Cisco Workload Optimization Manager

Continuously ensure application performance while minimizing cost

Enhance business with better resource management

Data centers and applications are getting more complex and distributed. The result is a dizzying array of monitoring, orchestration, and management solutions that have not been able to ensure workload performance. In addition, applications are becoming more distributed and complex as enterprises build them on containers and microservices in multicloud environments. The ability to continuously deliver application performance while minimizing costs is critical. It enables development teams to innovate and run applications efficiently. It ensures that end users and customers have great digital experiences. It drives revenue. But workload management is now so complex that it is moving beyond human capabilities.

Cisco Workload Optimization Manager is a real-time decision engine that drives continuous health in the IT environment. Its intelligent software constantly analyzes workload consumption, costs, and compliance constraints. It assures application performance by giving workloads the resources they need, when they need them.

Benefits

Full stack visibility and insights

- From applications to infrastructure including physical, virtual, cloud and container environments

- Deep integration with Cisco UCS®, AppDynamics®, and a broader Cisco and third-party ecosystem

Multicloud elasticity

- Single platform for ensuring application performance on hybrid and multicloud environments

Intelligent automation

- Applications are resourced continuously and automatically through AI-driven software
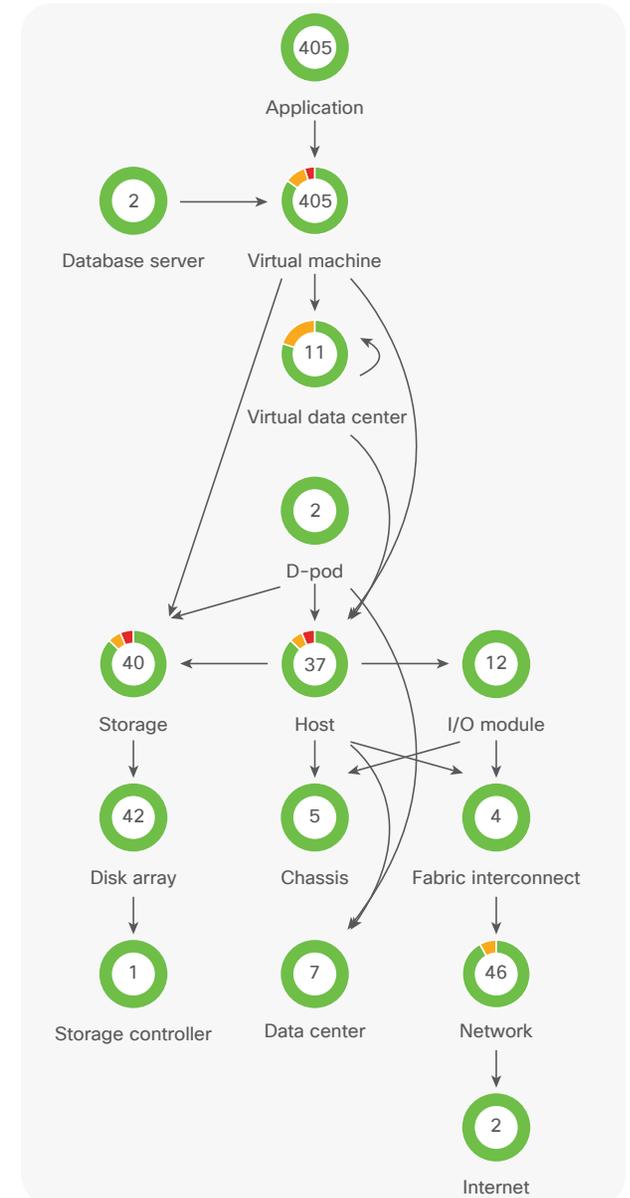
Time for self-managing workloads

Virtual-machine sprawl, dynamic cloud infrastructure, containers, microservices, and public cloud services are forcing enterprise IT teams to embrace AI-driven solutions. "Automate everything" is the new mandate across every level of the organization. We are entering a new age of IT automation, one that addresses the complexity that your organizations face, and one in which software makes decisions.

How we help

Cisco Workload Optimization Manager is the easy-to-install, agentless technology that detects relationships and dependencies between the components in your environment from applications through the infrastructure layers. Within one hour of deployment Cisco Workload Optimization Manager delivers a global topological mapping of your environment (local and remote, and across private and public clouds) and the interdependent relationships within the environment, mapping each layer of the full infrastructure stack to application demand (Figure 1).

Cisco Workload Optimization Manager provides specific real-time actions that ensure workloads get the resources they need when they need them, enabling continuous placement, resizing, and capacity decisions that can be automated, driving continuous health in the environment. You can automate the software's decisions according to your level of comfort: recommend (view only), manual (select and apply), or automated (executed in real time by software).

What if your applications got the resources they need, when they need them? What if end users and customers always experienced great application performance? What if your teams spent less time "keeping the lights on" and more time focusing on how to enable the business?

The Cisco advantage

Your IT organization needs to move at DevOps speed so that your applications perform for the best customer experiences. Cisco Workload Optimization Manager enables your IT environment to manage itself so that staff can focus on innovation for the business.

Figure 1. **Interdependencies across a global data center**

Ensure application performance across Cisco UCS servers and Cisco HyperFlex systems

- Discover, monitor, and manage Cisco UCS environments using the Cisco UCS Manager APIs

- Ensure application performance while leveraging the enhanced instrumentation and orchestration capabilities of Cisco UCS and Cisco HyperFlex™ systems

- Gain visibility into Cisco UCS integrated infrastructure performance and capacity for service profiles, chassis, I/O modules, adapters, virtual interface cards, ports, and uplinks

- Intelligently scale Cisco HyperFlex systems' compute and storage independently, based on real-time workload consumption

Create more effective teams

Cisco Workload Optimization Manager enables your application and IT team to assure application performance on virtual machine or container platforms without the need for IT involvement. Integration with ServiceNow workflows enables agility and speed without relinquishing control. Your teams have the freedom to create application environments quickly and efficiently, so your IT staff can focus on strategic business initiatives. Cisco Workload Optimization Manager application resource management works with the industry's top platforms, including VMware vSPhere, OpenStack, Citrix XenServer, and Microsoft Hyper-V hypervisors, and Kubernetes, Red Hat OpenShift, and Cloud Foundry, to create self-managing and optimized container environments that:

- Minimize human intervention
- Enable automated scheduling of pods to ensure performance
- Provide intelligent cluster scaling to reduce outages
- Ensure full-stack control to unite DevOps teams and infrastructure

Optimize your multicloud environment

Cisco Workload Optimization Manager can ensure application performance across your data centers and into public clouds. The software:

- Automates workload placement, scaling, and capacity to ensure performance while maximizing efficiency

- Quickly models what-if scenarios based on the real-time environment to accurately forecast capacity needs

- Continuously ensures performance for VMware Horizon virtual desktop users

- Tracks, reports, and views trends for compute, storage, and database consumption metrics (CPU, memory, IOPs, latency, and Database Transaction Unit (DTU)) across regions and zones

Optimize public cloud costs

Performance cost optimization takes into account your Microsoft Azure and Amazon Web Services (AWS) subscriptions to better utilize these resources, for example:

- Scale down AWS instances or Azure virtual machines, storage tiers, and database tiers, reducing costs without impacting performance

- Understand advanced Reserved Instance (RI) calculations to both purchase new RIs (coverage) and efficiently use existing RIs (utilization)

- Identify ghost and unattached storage instances

- Suspend or terminate unused instances

- Project actual cost of workloads by calculating compute, licensing (OS), IP address, and storage costs.

- Aggregate monthly bills across services, regions, accounts, specific workloads, and lines of business

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Continuously ensure application performance with real-time optimization

How do you ensure the performance of workloads on your premises and in the public cloud? Cisco Workload Optimization Manager continuously resources applications to perform so your applications deliver the best customer experiences.

With Cisco Workload Optimization Manager, data center and cloud infrastructure dynamically adjust to meet changing workload demand—ensuring continuous health in the environment. It relieves infrastructure and operations teams from the day-to-day management of infrastructure and resource availability, giving them time back to drive innovation for the business.

Better together

Cisco Workload Optimization Manager works with many third-party solutions to ensure your applications get the resources they need. However, its deep integration with the entire Cisco environment greatly enhances your Cisco deployments to optimize your data centers. It helps you safely maximize cloud elasticity in Cisco UCS server environments and Cisco HyperFlex systems to gain better performance and efficiency. With Cisco Tetration™ network awareness, you can confidently replatform to application architectures that have increased network complexity. Cisco CloudCenter™ can help intelligently deploy new workloads anywhere, anytime. Cisco Workload Optimization Manager optimizes initial cloud placement for performance, cost, and compliance. Application awareness with AppDynamics metrics complements Cisco Workload Optimization Manager and enables you to:

- Continuously ensure application performance and eliminate application performance risk due to infrastructure
- Show your IT organization's value to the business when infrastructure-resource decisions are directly tied to the performance of business critical applications
- Bridge the application-infrastructure gap with full-stack control that elevates teams and provides a common understanding of application dependencies
- Accelerate and de-risk application migration with a holistic understanding of application topology, resource utilization, and the data center stack

A solution to fit your needs

Cisco Workload Optimization Manager is available in three editions, each providing additional capabilities to meet your specific automation requirements and use cases. These editions make it easy to get started and realize more value as you extend this powerful tool into all layers of the stack and further automate actions.

Getting started is easy

Once Cisco Workload Optimization Manager is deployed, you connect to your browser of choice, add the license key, and select your targets. After you have selected your targets, you: add IP addresses, user names, and password credentials. Targets include hypervisors, cloud platforms, applications, storage, network, etc. Cisco Workload Optimization Manager uses these targets to discover your environment and determine the specific actions that will drive continuous health in your environment. Learn more at cisco.com/go/workloadoptimization or contact your Cisco partner or sales representative for a free trial license.