

# Optimizing Cisco UCS with Virtana Infrastructure Performance Management (IPM)

## Essentials

### Optimize Cisco UCS Environments with Virtana IPM

- Understand the overall health, availability, and performance of your compute and network resources
- Achieve real-time and historical performance visibility in context of your mission critical applications
- Make sense of the abstraction layers introduced by the physical and logical UCS architecture
  - Blades, vHBA, vNIC
  - Chassis + Backplane
  - IO Modules and Ports
  - Fabric Interconnects

### Assure your Mission Critical Environments through:

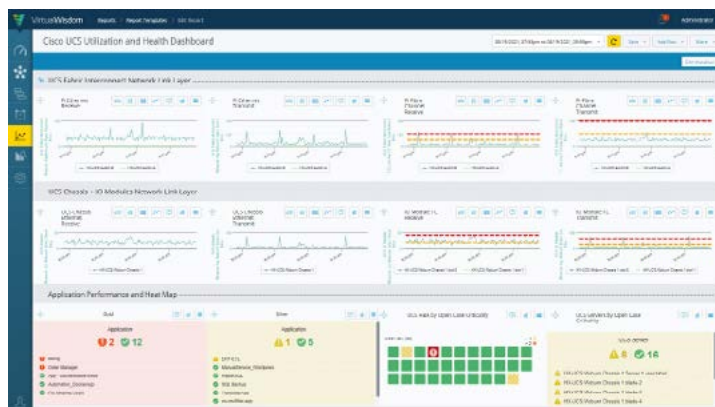
- Comprehensive, Cross-domain visibility across shared infrastructure
- Discover and map application usage of UCS systems
- Data driven insights based on application business value and service levels
- Out-of-the-box best practices dashboards, reports, and alarms
- Time-series database stores performance and capacity data for long-term trend analysis
- Automated investigations dramatically reduce mean time to resolution for the most challenging performance issues
- Virtana IPM's Advanced Analytics Suite:
  - Automated metric correlation across all infrastructure layers
  - Workload balancing optimizes performance and cost both on-premises and in the cloud
  - Predictive capacity management and forecasting
  - Seasonal trending for baselining and dynamic alert thresholding
  - Intelligent Workload Placement and Right-sizing, with proactive optimization recommendations

## Ensure Uptime, Availability, and Performance Across Applications Hosted on Cisco UCS

Enterprise CXOs are relying on Digital Transformation initiatives to drive competitive advantage, speed application delivery, and reduce costs – whether directly through improved customer experience, or through the business insights gained from analytics and machine learning. As a result, assuring the performance of the critical data infrastructure that digital transformation initiatives rely on has never been harder or more important.

A key component of these initiatives is the agility, scalability, and enterprise-class reliability enabled by the Cisco UCS platform. Virtana IPM employs a unique application-centric approach powered by our industry leading Virtana IPM AIOps engine. This ensures you will have unique cross-domain visibility into performance, consumption, and overall service levels throughout your entire infrastructure stack as well as underlying UCS components.

Combined with Virtana IPM's automated application mapping and app-centric reporting, Users gain unique visibility into which Cisco UCS resources an application is consuming. Together, Virtana IPM and Cisco UCS enable organizations to get a complete perspective on Application Service Delivery by capturing capacity, usage, performance, and health information from the physical and logical components of the UCS chassis, with additional metrics from related, interconnected infrastructure like external switches and storage.

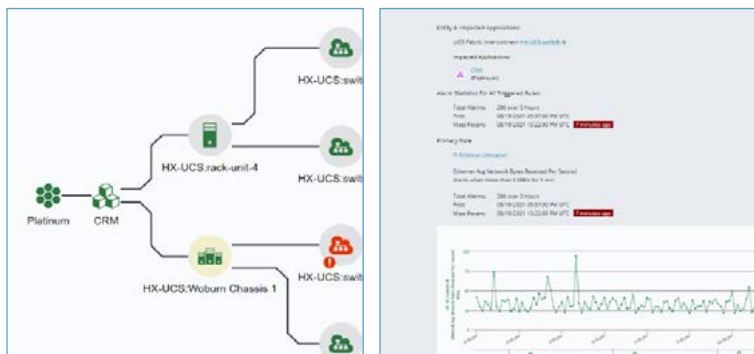


## Single-pane-of-glass for Your Hybrid Infrastructure

Virtana IPM's understanding of your data supply chain provides the basis for rich dashboards that deliver visibility and control to administrators, architects, and executives.

**Ensure Performance:** Virtana IPM combines dynamic, automatically applied best practice and custom monitoring to assure performance and availability – in real-time, at virtually unlimited scale across storage systems, network, and compute infrastructure. Base level monitoring for Cisco UCS includes nearly 300 unique properties and metrics collected from UCS Manager that can be analyzed both individually against expected baseline and collectively in context of metrics or events from external systems.

**Solve Problems Fast:** Automatically triage, diagnose, and provide actionable resolution recommendations before your operations teams are even aware of potential impacts on critical applications.



### The Virtana IPM Solution for Cisco UCS

- Monitors Cisco UCS internal and external KPIs, in context of applications and tiers of service.
- Maps physical and logical components from the UCS Domain into a topology view with visual cues to health, utilization, and performance.
- Proactively assures performance, availability, and efficiency of Cisco UCS deployments

Virtana IPM provides full-stack end-to-end Application Service Delivery visibility for Cisco UCS environments and protocol flows. The result is comprehensive visibility and unparalleled correlation that makes identification and root cause analysis easy, even for challenging issues.

Virtana IPM was built from the ground up as a machine learning-powered analytics platform that goes well beyond the capabilities of traditional AIOps platforms to assure, manage, and balance workloads across UCS chassis and associated infrastructure.

Virtana IPM provides flexible licensing, out-of-the-box best practices, and ease of deployment, which provides visibility and control in minutes, not days.

### Combined Value: Virtana IPM + Cisco UCS

The combination of Virtana and Cisco delivers a best in class integrated approach to cognition-based AIOps. This Unified Compute integration, in combination with granular cross-domain metrics plus ML- and AI-based analytics from Virtana IPM provides unparalleled visibility into delivery of mission critical applications that are hosted on Cisco UCS. Virtana IPM enables you to:

- Understand how and which applications are suffering performance issues from noisy neighbors or resource hogs
- Proactively manage performance sensitive workload and storage capacity at industry-leading scale
- Apply automation to quickly identify, diagnose and solve the toughest performance issues

Virtana delivers unprecedented visibility and actionable insights into the performance, health, and utilization of hybrid IT infrastructure, while Cisco UCS delivers enterprise-class performance and scale. Together, Virtana and Cisco empower you to cost-effectively ensure the performance and availability of mission-critical applications running on Cisco UCS and proactively prevent infrastructure related application slowdowns and outages.