Cisco UCS Director: Infrastructure Automation and Multicloud Foundation

Open orchestration and infrastructure as a service

Cisco UCS® Director delivers a foundation for private cloud Infrastructure as a Service (IaaS). It is a heterogeneous management platform that features multivendor task libraries with more than 2500 out-of-the-box workflow tasks for end-to-end converged and hyperconverged stack automation.

You can extend your capabilities to:

- Automate provisioning, orchestration, and management of Cisco and third-party infrastructure resources
- Order resources and services from an intuitive self-service portal
- Automate security and isolation models to provide repeatable services
- Standardize and automate multitenant environments across shared infrastructure instances

Benefits

- An open platform for implementing orchestration and management across Cisco® and third-party infrastructure for private-cloud Infrastructure as a Service (IaaS)
- Error-free production and development resources in minutes through unified provisioning and management of computing, network, and storage
- Accelerated time to market for applications through self-service portals with on-demand ordering of IT resources and services
- Modular, cost-effective means of implementing multicloud using existing hardware, tools, and processes

Greater flexibility and choice

Cisco has partnered with many hardware vendors and independent software vendors to establish an open framework for IaaS. UCS Director supports bare metal and virtualized environments. It also supports multiple hypervisors, so you don't have to choose one software-defined infrastructure and get locked into one vendor. This orchestration platform provides heterogeneous provisioning and lifecycle management for Cisco and third-party solutions.

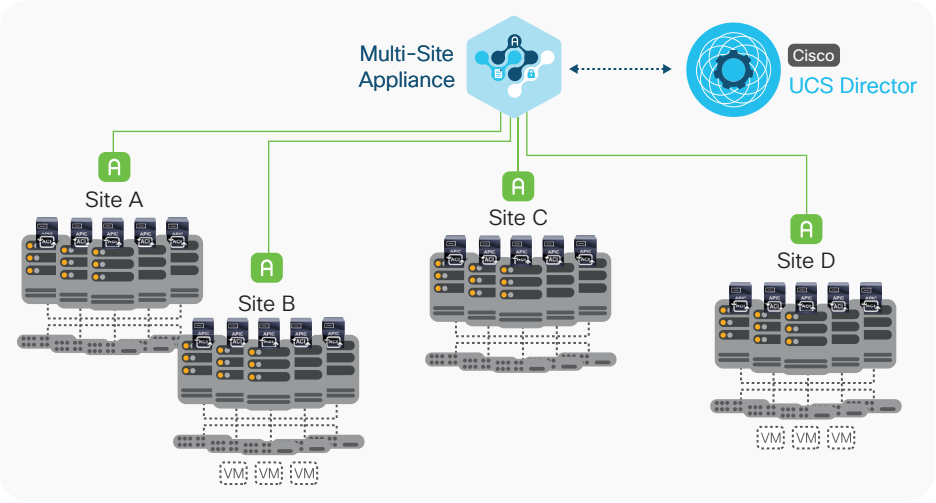
Cisco UCS Director unifies and automates end-to-end IT infrastructure management processes by abstracting the complexity of individual devices, hypervisors, and virtual machines. This abstraction reduces the complexity of resource management by enabling both physical and virtual resource groups across resource pools. With this capability, IT administrators can distribute resources across tenants in a shared or dedicated model by enabling you to efficiently and cost-effectively deploy on-premises infrastructure for private cloud.

Foundation for Cisco Multicloud and Cisco Application Centric Infrastructure (Cisco ACI)

This orchestration platform provides advanced automation for Cisco network, servers, hyperconverged and converged infrastructure. You can perform day-0 setup and day-1 definition and deployment of Cisco Unified Computing System™ servers, Cisco HyperFlex™ hyperconverged infrastructure, and Cisco Nexus® switches. In addition, the converged infrastructure solutions Cisco has developed with our storage partners, including VCE's VxBlock, NetApp's FlexPod, IBM's VersaStack, and Pure's FlashStack.

Working in conjunction with the Cisco Application Policy Infrastructure Controller (APIC), Cisco UCS Director builds and manages the fabric. It allow you to extend the fabric to onboard the necessary compute and storage resources. Cisco UCS Director bonds with APIC and Cisco UCS service profiles to ensure that all infrastructure elements are in sync with the application's needs. End-to-end infrastructure provisioning and management supports workloads through their complete lifecycle: inception through discontinuance.

Figure 1. Overview of ACI Multisite Controller and Cisco UCS Director



Cisco UCS Director also supports Cisco ACI Anywhere, enabling ACI Multisite Controller automation. Workflows are available for Cisco ACI site management, centralized tenancy, and application templates. The configuration of ACI Multisite allows for policy replication across disaster recover sites and centralized policy management via Multisite Controller, as well as centralized tenancy and application profiles.

Cisco UCS Director is a foundational component of the Cisco ONE Enterprise Cloud Suite–Infrastructure Automation offer. Cisco's modular approach to multicloud lets you begin with your private cloud and grow to include hybrid cloud management, as well as the ability to optimize the placement of workloads. Subscription-based licensing simplifies license and support management for easier compliance, lowers up-front costs, and shifts spending to an operating budget.

For more information

To learn more, visit www.cisco.com/go/cloudsuite.

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Extensible and evolving platform

Third-party hardware and solution vendors support Cisco UCS Director using a publically available Software Development Kit (SDK) with open southbound APIs that can be downloaded. The SDK contains all the APIs and management functionality needed to add the third-party hardware or solution into the Cisco UCS Director management model.

While UCS Director remains a strategic platform, Cisco is creating a path forward to allow customers to transition to Cisco Intersight in the future. This evolution will take time to implement, but we have started the process by introducing a UCS Director connector to Intersight. Beginning with version 6.6, Cisco UCS Director can be claimed as a managed device in Intersight. It is a first step forward on this journey.

Easing your transition to cloud

Cisco UCS Director is also an important component of the Cisco ONE™ Enterprise Cloud Suite–Infrastructure Automation offer, delivering infrastructure as a service using the UCS Director self-service catalog (Figure 2).

Figure 2. Example of Cisco UCS Director service catalogs