Cisco UCS Manager Partner Ecosystem

Operating With the Infrastructure

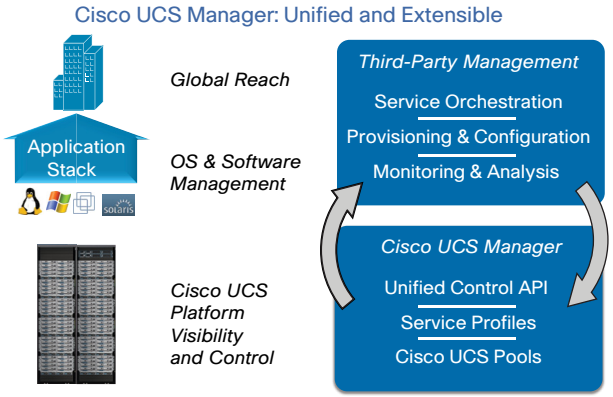
IT organizations have been asked to do more with largely static budgets for several years. Although the cost of computing power continues to decrease, labor remains a significant fixed cost, as the operation and maintenance of traditional computing infrastructure, especially in the wake of large-scale server virtualization, remains manually intensive.

Many IT organizations are increasingly investing in management solutions to better synchronize and automate both physical and virtual systems. Cisco® UCS Manager provides a unified, programmatic interface to dynamically provision computing and network elements within the Cisco Unified Computing System™. It also offers a robust XML API to facilitate deep integration with broader systems management tools, helping to address one of the largest costs in most IT budgets: management and administration.

Role of Cisco UCS Manager in Systems Management

Cisco UCS Manager (Figure 1) gives the administrator extensive controls for managing all aspects of the Cisco Unified Computing System. Cisco UCS Manager service profiles allow users to define hardware configurations in software and allocate resources through an open API. Building on this API, Cisco collaborates with a broad set of higher-level systems management leaders to integrate unique Cisco UCS capabilities within their native functions and user interfaces. These integrations enhance performance monitoring of OS and higher layers of the application stack and consistent cross-system management, especially in heterogeneous environments.

Figure 1. Cisco UCS Manager Provides Visibility and Control To Systems Management Tools



Combining Cisco UCS Manager with a third-party management solution reduces the time required to deliver new services simply, reliably, and securely from days or weeks to minutes.

Supporting Seamless Migration to the Cisco UCS Platform

Because Cisco UCS Manager is integrated with a broad management ecosystem, administrators can ensure policy consistency and follow best practices for deploying x86 application stacks on the Cisco Unified Computing System with their existing management solutions. Users can easily migrate physical or virtual server images from existing platforms to the Cisco Unified Computing System in software, retaining control over that image's configuration and health.

Optimizing IT Operations on the Cisco Unified Computing System

Cisco UCS Manager integrations with third parties cover the entire service management lifecycle, from service orchestration, through deployment and configuration, to monitoring and analysis. This approach helps ensure the availability of complete solutions for a variety of important use cases, including the following:

- **Workload agility:** Third-party tools use Cisco UCS service profiles to optimize the use of Cisco UCS resources, reducing overall IT service costs while accelerating service delivery. IT can respond more rapidly to new business requests without disrupting other priorities or taxing limited staff resources to provision new equipment.

  The Cisco UCS portfolio encompasses a range of options for addressing I/O, CPU- and memory-bound application challenges. Cisco UCS service profiles enable service orchestration tools to automatically allocate a given workload to the optimal type of server, helping to ensure high-quality application performance.

  The Cisco UCS "wire-once" architecture, with network and storage access settings managed in software, is an additional advantage for IT managers. The ability to dynamically allocate a workload to any available machine within a pool of appropriate servers entirely through management tools, without the need for physical set-up, largely eliminates the rationale for maintaining underutilized servers dedicated to specific workgroups or workloads. Instead, the same servers can be rapidly repurposed for different workloads based on peak and off-peak use, so fewer physical servers need to be purchased and maintained. This in turn helps reduce server sprawl, simplifying asset management.

  By removing traditional barriers to workload agility, Cisco and its management ecosystem partners help IT to transition the business more easily and reliably to lower-cost, more agile computing models based on shared infrastructure and service abstraction.

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- **Service assurance:** Cisco UCS Manager provides granular visibility of all components of the Cisco Unified Computing System to higher-level monitoring tools. This unified view of compute, network and storage access elements, delivered through a single API, speeds discovery and eliminates the tedious and error-prone process of manually correlating information about disparate system components. Administrators can quickly detect and remedy bottlenecks or outages affecting application performance and availability with reduced troubleshooting and change-window duration.
- **Self-service deployment and private cloud:** The promise of data center automation can now be achieved when service orchestration and deployment automation solutions are applied to the flexible, programmable, unified infrastructure provided by the Cisco Unified Computing System.

  Cisco UCS service profiles provide an operationally scalable way to enforce a consistent, system-wide policy framework. On its own, this unified framework provides a more reliable platform for application deployment. When integrated with solutions focused on OS and application management, it forms a powerful foundation for full-stack policy definition and enforcement—greatly simplifying service catalog development and enabling on-demand service delivery.

  The combination of unified, top-to-bottom service orchestration with unprecedented workload agility and painless, reliable service assurance puts into place all of the building blocks for delivering a manageable, cost-effective private cloud.

Cisco UCS Manager Partners

Cisco has worked with leading management vendors to offer a comprehensive portfolio of management options to our joint customers. These partners include:

- BMC
- CA
- Compuware
- Dynamic Ops
- EMC
- HP
- IBM
- Microsoft
- NetApp
- newScale
- SolarWinds
- Symantec
- Zenoss

More than 20 management applications from these vendors have been qualified with Cisco UCS Manager, with more being added regularly.

In addition, the Cisco UCS Platform Emulator and supporting tools, available through the Cisco Developer Network, is fueling rapid growth of the Cisco UCS developer community. In-house and third-party developers can use the Cisco UCS XML API's more than 9000 exposed objects to further enhance the value of the Cisco UCS platform.

Cisco Unified Computing Services

Using a unified view of data center resources, Cisco and our industry-leading partners deliver services that help you migrate to Cisco's unified computing architecture and optimize ongoing operations to better meet your business needs.

For more information, please visit Cisco Unified Computing Services.

Why Cisco?

The Cisco Unified Computing System continues Cisco's long history of innovation in delivering integrated systems for improved business results based on industry standards and using the network as the platform. The Cisco Unified Computing System takes a novel approach to computing that unifies network intelligence and scalability with memory innovations, integrated, embedded management, and standard computing components.

For more information, please visit

- Unified computing
- Cisco UCS Manager
- Cisco UCS service profiles: Understanding Cisco Unified Computing System Service Profiles

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