

Cisco UCS Director



Overview

Your business is evolving. It may be growing organically or through acquisition. It has become complex and is becoming more so as your organization grows, adds new infrastructure platforms, and supports more locations and new customers. The pace of change and introduction of new services is pushing data center professionals to deliver resources much more quickly.

And to accommodate cloud adoption and infrastructure transformation as well, your data center also needs to scale—without affecting performance or service quality. But manual or poorly designed processes undermine your data center's ability to keep pace. Each manual step depends on the bandwidth and speed of an individual, which can vary from day to day. And tasks that involve humans are prone to errors. Manual tasks also take longer and use resources less predictably.

The more manual trade-offs are removed, the more agile and efficient your data center will be. Removing manual processes requires automation. With automation, you can:

- Increase data center productivity
- Reduce the complexity of your data center
- Increase consistency
- Enhance usability and monitoring capabilities
- Allow IT and operational staff to deploy new services from a self-service catalog

Scale Your Data Center at the Speed of Business

To replace manual processes and increase data center efficiency, you need Cisco UCS[®] Director. It automates, orchestrates, and manages your Cisco[®] and third-party infrastructure. It can automate firewalls, load balancers, and services. It lets you replace manual processes with automated ones. And it allows your data center staff to focus on innovative projects that set your business apart.

Cisco UCS Director model-based automation is a key component of consistent infrastructure automation. It discovers and maps your environment. It abstracts hardware and software into programmable tasks. IT professionals can use these tasks to build automated workflows to replace manual tasks. Infrastructure services are delivered within minutes.

When used in combination with your standardized processes, Cisco UCS Director can become a multiplier in your business. Removing the variability of human interaction helps ensure consistency in repetitive tasks and relieves the load on human resources. Productivity is increased.

“We can deploy a virtual data center for a tenant in 20 minutes by automating 56 manual tasks.”
—Velibor Kokanovic, Director of IT Operations, Telekom Srbija

A Closer Look

Cisco UCS Director supports a broad range of services that scale from standard infrastructure provisioning to configuration and deployment of multitenant or bare-metal environments.

- Set up and assign resources for physical and bare-metal environments on Cisco and third-party hardware.
- Assign and deploy security and isolation models to meet specific tenant or application requirements.
- Perform day-0 setup and day-1 definition and deployment of Cisco UCS integrated and hyperconverged infrastructure.
- Consume data center resources from a self-service catalog (Figure 1). From this interface, administrators can review and approve service requests to provision virtual machines, bare-metal servers, and application containers.
- Monitor and create reports for provisioned and reserved physical and virtual resources (Figure 2). With a choice of spreadsheet or graphical report, administrators can choose the right format to increase users' understanding of their resource consumption.
- Increase consistency with one-click installation, provisioning, and deployment of Hadoop and Splunk clusters, and reduce risk with real-time diagnostics and historical analysis.

Figure 1. IT and Operations Professionals Can Order Services from the Self-Service Catalog

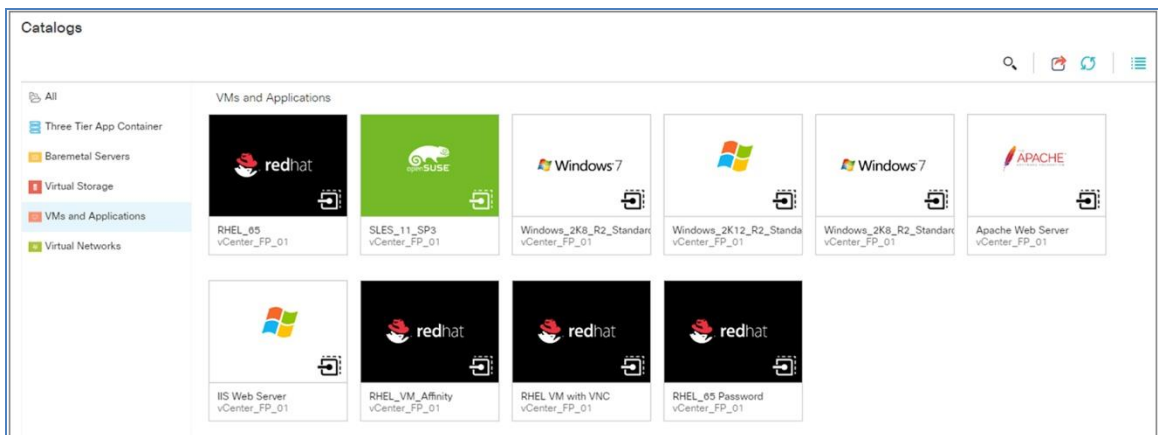


Figure 2 Administrators Can Create Consumption Reports by User or Group

VM ID	Instance Name	Provisioned Time	Month	Active VM ...	Inactive V...	Blade Type	Active VM ...	Inactive V...	Allocated ...	Allocated ...	Storage Co...	Total Cost USD
599	Dev_VM_SR832	Tue Aug 09 2016...	August, 2016	1.0	0.0		0.00	0.00	0.00	0.00	0.00	8.00
1112	Prod_VM_SR866	Wed Sep 28 201...	September, 2016	54.0	0.0		0.00	0.00	0.00	0.06	0.00	10.08
547			July, 2016	163.0	0.0		0.00	0.00	0.00	0.04	0.01	0.08
532	Dev_VM_SR796	Thu Jun 09 2016...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.17	0.03	0.28
590	Prod_VM_SR843	Tue Sep 20 2016...	September, 2016	243.0	0.0		0.00	0.00	0.00	0.07	0.01	10.11
398	Dev_VM_SR432	Tue Mar 01 2016...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.17	0.03	0.28
537	Dev_VM_SR804	Tue Jun 14 2016...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.17	0.03	0.28
1111	Prod_VM_SR863	Wed Sep 28 201...	September, 2016	55.0	0.0		0.00	0.00	0.00	0.03	0.00	10.05
557			July, 2016	163.0	0.0		0.00	0.00	0.00	0.04	0.01	0.06
591	Prod_VM_SR807	Tue Sep 20 2016...	September, 2016	242.0	0.0		0.00	0.00	0.00	0.07	0.01	10.11
412	Prod_VM_SR452	Wed Mar 09 201...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.21	0.03	0.65
500	Dev_VM_SR742	Tue May 10 2016...	September, 2016	621.0	97.0		0.00	0.00	0.00	0.32	0.10	0.58
500	Dev_VM_SR742	Tue May 10 2016...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.33	0.10	0.60
556			July, 2016	163.0	0.0		0.00	0.00	0.00	0.07	0.02	0.11
397	Dev_VM_SR430	Fri Feb 19 2016 ...	July, 2016	744.0	0.0		0.00	0.00	0.00	0.04	0.08	0.21
561	Dev_VM_SR827	Tue Jul 05 2016 ...	September, 2016	541.0	97.0		0.00	0.00	0.00	0.07	0.03	0.18
399	QA_VM_SR438	Wed Mar 02 201...	September, 2016	621.0	97.0		0.00	0.00	0.00	0.10	0.04	0.19

Table 1 describes the main capabilities of Cisco UCS Director.

Table 1. Main Features

Capability	Features
Infrastructure automation	<ul style="list-style-type: none"> Automation, orchestration, and management of Cisco UCS converged and hyperconverged solutions On-demand provisioning of multitenant environments with secure network segmentation and isolation Centralized, consistent management for traditional, converged infrastructure and hyperconverged infrastructure Ability to meter resource utilization and consumption by users and provide showback data that can be exported to third-party billing systems to charge users and organizations based on use
Self-service catalog	<ul style="list-style-type: none"> On-demand ordering and rollout of infrastructure components, bare-metal servers, or all-inclusive infrastructure stacks for specific application environments Customizable dashboard to track consumption of resources
Network management	<ul style="list-style-type: none"> On-demand provisioning of physical and virtual switches and dynamic network topologies Automation of VLANs, virtual network interface cards (vNICs), port groups, port profiles, IP Dynamic Host Configuration Protocol (DHCP) allocation, and access control lists (ACLs) across network devices
Computing and storage management	<ul style="list-style-type: none"> Capability to provision, manage, and monitor physical, virtual, and bare-metal servers in Cisco and third-party hardware environments Automated provisioning and management of storage virtual machines, filers, virtual filers (vFilers), logical unit numbers (LUNs), and volumes Server and storage utilization trends and capacity analysis to identify underutilized and overutilized resources
Comprehensive discovery and inventory collection	<ul style="list-style-type: none"> Discovery, mapping, and monitoring of the physical and logical topology of data center resources Detection of resource changes and movement through a discovery process that occurs at intervals determined by IT
Multiple-hypervisor and bare-metal automation support	<ul style="list-style-type: none"> Support for VMware ESX and ESXi, Microsoft Hyper-V, and Red Hat hypervisors Support for bare-metal OS (Red Hat Enterprise Linux [RHEL], CentOS, and Microsoft Windows) installation and hypervisor (ESXi and Hyper-V) installation
Orchestration and workflow designer	<ul style="list-style-type: none"> More than 3000 built-in tasks for operations on Cisco and third-party hardware components Capability to create API-based custom tasks for operations on hardware and software stacks Built-in workflow designer used by IT and operation professions to create automated workflows Workflow validation that identifies configuration errors, lack of available resources, and improper resource assignments
Open Automation Software Development Kit (SDK)	<ul style="list-style-type: none"> Growing ecosystem of partners who use the Open Automation SDK to develop integrations for Cisco UCS Director
Robust development community	<ul style="list-style-type: none"> More than 300 predefined and certified code samples that are available through free download; each download contains code samples and instructions and a sample topology

Benefits

- Deliver and support new services faster, allowing the business to win, serve, and retain customers.
- Rapidly align resources with business demand by transparently increasing or decreasing infrastructure.
- Through abstraction of infrastructure components, more quickly provision, pool, and schedule resources based on the requirements of the workload.
- The robust open community fuels innovation through collaboration.
- Free time for data center professionals to become true business partners and provide competitive value to your business.

“The effects of Cisco UCS Director have been enormous. Teams spend half as much time deploying environments. NESIC looked at other options for automated management tools, but only Cisco UCS Director could manage both virtual and physical environments.”

—Hiroshi Matsuda, Head of Cloud Architecture Department, New Solutions Division, Enterprise Solutions Operations Unit, NEC Networks & System Integration Corporation.

Platform Support and Compatibility

Cisco UCS Director supports an extensive range of hardware solutions. Refer to this [compatibility matrix](#) to learn more.

Product Specifications

Refer to the following links for more details:

- [Bare-metal installation and configuration guide](#)
- [Cisco UCS Director installation on Microsoft Hyper-V](#)

System Requirements

For system requirements, click [here](#).

Warranty

Refer to Cisco's [software warranty policy](#) for more details.

Licensing

Cisco UCS Director is licensed on a per-server basis. Multitier and enterprise license agreements are available. Contact your Cisco sales representative or reseller for more details.

Cisco and Partner Services

Services from Cisco and our certified partners can help you transform your data center and accelerate business innovation and growth. For more information, visit <http://www.cisco.com/go/services>.

Cisco Capital Financing

Cisco Capital[®] financing can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce capital expenditures (CapEx), accelerate your growth, and optimize your investment dollars and ROI. Cisco Capital financing give you flexibility in acquiring hardware, software, services,

and complementary third-party equipment. And there's just one predictable payment. Cisco Capital financing is available in more than 100 countries. [Learn more](#).

Cisco ONE Enterprise Cloud Suite

Cisco UCS Director is a component of [Cisco ONE™ Enterprise Cloud Suite](#). Enterprise Cloud Suite extends your automation capabilities beyond infrastructure:

- Cloud Management allows you to model, provision, and deploy applications and supporting infrastructure to approximately 20 data center and private and public cloud platforms.
- Service Management provides a unified self-service catalog for IT and non-IT tasks to deliver an exceptional customer experience.
- Big Data Automation allows you to deploy, adapt, and scale Hadoop infrastructure and software components through a unified, single-touch experience.

Why Cisco?

Look at any tech site blog, industry webinar, or conference agenda. The industry is focused on the notion of business transformation in response to rapid change. Business issues are complex, and every business is different. Few vendors are qualified to accelerate the transformation from traditional IT silos to the world of automation consistency. But Cisco is. Years of managing data and accelerating business have taught us exactly what's needed to achieve the automated speed and agility required to propel your business.

Now Is the Time to Begin

The market waits for no one. With changes abounding in your organization, now is the time to begin your transformation journey. Cisco UCS Director delivers the heterogeneous infrastructure automation you need to deliver standardized infrastructure resources in minutes. Or use the solution to roll out infrastructure and bare-metal servers to support a private cloud. The key is simply to begin. Learn more at <http://www.cisco.com/go/ucsdirector>.

What's Next?

Contact your Cisco sales representative or reseller partner for a demonstration and more deeply explore Cisco UCS Director.



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