

Cisco UCS Director Versions 5.0 and 5.1



Introduction

As the transformation of the data center continues, the demand for IT to move faster has never been greater. With the Internet setting customer expectations for immediate delivery and with data volumes rising dramatically, IT can no longer take weeks to provide the infrastructure and services their customers expect.

To deliver business services faster, organizations need to adopt automation at various organizational levels. Infrastructure automation allows IT to deliver infrastructure services within minutes while relieving IT staff from the need to perform manual, time-consuming processes.

Application-Centric and Application-Ready Infrastructure

Business applications today typically work together in a tiered fashion and require computing, networking, and storage resources as foundational support. Often, virtual machines are put online in minutes, yet the remaining infrastructure stack required for the application takes more time to deploy manually. Cisco UCS® Director solves that problem. It delivers programmable application containers across computing, networking, and storage resources that are configured to the needs of the specific application to reduce manual processes and extend automation benefits to the entire infrastructure stack.

How It Works

Cisco UCS Director abstracts hardware and software into programmable tasks that can be tailored to a customer's specific business needs. The IT department uses these tasks to create workflows spanning hypervisor, computing, network, and storage components. This process relieves IT staff of the need to manually configure and manage these layers.

Cisco UCS Director acts as the orchestra conductor for IT operations. The software helps ensure that infrastructure layers are synchronized, optimized, and available on demand. Cisco UCS Director's benefits include:

- Radical streamlining of infrastructure provisioning and management from weeks to minutes
- Physical, virtual, and multivendor management from a single pane to accommodate heterogeneous data centers
- Increased IT agility, which allows IT to have a greater impact on the effectiveness of the business

Cisco UCS Director and Cisco Application Policy Infrastructure Controller

- Working in conjunction with the Cisco® Application Policy Infrastructure Controller (APIC), Cisco UCS Director interprets the requirements of applications into policies to deliver consistent application-aware infrastructure. The business outcome for IT is delivery of application-aware infrastructure containers.
- Cisco UCS Director bonds with Cisco APIC and Cisco Unified Computing System™ (Cisco UCS) service profiles to help ensure that all infrastructure elements are synchronized with the application's needs.
- End-to-end infrastructure provisioning and management supports workloads through their complete lifecycle, from inception through discontinuance.
- Cisco UCS Director can support a diverse range of workloads from testing and development to production.
- Customers can manage existing non-application-centric infrastructure as well as Cisco Application Centric Infrastructure (ACI) from a single pane, eliminating the need for multiple management consoles and enabling smoother migration.

Cisco Virtual Application Container Services

Cisco Virtual Application Container Services (VACS) is designed for non-application-centric environments, specifically the Cisco Nexus® 1000V Switch, virtual routing with the Cisco Cloud Services Router (CSR) 1000V, and virtual security on the Cisco Virtual Security Gateway (VSG) and Cisco VSG for Nexus 1000V Series Switch. Cisco VACS relieves server administrators from having to understand and complete manual tasks associated with the creation of application containers.

Delivered as a single license for all components, the Cisco VACS license is an add-on to new or existing Cisco UCS Director instances. By means of a wizard installation and configuration, Cisco UCS server administrators can configure and take delivery of application containers in fewer than six logical steps. The combination of Cisco UCS Director and Cisco VACS helps enable IT to better serve customers faster.

Resource Management

Cisco UCS Director supports resource groups or pools that span physical and virtual resources. This capability allows IT operations, or group administrators, to allocate resource changes internal to specific pools without affecting other unrelated pools within the organization. Resource pools give IT the flexibility to better serve customers with resource allocation that helps ensure that each pool has the resources required for its specific project or task.



Extensible Platform with Open Automation

Third-party hardware and solution vendors support Cisco UCS Director using a publicly available software development kit (SDK) with open, downloadable APIs. The SDK contains all the required APIs and management functions to allow the third-party hardware or solution to snap directly into the Cisco UCS Director management model.

Cisco UCS Director's SDK can be downloaded from <http://software.cisco.com/download/release.html?mdfid=285012325&flowid=44583&softwareid=285018084&release=4&reind=AVAILABLE&rellifecycle=&reltype=latest>.

Enriched Task Library

Cisco UCS Director's task library has been expanded to more than 1000 preconfigured tasks. These represent the equivalent of 2400 person days of development effort. They save organizations the cost and time of separate professional service engagements to develop workflows that can be run immediately or saved for on-demand use through an infrastructure self-service catalog. Cisco UCS Director's task-based workflow orchestration represents up to 80 percent time and cost savings over script-based orchestration tools.

Simplified Bare-Metal Agent

Cisco UCS Director's enhanced bare-metal agent is managed directly from the Cisco UCS Director administrator user interface to provision and configure bare-metal instances. This feature eliminates the need for command-line and manual launching of preboot execution environment (PXE) images.

Benefits at Each Level of the IT Department

Senior executives, including chief information officers (CIOs) and chief technology officers (CTOs), can gain:

- Investment protection with a single management control point for heterogeneous infrastructure solutions
- Operation efficiency through optimal use of both infrastructure and human resources for increased uptime for the business
- Heterogeneous management that delivers a choice of server, storage, and hypervisor options to meet the needs of diverse projects
- Better alignment of IT with the needs of the business with application-aware infrastructure to increase collaboration between IT operations and application developers

Heads of IT infrastructure can gain:

- Operation efficiency through elimination of administrator silos, which sparks innovation by encouraging teamwork and collaboration
- Visibility of use and potential problems before they affect application and business performance
- Heterogeneous management that provides IT with the flexibility to rapidly adapt to changing business requirements
- Agility and speed from fast, consistent infrastructure service delivery, resulting in increased confidence in IT's ability to deliver required services

IT administrators can gain:

- Single-purpose solution that delivers one architecture and API base, making integration into third-party solutions straightforward
- Operation efficiency with a role-based user interface that allows administrators to view and manage only those resources that are under their control
- Visibility through use and consumption reports, increasing end-users' confidence in IT's ability to maintain a stable and reliable environment

Why Cisco?

Cisco UCS Director improves business agility and increases efficiency by improving infrastructure management and services delivery. It provides unified infrastructure provisioning and automation across computing, networking, and storage resources to drastically reduce complexity for IT operators and administrators.

The combination of Cisco UCS service profiles and Cisco ACI delivers integrated infrastructure solutions through a single pane across computing, networking, and storage components to secure tenant containers. With application-aware infrastructure containers, applications - and your business - run at optimal performance.

For More Information

- Learn more about Cisco UCS Director at cisco.com/go/ucsdirector.
- Schedule attendance of a live demonstration of Cisco UCS Director at <https://buildprice.cisco.com/software/ucs-director>.