CA Unified Infrastructure Management for Cisco UCS

At a Glance

CA Unified Infrastructure Management (CA UIM, formerly CA Nimsoft Monitor) for Cisco UCS provides comprehensive capabilities for monitoring the entire UCS environment—including both physical and virtual components—equipping administrators with the insights they need to proactively manage and improve service levels. Further, the solution offers the automation and template-based configuration that are essential to efficiently monitoring these virtualized, dynamic environments.

Key Benefits/Results

- Eliminates the overhead and expense of manual monitoring configuration and deployment within the UCS chassis
- Improved SLA compliance—with predictive monitoring and real time, well correlated alerts prevent downtime and reduce outage duration

Key Features

- Automatically discovers physical and virtual elements
- Automatically configures and deploys monitoring based on flexible templates
- Automatically displays timely, accurate monitoring data
- Automatically adjusts monitoring to physical and virtual environment changes
- Templates for chassis elements, blades, fabric interconnects, VMs and more

Business Challenges

The Cisco Unified Computing System (UCS) is a next-generation data center platform that unites computing, networking, storage access and virtualization into a cohesive system designed to reduce total cost of ownership and increase business agility.

Given the integrated, centralized role of UCS in organizations, ensuring optimal performance and availability of these systems is a critical mandate. To track and optimize performance of these systems, administrators need correlated, unified monitoring coverage.

Solution Overview

CA UIM for Cisco UCS automatically discovers components, querying the Cisco UCS Manager to detail the physical configuration of the UCS chassis, including blades, network adapters, fabric interconnects, disks and fabric extenders. In addition, when the Cisco UCS manager is securely connected to VMware vCenter using vCenter extension files, CA UIM can automatically discover the virtual environment within the Cisco UCS chassis. Once physical and virtual resources have been discovered, CA UIM can automatically configure, deploy and display monitoring data based on user-defined templates.

CA UIM offers these capabilities:

- A comprehensive view into the environmental status and historical operation of physical elements, including fans and fan modules, power supply units, fabric interconnects and IO modules; and basic environmental monitoring of blade interfaces, processors and memory arrays.
- Real-time views of the virtual environment ESX host and VM guest availability—views that automatically associate hosts with guest instances.
- Pre-configured alarm and alert settings, quality of service settings, dashboards and more.

Critical Differentiators

CA UIM uses a Message Bus Architecture as a core element that is streamlined, comprehensive and efficient. It enables all monitoring components to communicate with each other, without direct program-to-program connections and acts as an abstraction layer between the core system and the monitoring probes. This leads to significant improvements in reliability, scalability and development agility.
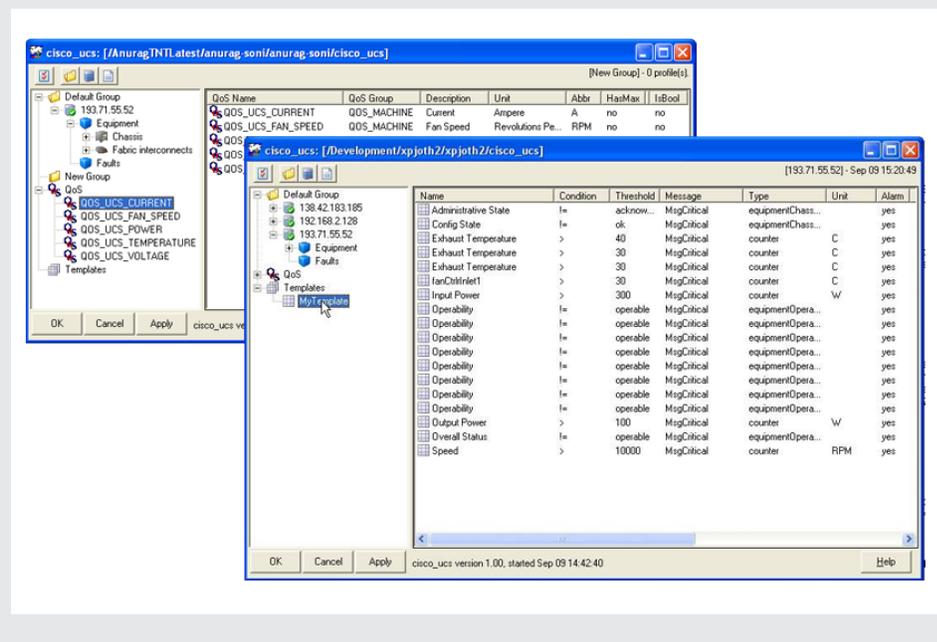
Automated configuration and monitoring templates. CA UIM templating capabilities also allow for automatic configuration of monitoring of new elements when they are discovered—enabling the solution to automatically adjust to the results of replacements of hardware on failure or swap, and to changes in the virtual environments.

The solution's monitoring of virtual environments automatically adjusts to VM guest movement and resource allocation changes, whether applied by VMware DRS, HA or vMotion. Templates are available for chassis elements, blades, fabric interconnects, VMs and more. The result is seamless, automated monitoring of resources, which is a critical requirement for cost effectively managing dynamic and highly automated UCS environments.

Extensive infrastructure coverage. CA UIM enables complete monitoring of IT environments—including physical and virtual infrastructure, applications, servers, networks and more. When Cisco UCS monitoring is combined with CA UIM for VMware and other solution elements, the result is a unified view of the UCS environment—including virtual components and applications within the virtualized environment—as well as of the wider data center. Thus, customers get a complete, unified view of their entire IT infrastructure.

CA UIM provides easy access to a range of Cisco UCS metrics.

Supported Environments

CA UIM collects a variety of metrics by physical component. Physical component metrics include status, presence, performance status, power levels, temperatures, fan speeds, voltage and more. Metrics are collected from the Cisco UCS manager for the following components:

- Chassis
- Chassis fan module
- Chassis fans
- Power supply units
- IO modules
- Blade servers
- Blade server adaptor units
- Blade server memory arrays
- Blade server processors
- Fabric interconnect fans
- Fabric interconnect power supplies
- Fabric interconnect IO modules and ethernet ports
- Fabric interconnect IO module fibre channel ports
- Fabric interconnect local storage and dynamic counters

For more information, please visit **ca.com/uim**