

# Manage Your Data Center Your Way

Solution Brief  
April 2017

With Cisco UCS Plug-ins for Cisco, Microsoft, and VMware Management and Monitoring Solutions



## Highlights

### Simplify Management

- Use Cisco Unified Computing System™ (Cisco UCS®) plug-ins and manage your IT infrastructure with familiar tools from Cisco, Microsoft, and VMware.

### Manage Hardware Resources

- Provision and manage your hardware resources from a single management pane for improved consistency.

### Control Virtual Environments

- Monitor and manage your Cisco UCS servers at the domain, server, or hypervisor level through popular virtualization management tools.

### Orchestrate Processes and Workflows

- Simplify the consumption, management, and lifecycle of your IT infrastructure resources.

### Monitor Systems

- Improve health and performance monitoring and remediate problems before they affect operations.

### Script Innovative Solutions

- Integrate Cisco UCS with familiar scripting and programming tools.

You need better ways to manage your data center. Our plug-ins for popular management solutions deliver just that.

You need to be able to manage your data center your way. That's hard to do with inflexible infrastructure and poorly integrated management solutions. That's why many organizations are deploying Cisco Unified Computing System™ (Cisco UCS®). Our programmable infrastructure approach and unified management API work with your existing data center management and monitoring solutions so that you can optimize IT operations and improve visibility and control.

## Cisco UCS: Changing IT with Programmable Infrastructure

No matter what type of applications and environments you use, your IT infrastructure must be agile, flexible, and easy to manage. The programmable infrastructure approach of Cisco UCS provides a consistent way to refer to, define, configure, and manage IT resources. Every component is incorporated into an object model that maintains a single source of truth regarding system inventory and configuration, from individual CPUs, memory chips, ports, and networking interfaces to servers, internal disk storage systems, and installed virtual machines. The Cisco UCS object model is available to Cisco and third-party management tools through a unified API and set of plug-ins. Using these plug-ins, you can manage your infrastructure with fine-grained control at any level you choose using the management tools that are already familiar to you (Figure 1).

## Manage Your Hardware

It starts with managing your hardware. With Cisco UCS tools and plug-ins you can:

- **Manage standalone servers:** Embedded in Cisco UCS servers, the Cisco® Integrated Management Controller (IMC) provides an easy way to provision and manage servers, including network configuration; remote keyboard, video, and

Manage Your Data Center Your Way  
 With Cisco UCS Plug-ins for Cisco, Microsoft, and VMware Management and Monitoring Solutions

mouse (KVM) devices; power states; and firmware revisions. Out-of-band management is accessible through standard protocols, command-line interfaces (CLIs), and web-based interfaces.

- Manage fabrics and logical servers:** Cisco UCS Manager, which runs in the system's fabric interconnects, controls all parts of the system. Using configuration models, your IT staff can help ensure the consistent, error-free policy-based alignment of server personalities with workloads.

- Manage your data center at scale:** Cisco UCS Central Software helps you manage growth within a single data center and support multiple sites. Your IT staff can manage multiple, globally distributed Cisco UCS domains with thousands of servers from a single pane, simplifying your operations at scale.

in each scenario. Our plug-ins are available for popular virtual machine management tools, giving you access to Cisco UCS infrastructure through familiar tools to simplify virtualized software and hardware management and improve IT productivity. These plug-ins allow your virtualization administrators to monitor and manage your Cisco UCS servers at the domain, server, or hypervisor level; create, manage, and assign service profiles and templates; and correlate hypervisors with the servers on which they are installed. In addition:

### Control Virtual Environments

Just as your users, workloads, priorities, and initiatives are all different, so too are the virtual solutions that work best

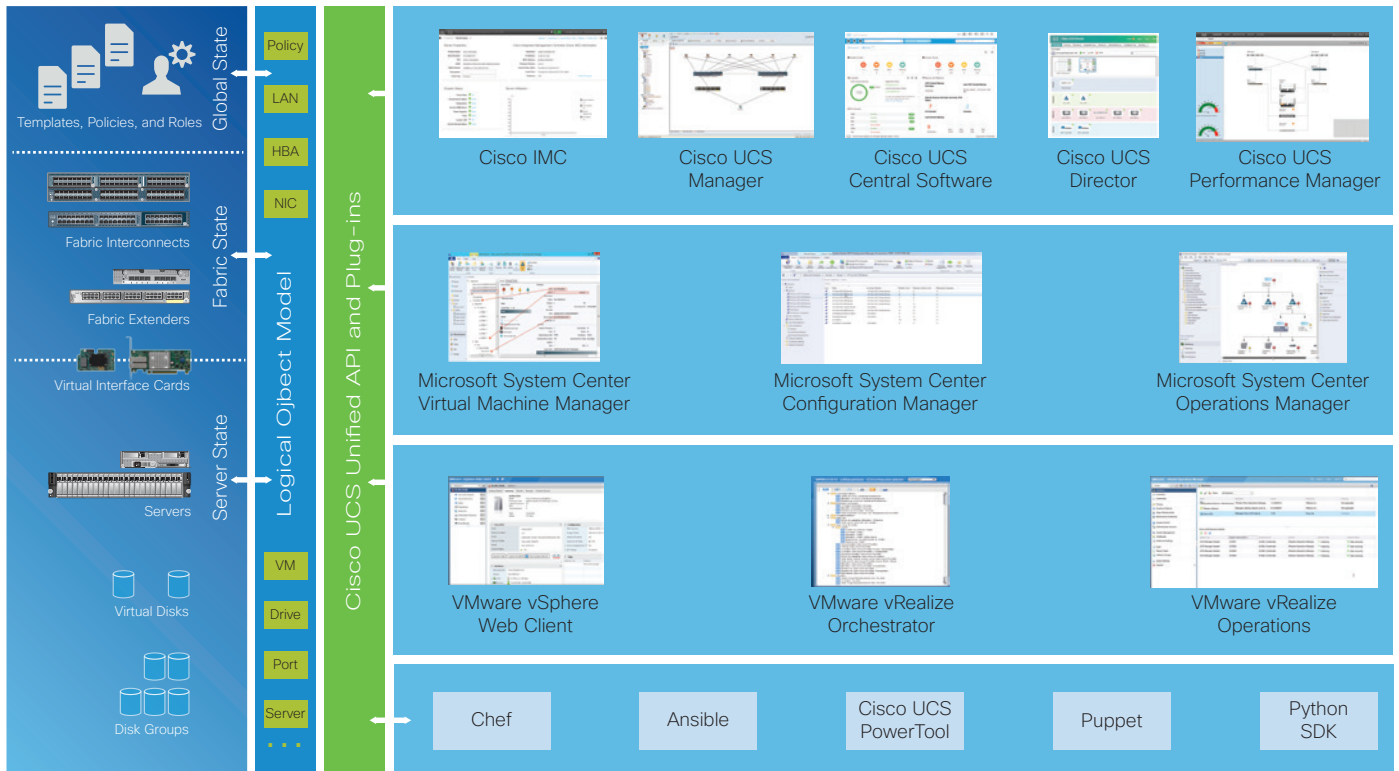


Figure 1 Cisco Unified API and Cisco UCS Plug-ins Provide Easy and Consistent Access for Management and Monitoring Tools



- **Cisco UCS Manager Plug-in for VMware vSphere Web Client** provides an extension to the VMware vSphere Web Client. Using this plug-in, you can correlate hypervisors with Cisco UCS servers; obtain chassis, server, and fabric interconnect information; and manage host firmware, including downloading firmware and associating it with one or more service profiles. In addition, your IT staff can use service profiles in conjunction with the autodeploy capabilities of VMware vCenter. As a result, the VMware ESXi software can be installed automatically based on your configuration model, and BIOS and firmware policies can be modified.
- **Cisco UCS Add-In for Microsoft System Center Virtual Machine Manager (SCVMM)** provides an extension to the SCVMM user interface. Using this plug-in, you can assign and unassign

a service profile to a server or server pool; change a service profile's association with a firmware package; upload and upgrade server firmware; manage the power state; switch on and off the locator LEDs; view server firmware details; launch the host KVM console; and view and acknowledge faults and any pending activity.

### Orchestrate Processes and Workflows

Management orchestration tools support your business acceleration efforts by simplifying the consumption, management, and lifecycle of your IT infrastructure resources. Cisco UCS plug-ins are uniquely positioned to provide a premier framework for automation, giving you the flexibility to choose your management tool and define entire workflows. These workflows let you automate the delivery

and management of physical and virtual infrastructure; perform lifecycle tasks; maintain security policies across shared IT infrastructure resources; specify the order of operations; validate deployed configurations; handle post deployment validation; handle failure scenarios; and more. In addition, the plug-ins allow:

- **Cisco UCS Director** unifies management and automation for converged and hyperconverged infrastructure, including physical and virtual components, across Cisco UCS and third-party solutions. Using this tool, you can increase efficiency and productivity by automating IT infrastructure configuration with consistency for virtual machines and bare-metal server workloads and deliver them through a self-service portal for on-demand access.
- **VMware vRealize Orchestrator** obtains, sets, adds, removes, renames, and clones service

profiles. It disassociates a service profile for a server, binds and unbinds a service profile from a template, dynamically adds Cisco UCS computing resources to a VMware vSphere cluster to deliver an elastic capacity expansion workflow, and exports and imports a Cisco UCS backup instance.

- **Cisco UCS Integration Pack Suite for Microsoft System Center Configuration Manager** lets you deploy, configure, and manage standalone servers through Microsoft System Center Configuration Manager. A wizard simplifies driver downloads and allows you to configure power-related policies and limits and download firmware bundles from Cisco.com.

## Monitor Systems

You need assurance that your deployed IT infrastructure is operating as expected. Our plug-ins access the data available through the Cisco UCS Manager API to provide data about your Cisco UCS infrastructure to your existing management tools so that you can improve health and performance monitoring and remediate problems before they affect operations. Your IT staff gain visibility into all Cisco UCS components, including servers, chassis, I/O modules, fabric extenders, and fabric interconnects. As a result, you can perform ongoing monitoring of the health and performance of your infrastructure from the tools of your choice. In addition:

- **Cisco UCS Performance Manager**, a purpose-built data center operations management solution, unifies the monitoring of essential servers and integrated infrastructures across dynamic, heterogeneous, physical, and virtual data centers built on Cisco UCS platforms.
- **Microsoft System Center Operations Manager** performs real-time monitoring of your Cisco UCS infrastructure. It can monitor domain faults, automatically discover components, and obtain power-state change information for Cisco UCS blade and rack servers.
- **Cisco UCS Management Pack for VMware vRealize Operations** monitors your Cisco UCS domain's physical infrastructure,

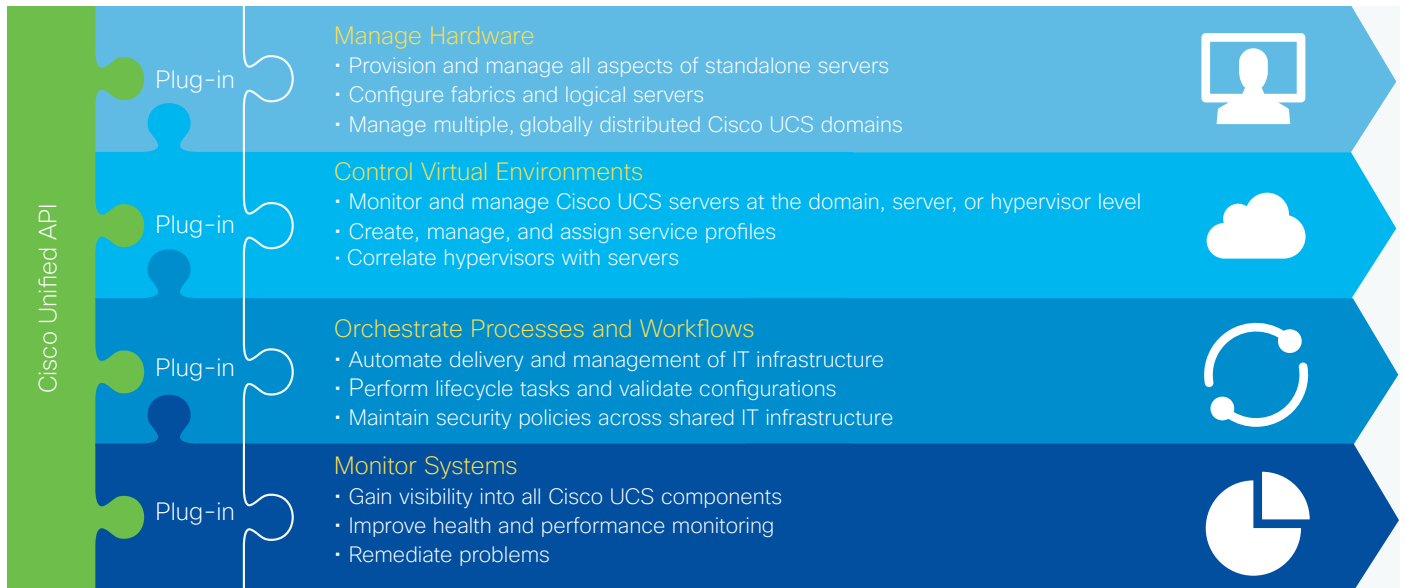


Figure 2 Cisco UCS Plug-ins Allow You to Manage, Control, Orchestrate, and Monitor Your IT Systems from Familiar Tools

correlates your physical and virtual infrastructure components and hardware inventory, and monitors system health and alerts. It lets you view I/O, power, and temperature performance metrics from within vRealize Operations.

## Script Innovative Solutions for Your Business

Your administrators and developers don't have a lot of time to waste on learning new interfaces, protocols, and tools. Cisco's approach includes easy-to-use programming environments that abstract the underlying unified API. These abstractions provide a robust set of functions for the Cisco UCS product line and are integrated with familiar programming tools, giving your staff access to the same development environment regardless of the scale or scope of your management domain. Your developers and IT staff can use the tools with which they are familiar, including Microsoft PowerShell, Python, Ansible, Puppet, and Chef.

## For More Information

For more information about Cisco UCS management tools, visit [http://www.cisco.com/c/en/us/products/servers-unified-computing/cisco\\_ucs\\_management.html](http://www.cisco.com/c/en/us/products/servers-unified-computing/cisco_ucs_management.html).

For more information about the Cisco UCS Integration Pack Suite for Microsoft System Center Configuration Manager, visit <https://communities.cisco.com/docs/DOC-37157>.

For more information about the Cisco UCS Add-in for Microsoft System Center Operations Manager, visit <https://communities.cisco.com/docs/DOC-67249>.

For more information about the Cisco UCS Add-in for Microsoft System Center Virtual Machine Manager, visit <https://communities.cisco.com/docs/DOC-37158>.

For more information about the Cisco UCS Manager Plug-in for VMware vSphere Web Client, visit <https://communities.cisco.com/docs/DOC-36989>.

For more information about the Cisco UCS Management Pack for VMware vRealize Operations, visit <https://communities.cisco.com/docs/DOC-57232>.

For more information about the Cisco UCS Management Pack for VMware vRealize Orchestrator, visit <https://communities.cisco.com/docs/DOC-50471>.

For more information about Cisco UCS Director, visit <http://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-director/index.html>.

For more information about Cisco UCS Performance Manager, visit <http://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-performance-manager/index.html>.

To read the Cisco UCS Performance Manager data sheet, visit <http://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-performance-manager/datasheet-c78-733242.html>.

For Cisco UCS Performance Manager documentation, visit <https://communities.cisco.com/docs/DOC-72001>.



**Americas Headquarters**  
Cisco Systems, Inc.  
San Jose, CA

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
Singapore

**Europe Headquarters**  
Cisco Systems International BV Amsterdam,  
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).