Introducing Cisco UCS Central 2.0

This chapter includes the following sections:

Overview of Cisco UCS Central 2.0 Features

Cisco UCS Central, release 2.0 allows you to take charge of the data center environment by delivering easy to use, integrated solution for managing Cisco UCS Domains from a single management point, both in data centers and remote management locations. With Cisco UCS Central 2.0, you can efficiently manage server, storage, and network policies and generate network traffic reports for your data center.

Note The flash-based user interface is deprecated, and is not supported in Cisco UCS Central.

Release 2.0(1a) supports the following new features:

Feature	Function
Support for IOE Controller	Supports a second RAID Controller in the IO Expander on Cisco UCS S3260 Storage Server (UCS-C3K-M4RAID). Supports dual-height Cisco S3260 servers.
Support for HBA Controller	Supports Dual HBA Controllers on Cisco UCS S3260 Storage Server (UCS-S3260-DHBA).
BIOS Asset Tag	Service profiles now display an Asset Tag to uniquely identify servers.
Globalization of Service Profiles	Allows you to globalize Local Service Profiles from Cisco UCS Manager into Cisco UCS Central to deploy and use Cisco UCS Central in a legacy software environment.

Feature	Function
Integrated Server Diagnostics	Enables you to verify the health of hardware components on your servers and provides various tests to stress and exercise the hardware subsystems, such as memory and CPU, on the servers.
Lightweight Upgrades/ Hot Patching	Delivers Cisco UCS Manager firmware security updates for infrastructure and server components through service pack bundles.
Set KVM IP on Physical servers	Allows you to configure KVM IP s on physical servers for Inband and Outband management.
SED Management, KMIP Support	Introduces security policies for Self-Encrypting Drives (SEDs) for management of data encryption. The security keys required to encrypt the media encryption key can be configured locally, or remotely using the KMIP server.
Smart SSD	Supports monitoring SSD health and provides statistics about various SSD properties. Also allows to provide a threshold limit for each property.
User-defined FC Zoning	Allows you to create an FC Zone profile to group all zoning needs for a VM to represent a single data replication solution between storage arrays.
Fabric Evacuation in Firmware Auto Install	Supports automatic configuration of Fabric Evacuation during an FI upgrade and reboot during AutoInstall, and ensures that the appropriate failover settings are configured for the firmware upgrade.
Launch HTML5 KVM Client	Launches the HTML5 based KVM client directly from the Cisco UCS Central GUI.
New Policies	The following new policies are introduced in Cisco UCS Central 2.0: • Multicast Policy with IGMP Snooping • Power Sync Policy • Statistics Threshold Policy • Graphics Card Policy • QoS System Class • Hardware Change Discovery Policy • Port Auto-Discovery Policy • KMIP Certification Policy • Port Auto-Discovery Policy

Feature	Function
Server Reboot Log	Displays a server reboot log with the last five reasons for the reset along with the time and source of power transition.
Cisco UCS Manager DirectView tabs	Launches DirectView of Cisco UCS Manager Server Statistics tabs from 2.0 to view details of CIMC Sessions, System Event Logs, VIF paths, Statistics, Temperatures, Power, and Installed Firmware.
UI enhancements	Introduces the following UI enhancements: • Spotlight search bar to enable a comprehensive search for objects by their names. Top 10 results and suggested entries are displayed. • Restore Tabs to save open tabs and enable direct access to the same session when you log back in to Cisco UCS Central. • Favorites widget on the widgets menu bar to save your most used components, tabs, and dialogs for creating or editing policies. • Clone Policies icon to enable deep cloning a policy with a new name, parent organization or domain group, and description if applicable, in order to help you make minor edits without having to create a new policy.

# Overview of Cisco UCS Central HTML 5 UI

Cisco UCS Central HTML5 based user interface provides flexibility and task based usability for your management purposes.

The dashboard provides a quick overview of components in the system. You can pin the components you use frequently and customize the dashboard to suit your operational requirements. You can click on any object on the dashboard to go to the related page in the system.

Using the HTML5 UI

Dashboard

You can pin dashboard widgets and customize the dashboard based on your operational requirements. The following describes the basic dashboard structure, and the navigation icons, for performing management tasks:
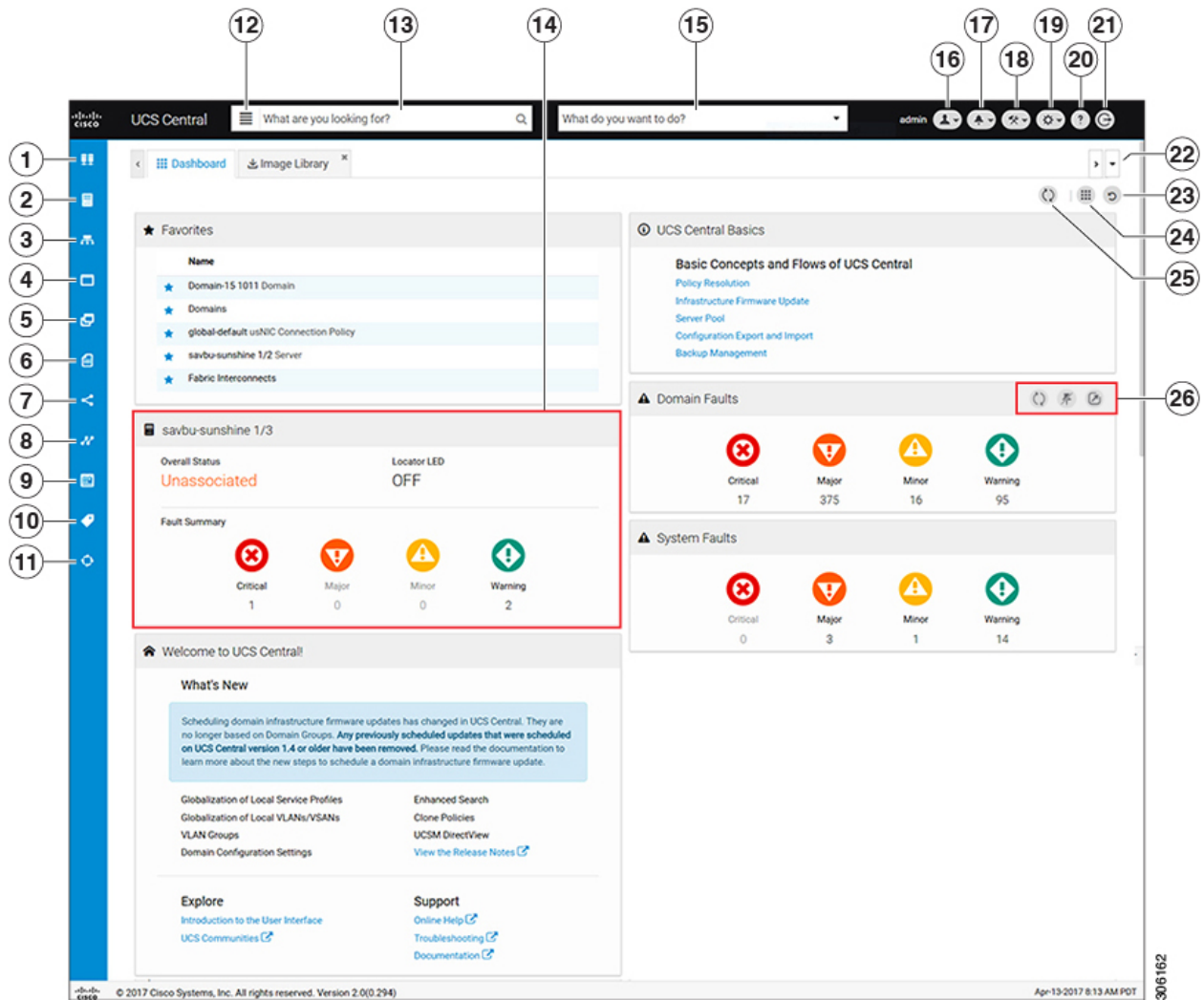
Item	Description
1	Domain group navigation icon. Click to display domain group **root** and other domain groups in the system. You can click a domain group to launch the details page.
2	Browse Tables icon. Click to display physical and logical inventory-related entities in the system such as: **Equipment**, **Domains**, **Fabric Interconnects**, **Servers**, **Chassis**, **FEX**, **Hardware Components**. Click any of these entities to launch related pages and view details.
3	Organization navigation icon. Click to display org **root** and other sub organizations in the system. You can click the root, or any suborganization, to launch the details page for a selected organization.
4	Profiles icon. Click to display a list of **Service** and **Chassis** Profiles and their **Scope**, **Fault Level**, and the associated **Org**. Click to view corresponding Profile details.

Item	Description
5	Templates icon. Click to display templates available in Cisco UCS Central such as **Service Profiles**, **Chassis Profiles**, **vHBAs**, and **vNIC** templates.
6	Policies icon. Click to display all the policies available in Cisco UCS Central. Click to view details of a policy from the Policies table.
7	LAN and SAN icon. Click to view details of **VLANs**, **VLAN Groups** and **VSANs**.
8	Identifiers icon. Click to view details of Identifiers, Pools, and ID Universe.
9	Schedules icon. Click to view details of **Schedules** in the system, **Schedule Type, Start Date** and **Frequency**.
10	Tag Management icon. Click to view **Tags** and **Tag Types**. Click a Tag to view the **Tag Type, Multiple Tags Per Object, Value Type,** and **System-Based Tag**.
11	Globalization tasks icon. Click to view **Globalization Tasks**, **Globalization Type**, and the **Status** of the globalization operation.
12	Search Categories icon. Click to search for an item in a specific category.
13	Spotlight Search bar. Type the name of a Pool, Policy, Tag Type, VLAN, VSAN, Equipment, Template, Domain, or other objects in Cisco UCS Central. The search result displays the top 10 matches and also provides a list of potential matches to the search term.
14	Dashboard widget. You can pin any widget on this dashboard. When you mouse over on the widget, other options are enabled on the widget menu bar.
15	Actions bar. What do you want to do? You can Create, Schedule, Install, Export, and Import from here: • Click the drop-down arrow to display available actions. • Select a task, or type the task into the actions bar. • Launch the dialog box to perform the task.

Item	Description
16	**Profile Configuration** icon. Click to launch **User Profile**, or **Change Password**. You can perform the following actions: • In the Basic tab, set **Language** preference. • **Restore Tabs** to save the open tabs and access them directly when you back in to Cisco UCS Central. You can select one of the following options from the **Restore Tabs** drop-down menu: • **Prompt to restore tabs** • **Automatically restore tabs** • **Do not restore tabs** The **Prompt to Restore** Tabs option is enabled by default when you log in to Cisco UCS Central. If you select the Auto Restore option, the selected tabs are restored automatically when you log back in to Cisco UCS Central. You can set User Roles from the **Roles** tab and set Locales from the **Locales** tab.
17	System Alerts icon. Click to display and navigate to **Pending Activities, System Faults, Domain Faults, Events, Audit Logs, Core Dumps**, and **Internal Services**.
18	System Tools icon. Click to display and navigate to **Firmware Management, Backup & Restore, Export & Import, Tech Support, Image Library, Domain Management, Hardware Compatibility Reports, Unified KVM Launcher, Active Sessions,** and **Start Logging Session**.
19	System Configuration icon. Click to display and navigate to **System Profiles, System Policies, Users, Authentication, SNMP, Smart Call Home**, and **Licenses**.
20	Help icon. Click to access online help.
21	Log out icon. Click to log out from the active Cisco UCS Central session.
22	Tab navigator. Allows you to navigate through the open tabs, or close all tabs at once.
23	Log out icon. Click to log out from the active Cisco UCS Central session.
24	Dashboard widgets library icon. Click to view available widgets. Click the widget to pin it to the dashboard.
25	Refresh icon. Click to refresh the information in all pinned widgets or table pages.
26	**Refresh, Pin,** and **Show Detail** icons. Click to perform these actions for a widget.

Behavior Changes in Release 2.0

Deprecation Announcements

- Cisco UCS Central no longer includes the Flex-based UI. The HTML5 UI is the only graphical interface available.

- The Statistics Management feature is deprecated and is no longer supported in Cisco UCS Central.

- After March 3, 2017, Cisco UCS Central version 1.4 or earlier will be unable to fetch the updated firmware image list from Cisco.com. If you are running Cisco UCS Central version 1.4 or earlier, you can manually download firmware images directly from Cisco.com and import them to Cisco UCS Central. To continue to have Cisco UCS Central fetch the available image data from Cisco.com and place the firmware image in the **Image Library**, Cisco recommends that you upgrade to Cisco UCS Central release 1.5 or later.

Feature Support

Behavior Changes Based on Design

- The Spotlight search bar replaces the search bar, and allows you to search for profiles, policies, pools, VLANs/VSANs, templates, domains, orgs, domain groups etc by their names, descriptions, and labels. Spotlight auto-completes the search field with suggestions as you type and displays the top 10 potential matches to the term you type.

- Icons in the Sidebar navigation menu enable direct and easy access to all objects in Cisco UCS Central. Browse tables, Organization navigation, and Domain group navigation are now part of Sidebar navigation.

- From the Organizations tree view, you can directly navigate to that org's Profiles, Templates, Pools, Policies, and Permitted VLANs. The corresponding tab in the selected org is highlighted and opened when you click these objects.

- Cisco UCS Central 2.0 prevents you from deleting critical objects such as service profiles, domain groups, organizations, and service profile templates from the Cisco UCS Central GUI and the command line. When you attempt to delete any of these items from Cisco UCS Central, an error message with the potential impact displays.

- You must create the global service profile template before you can create a service profile.

- vNIC and vHBA Placement is now referred to as Interface Placement.

- Registration Policy is now referred to as Domain Group Qualification Policy.

- ID Range Qualification Policy is now referred to as ID Range Access Control Policy.

- There are no qualified IP addresses for ID Range Access Control Policy.

- Only the configuration export (all-config) and backup (full-state) options are used in Cisco UCS Central. Other backup types such as config logical and config system are not supported.

Multi-version Management Support

Cisco UCS Central provides you the ability to manage multiple Cisco UCS domains with different versions of Cisco UCS Manager at the same time. Cisco UCS Central identifies feature capabilities of each Cisco UCS domain at the time of domain registration. This ability enables you to seamlessly integrate multiple versions Cisco UCS Manager with Cisco UCS Central for management and global service profile deployment.

When you upgrade your Cisco UCS Central to a newer release, based on the features you are using, you might not have to upgrade all of your Cisco UCS Manager release versions to make sure the registered UCS domains are compatible with Cisco UCS Central.

When you register a Cisco UCS domain in Cisco UCS Central, along with the inventory information Cisco UCS Central receives the following information from the domain:

- Cisco UCS Manager release version

- List of available supported features in the domain

The available features are sent as a management capability matrix to Cisco UCS Central. Based on this information Cisco UCS Central builds a list of supported features for each registered domain. Based on the feature capabilities in a Cisco UCS domain, Cisco UCS Central decides if certain global management options are possible in the domain. When you perform management tasks, such as deploying a global service profile on a group of domains that include earlier versions of Cisco UCS Manager instances, based on the feature capability matrix, Cisco UCS Central does the following:

- Delivers the task only to the supported domains.

- Displays a version incompatibility message for the domains where the feature is not supported.

Supported Features in Cisco UCS Manager

You can view supported features in a Cisco UCS domain using the Cisco UCS Central CLI. Based on the Cisco UCS Manager versions in the registered Cisco UCS domains, Cisco UCS Central CLI builds list of supported features in the following four categories:

- **Server Feature Mask**: Includes global service profiles, policy mapping and Inband management, advanced boot order

- **Network Feature Mask**: None

- **Storage Feature Mask**: FC Zoning and ISCSI IPv6

- **Environment Feature Mask**: Power group, remote operations, UCS registration, estimate impact on reconnect

Management Exclusion

Multi-version support also provides you the ability to exclude some features from global management. You can log into a registered UCS domain and turn off a specific feature from Cisco UCS Manager CLI. You can disable the following global management capabilities:

- **Global service profile deployment**: If you deploy global service profile on a server pool, and you have disabled global service profile deployment in one of the servers in the pool, Cisco UCS Central excludes the server from the global service profile deployment.

- **In band management**: A service profile with inband management capability will not be deployed on the servers where you have excluded inband management feature.

- **Policy mapping**: This will disable importing policies or policy components from this Cisco UCS domain into Cisco UCS Central.

- **Remote management**: This will restrain controlling physical devices in a Cisco UCS domain from Cisco UCS Central.

You can enable these features any time using the Cisco UCS Manager CLI to restore global management capabilities in the registered Cisco UCS domains at anytime.

Feature Support Matrix

The following table provides a list of features in Cisco UCS Central, and Cisco UCS Manager release versions in which these features are supported:

Note Some features are built in Cisco UCS Central to be compatible with upcoming Cisco UCS Manager releases.

Feature Support for Release 2.0

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions			
		2.1	2.2	3.0	3.1 /3.2/4.0
Support for Second RAID Controller in the IO Expander on Cisco UCS S3260 Storage Server (UCS-C3K-M4RAID)	2.0(1a)	No	No	No	3.1(3) and later
Support for Dual HBA Controller on Cisco UCS S3260 Storage Server (UCS-S3260-DHBA)	2.0(1a)	No	No	No	3.1(3) and later
Support for Dual SIOC	2.0(1a)	No	No	No	3.1(3) and later
Globalization of Service Profiles	2.0(1a)	No	2.2(8f)	No	3.1(2) and later
BIOS Asset Tag	2.0(1a)	No	No	No	3.1(3) and later

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions			
		2.1	2.2	3.0	3.1 /3.2/4.0
Hot patching/ Lightweight Upgrades	2.0(1a)	No	No	No	3.1(3) and later
User-Defined Zone Profiles	2.0(1a)	No	No	No	3.1(3) and later
Integrated Server Diagnostics	2.0(1a)	No	No	No	3.1(3) and later
SED Security Policies, Smart SSD, and KMIP Support	2.0(1a)	No	No	No	3.1(3) and later
Automatic Configuration of FI-Server Ports	2.0(1a)	No	No	No	3.1(3) and later
Set KVM IP on physical servers	2.0(1a)	No	No	No	3.1(3) and later
Fabric Evacuation in Firmware Auto Install	2.0(1a)	No	No	No	3.1(3) and later
Direct Fabric Interconnect Evacuation	2.0(1a)	No	2.2(4) and later	No	3.1(1) and later
Launch HTML5 KVM Client	2.0(1a)	No	No	No	3.1(3) and later
Multicast Policy	2.0(1a)	No	No	No	3.1(3) and later
Power Sync Policy	2.0(1a)	No	2.2(8)	No	3.1(2) and later
Statistics Threshold Policy	2.0(1a)	No	No	No	3.1(3) and later
Graphics Card Policy	2.0(1a)	No	No	No	3.1(3) and later
QoS System Class	2.0(1a)	No	No	No	3.1(3) and later
Hardware Change Discovery Policy	2.0(1a)	No	No	No	3.1(3) and later
Port Auto-Discovery Policy	2.0(1a)	No	No	No	3.1(3) and later

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions			
		2.1	2.2	3.0	3.1 /3.2/4.0
KMIP Certification Policy	2.0(1a)	No	No	No	3.1(3) and later
Server Reboot Logs	2.0(1a)	No	No	No	3.1(3) and later
Delete Decommissioned Rack Server, Chassis, FEX	2.0(1a)	Yes	Yes	No	3.1(1) and later
VLAN Group	2.0(1b)	No	No	No	3.1(2) and later

Feature Support for Release 1.5

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions			
		2.1	2.2	3.0	3.1
Cisco UCS S3260 Storage Server support	1.5(1a)	No	No	No	3.1(2) and later
vNIC/vHBA pairing	1.5(1a)	No	2.2(7) and later	No	3.1(2) and later
Traffic monitoring	1.5(1a)	No	2.2(7) and later	No	3.1(1) and later
UUID sync	1.5(1a)	No	2.2(7) and later	No	3.1(2) and later
Admin host port for PCI placement	1.5(1a)	No	No	No	3.1(1e) and later
Support for 160 LDAP group maps	1.5(1a)	No	2.2(8) and later	No	3.1(2) and later

Feature Support for Release 1.4

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions				
		2.1	2.2	2.5	3.0	3.1
Port Configuration	1.4(1a)	No	2.2(7) and later	No	No	3.1(1) and later

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions				
		2.1	**2.2**	**2.5**	**3.0**	**3.1**
Advanced Local Storage Configuration	1.4(1a)	No	2.2(7) and later	2.5(1) and later	No	3.1(1) and later
Multiple LUNs in Boot Policy	1.4(1a)	No	2.2(7) and later	2.5(1) and later	No	3.1(1) and later
Consistent Device Naming	1.4(1a)	No	2.2(4) and later	2.5(1) and later	3.0(1) and later	3.1(1) and later
Direct-Attached Storage/FC Zoning	1.4(1a)	No	2.2(7) and later	No	No	3.1(1) and later
Advanced Host Firmware Pack	1.4(1a)	No	2.2(6) and later	No	No	3.1(1) and later
usNIC Connection Policy	1.4(1a)	No	2.2(6) and later	No	No	3.1(1) and later
VMQ Connection Policy	1.4(1a)	No	2.2(6) and later	No	No	3.1(1) and later
Equipment Policies	1.4(1a)	No	2.2(7) and later	No	No	3.1(1) and later
Maintenance Policy on Next Reboot	1.4(1a)	No	No	No	No	3.1(1) and later

Feature Support for Release 1.3 and earlier

Cisco UCS Central Features	Supported Cisco UCS Central Versions	Supported Cisco UCS Manager Versions				
		2.1	2.2	2.5	3.0	3.1
Multi-version management support and viewing supported Cisco UCS Manager features	1.1(2a)	No	2.2(1b) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
Importing policy/policy component and resources		No	2.2(1b) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
Specifying remote location for backup image files		No	2.2(2b) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
3rd party certificate		No	2.2(2c) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
IPv6 inband management support		No	2.2(2c) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
Estimate Impact on Reconnect	1.2(1a)	No	2.2(3a) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
Precision Boot Order Control		No	2.2(1b) and later	2.5(1a) and later	3.0(1c) and later	3.1(1a) and later
Scriptable vMedia	1.2(1e) and later	No	2.2(2c) and later	2.5(1a) and later	3.0(2c) and later	3.1(1a) and later

Note

- Searching for policy/policy components or resources is supported in Cisco UCS Manager, releases 2.1(2x) and 2.1(3x). To import policies, you must have Cisco UCS Manager, releases 2.2(1b) or higher.

- For precision boot order control, the blade server must have CIMC version 2.2(1b) or above.