

Cisco UCS Central Software Plus Zenoss Cloud Service Assurance: Unified Service Assurance Monitoring Across Cisco UCS Cloud Domains

Zenoss Cloud Service Assurance (CSA) integrated with Cisco UCS[®] Central Software helps administrators understand Cisco Unified Computing System[™] (Cisco UCS) performance and capacity utilization across Cisco UCS domains.

HIGHLIGHTS

- Manage multiple Cisco Unified Computing System[™] (Cisco UCS[®]) domains end to end: Cisco UCS Manager embedded device management software manages each Cisco UCS domain across the entire system as a single logical entity. Cisco UCS Central Software extends these management features to multiple Cisco UCS domains, which may be distributed across different data centers.
- Enable organizationwide device discovery and monitoring for lower operating costs and less complexity: The Zenoss Cloud Service Assurance (CSA) solution, when integrated with Cisco UCS Central Software, provides discovery of Cisco UCS infrastructure, including blade and rack servers, throughout all of an organization's data centers using data from Cisco UCS Manager.
- Monitor performance and capacity use for Cisco UCS domains: Zenoss CSA is a centralized resource for understanding Cisco UCS multidomain performance and capacity. Zenoss CSA uses Cisco UCS Manager data input aggregated by Cisco UCS Central Software, including Cisco UCS service profiles, servers, and operating system metrics such as CPU use, memory consumption, and disk use. This information allows customers to redistribute loads from over utilized blade servers to underutilized servers using Cisco UCS service profiles, or to target those workloads.

Cisco Unified Computing System and Cisco UCS Manager

Cisco UCS is the first data center platform that integrates industry-standard, x86-architecture Cisco[®] servers with networking and storage access into a single converged computing, networking, and storage system. Cisco UCS Manager provides a single point of management for each Cisco UCS domain of up to 160 servers and associated infrastructure. Using a policy-based approach to server provisioning based on service profile templates, Cisco UCS Manager is used by administrators to quickly reproduce existing physical configurations, including I/O, firmware, and settings. A role-based access control (RBAC) model helps ensure the security of system configurations.

Cisco UCS Central Software

Cisco UCS Central Software extends Cisco UCS Manager features across multiple Cisco UCS domains. It allows companies to manage unified computing environments on a global scale, putting computing capacity close to users while managing infrastructure with policies defined centrally. With Cisco UCS Central Software, helping ensure global policy compliance is much easier, with subject-matter experts able to choose the resource pools and policies that must be enforced globally or locally. Cisco UCS service profiles can be moved between geographical locations with drag-and-drop simplicity to enable fast deployment of infrastructure as needed to

support business workloads.

Zenoss Cloud Service Assurance for Cisco UCS Central Software

Zenoss CSA is an advanced software solution for Cisco data center cloud infrastructure deployments running on Cisco UCS solutions. It provides an essential platform for resource monitoring, relationship modeling, adaptive dependency discovery, and continuous delivery of quantitative impact and root-cause analyses.

Integrated with Cisco UCS Manager, Zenoss CSA enables single pane of glass access to operational data from Cisco UCS service profiles and blade and rack servers and a wealth of operating system metrics. With the addition of Cisco UCS Central Software, Zenoss CSA can centrally gather operation data for monitoring and management from multiple Cisco UCS domains and associated physical and virtual infrastructure, which may be spread among different data centers regionally, nationally, or globally.

With Zenoss CSA and Cisco UCS Central Software, data center staffs no longer have to use a variety of separate products with different interfaces, processes, and agents to manage heterogeneous physical and virtual Cisco UCS environments.

Cisco and Zenoss have jointly validated the Zenoss CSA product, extending and customizing it to work with the Cisco Virtualized Multitenant Data Center (VMDC) architecture.

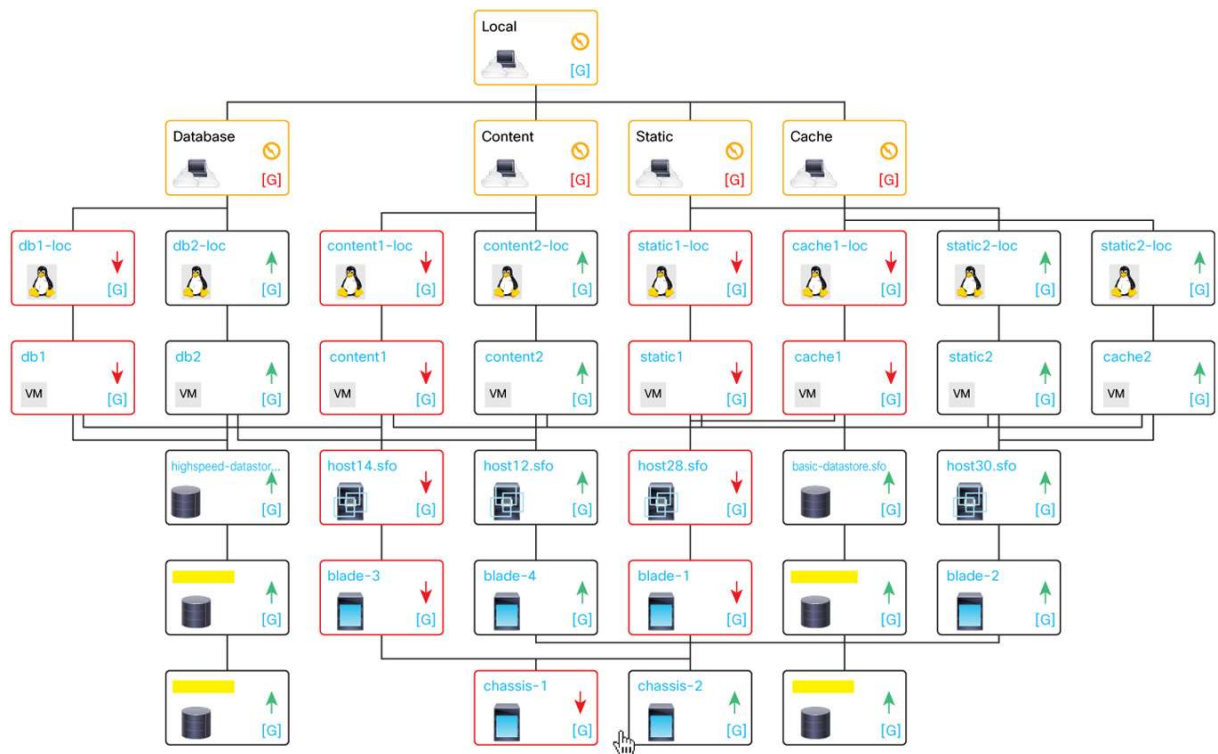
Zenoss CSA plus Cisco UCS Central Software features include:

- **Resource monitoring:** Zenoss CSA unifies management of Cisco UCS components across domains along with other data center hardware. It dynamically collects information about Cisco UCS blade, rack, network, storage, and virtual machine host resources. It also collects information from all other hardware components in data centers, including third-party servers and network and storage devices, using an agentless approach.
- **Relationship modeling:** Zenoss CSA discovers and creates relationship models of each system, giving data center staff a single, accurate view of all physical hardware components. It allows staff to view the level of detail necessary for individual components when triaging and resolving problems related to physical components.
- **Adaptive dependency discovery:** Zenoss CSA reports help administrators identify which Cisco UCS servers are reaching capacity and which have unused capacity, so that Cisco UCS service profiles can be adjusted to use resources more efficiently. Other information includes the available memory slots on blade servers and the components that reside on each Cisco UCS device, enabling data center staff to quickly understand and fine-tune existing Cisco UCS capacity and configurations.
- **Real-time quantitative impact and root-cause analyses:** Zenoss CSA helps identify events that may affect service across Cisco UCS stacks, rapidly focusing resources on the incident root cause. Figure 1 shows cross-stack root-cause analysis, from Cisco UCS infrastructure to VMware to the OS. The relationship model is used to process incoming fault notifications for each individual tenant application and service.

Zenoss CSA provides improved customer service, enabling business users to track performance and availability of tenant applications in a shared cloud infrastructure. The product can help reduce operating expenses for Cisco UCS cloud component monitoring and dynamic relationship modeling by providing an integrated view of an entire cloud infrastructure.

Figure 1 shows a complex cloud service built from four subservices, each using redundant Linux servers virtualized on VMware ESX hosts running on Cisco UCS servers and supported by VMware data stores provided by NetApp filers.

Figure 1. Zenoss CSA Provides Fault and Performance Reporting for Individual Cloud Tenants (Green = Working Components, Red = Availability Problem, and Yellow = Not Used for Service)



For More Information

- Cisco Unified Computing System: <http://www.cisco.com/go/ucs>
- Cisco UCS Central Software: <http://www.cisco.com/en/US/products/ps12502/index.html>
- Zenoss Cloud Service Assurance: <http://www.cisco.com/go/cloudassurance>
- Zenoss Cloud Service Assurance for Virtualized Multi-Services Data Center Design Guide: http://www.cisco.com/en/US/docs/solutions/Enterprise/Data_Center/Management/CLSA_VMDC.html



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