types has been enhanced to include the following information:

- Disk size of the boot volume
- Image path of the template
- UUID of the VM instance
- BIOS UUID
- vCenter UUID
- VM folder name
Enhancements to Create VM Disk Workflow Task

Starting with this release, the Create VM Disk workflow task has been enhanced to display the following information in the workflow task output:

- Disk UUID
- Disk Label

This enhancement is available in the Create VM Disk API as well. In addition, the Disks page for the VM now includes additional columns to display the Disk UUID.

Introduction of the Select Host Task

This release introduces a new workflow task called Select Host, using which you can retrieve information such as CPU usage and memory for the host. For this workflow task, as an input, you can specify the host name of a standalone host name or a host within a cluster. The output of this workflow task displays the following information:

- Host Name
- Host UUID
- Cluster Name — if applicable
- Product Version
- Hardware Vendor and Hardware Model
- Total number of VMs and active VMs on the host
- Memory, Power and Storage Capacity information

Enhanced Reporting for DV Switches Objects

Starting with this release, the following reports have been introduced for DV Switches:

- Distributed Port Groups
  Choose Network > Cloud > DVSwitch > Distributed Port Groups
- Uplink Port Groups
  Choose Network > Cloud > DVSwitch > Uplink Port Groups
- Ports
  Choose Network > Cloud > DV Port Groups > Ports

Open and Resolved Bugs

The open and resolved bugs for this release are accessible through the Cisco Bug Search Tool. This web-based tool provides you with access to the Cisco bug tracking system, which maintains information about bugs and vulnerabilities in this product and other Cisco hardware and software products.
You must have a Cisco.com account to log in and access the Cisco Bug Search Tool. If you do not have one, you can register for an account.

For more information about the Cisco Bug Search Tool, see the Bug Search Tool Help & FAQ.

Open Bugs in Release 6.7

You can find detailed information about all open bugs in Release 6.7 through the open bug search for Release 6.7. This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong> drop-down list</td>
<td>Choose Series/Model and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong> drop-down list</td>
<td>Choose Affecting or Fixed in these Releases and enter 6.7(0.0).</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose Open from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Important: Cisco UCS Director Release 6.7 is no longer available for download.

Open Bugs in Release 6.7(1.0)

You can find detailed information about all open bugs in Release 6.7(1.0) through the open bug search for Release 6.7(1.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong> drop-down list</td>
<td>Choose Series/Model and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong> drop-down list</td>
<td>Choose Affecting or Fixed in these Releases and enter 6.7(1.0).</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose Open from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Important: Cisco UCS Director Release 6.7(1.0) is no longer available for download.

Open Bugs in Release 6.7(2.0)

You can find detailed information about all open bugs in Release 6.7(2.0) through the open bug search for Release 6.7(2.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong> drop-down list</td>
<td>Choose Series/Model and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong> drop-down list</td>
<td>Choose Affecting or Fixed in these Releases and enter 6.7(2.0).</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose Open from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Important: Cisco UCS Director Release 6.7(2.0) is no longer available for download.
Open Bugs in Release 6.7(3.0)

You can find detailed information about all open bugs in Release 6.7(3.0) through the open bug search for Release 6.7(3.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>Choose <strong>Series/Model</strong> and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong></td>
<td>Choose <strong>Affecting or Fixed in these Releases</strong> and enter 6.7(2.0)</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose <strong>Open</strong> from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Resolved Bugs in Release 6.7

You can find detailed information about all resolved bugs in Release 6.7 through the resolved bug search query for Release 6.7. This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>Choose <strong>Series/Model</strong> and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong></td>
<td>Choose <strong>Affecting or Fixed in these Releases</strong> and enter 6.7(0.0)</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose <strong>Fixed</strong> from the Status drop-down list.</td>
</tr>
</tbody>
</table>

**Important**

Cisco UCS Director Release 6.7 is no longer available for download.

Resolved Bugs in Release 6.7(1.0)

You can find detailed information about all resolved bugs in Release 6.7(1.0) through the resolved bug search for Release 6.7(1.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>Choose <strong>Series/Model</strong> and enter Cisco UCS Director.</td>
</tr>
<tr>
<td><strong>Releases</strong></td>
<td>Choose <strong>Affecting or Fixed in these Releases</strong> and enter 6.7(0.0)</td>
</tr>
<tr>
<td><strong>Filter</strong></td>
<td>Choose <strong>Fixed</strong> from the Status drop-down list.</td>
</tr>
</tbody>
</table>

**Important**

Cisco UCS Director Release 6.7(1.0) is no longer available for download.
Resolved Bugs in Release 6.7(2.0)

You can find detailed information about all resolved bugs in Release 6.7(2.0) through the resolved bug search for Release 6.7(2.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product drop-down list</td>
<td>Choose <strong>Series/Model</strong> and enter Cisco UCS Director.</td>
</tr>
<tr>
<td>Releases drop-down list</td>
<td>Choose <strong>Affecting or Fixed in these Releases</strong> and enter 6.7(1.0).</td>
</tr>
<tr>
<td>Filter</td>
<td>Choose <strong>Fixed</strong> from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Important

Cisco UCS Director Release 6.7(2.0) is no longer available for download.

Resolved Bugs in Release 6.7(3.0)

You can find detailed information about all resolved bugs in Release 6.7(3.0) through the resolved bug search for Release 6.7(3.0). This search uses the following parameters:

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product drop-down list</td>
<td>Choose <strong>Series/Model</strong> and enter Cisco UCS Director.</td>
</tr>
<tr>
<td>Releases drop-down list</td>
<td>Choose <strong>Affecting or Fixed in these Releases</strong> and enter 6.7(3.0).</td>
</tr>
<tr>
<td>Filter</td>
<td>Choose <strong>Fixed</strong> from the Status drop-down list.</td>
</tr>
</tbody>
</table>

Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at [Cisco Profile Manager](#).
- To get the business impact you’re looking for with the technologies that matter, visit [Cisco Services](#).
- To submit a service request, visit [Cisco Support](#).
- To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit [Cisco Marketplace](#).
• To obtain general networking, training, and certification titles, visit Cisco Press.

• To find warranty information for a specific product or product family, access Cisco Warranty Finder.

**Cisco Bug Search Tool**

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.