

Key Use Cases for Intelligent IT Operations Management



It's Time To Take Control of Complexity

Progressive IT organizations have put virtualization to work across the data center to increase compute density and take advantage of underutilized resources, while reducing space, power, and cooling requirements.

Now it's time for the next step: taking control of the management complexity that comes with a growing IT infrastructure. That's the idea behind VMware vSphere® with Operations Management™. It delivers virtualization with consistent management, purpose-built to help you get the best performance, availability, and efficiency out of your infrastructure and applications—from day one.

What could vSphere with Operations Management do for your organization? Let's explore some of the key use cases you can use immediately within vSphere with Operations Management to enhance your data center operations.

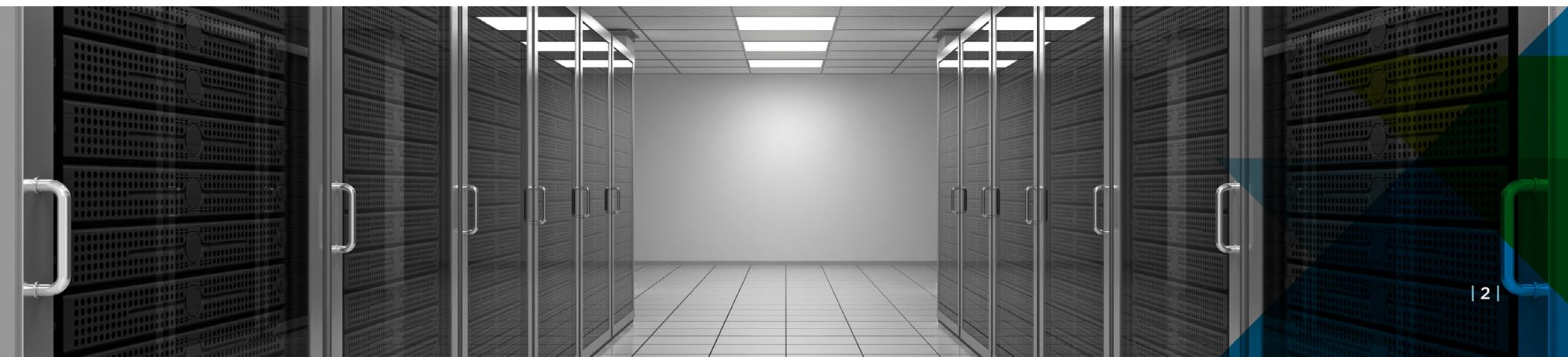
Key Use Cases for Intelligent IT Operations Management

These use cases illustrate common scenarios for the use of vSphere with Operations Management and the unique feature set of its management component, VMware vRealize® Operations™—VMware's solution for intelligent IT operations management from applications to storage, for physical, virtual, and cloud infrastructures.

In these use cases, you will see how vSphere with Operations Management arms your organization with predictive analytics, policy-based automation, and an easy-to-use management interface that gives you control over performance, capacity, and configuration.

VSPHERE WITH OPERATIONS MANAGEMENT DELIVERS:

- Virtualization with consistent management—Maximize the benefits of your virtualized data center with consistent management to deliver more value to your business.
- Intelligent operations from apps to storage—Improve performance and avoid disruption with predictive analytics, simplified availability, and comprehensive visibility in one place.
- Automation with control—Safely automate management of your infrastructure and applications to increase control and free up time for more strategic tasks.



1. Monitoring and Remediation

To help you work proactively to identify emerging issues and maintain the performance of your IT services, vSphere with Operations Management provides features that enable automated monitoring and guided remediation of IT problems. Monitoring data is automatically analyzed and expressed as health, risk, and efficiency measures that enable your IT team to detect potential issues in your environment more easily.

The Smart Alerts feature aggregates and correlates monitoring data to give you actionable insights into infrastructure and application health. To reduce overall alert volume, Smart Alerts combine multiple symptoms to generate a single alert focused on the root cause of the problem. All the while, real-time log analytics provide comprehensive visibility into unstructured data to enable proactive troubleshooting and facilitate root-cause analysis.

To help you take decisive actions to mitigate issues and maintain performance, the Smart Alerts feature provides clear recommendations with options for remediation. You get expert advice and guidance at every step. Guided remediation provides simplified, actionable explanations of underlying problems and recommends corrective actions you can take to address issues before they impact workloads.

The vSphere with Operations Management interface functions like a command and control center. You can select the vSphere World object to see an alerts summary of your virtual infrastructure along with health risks and efficiency badges. You can then drill down on a single alert to see the symptoms that triggered the alert and to gain prioritized recommendations on how to address the alert.

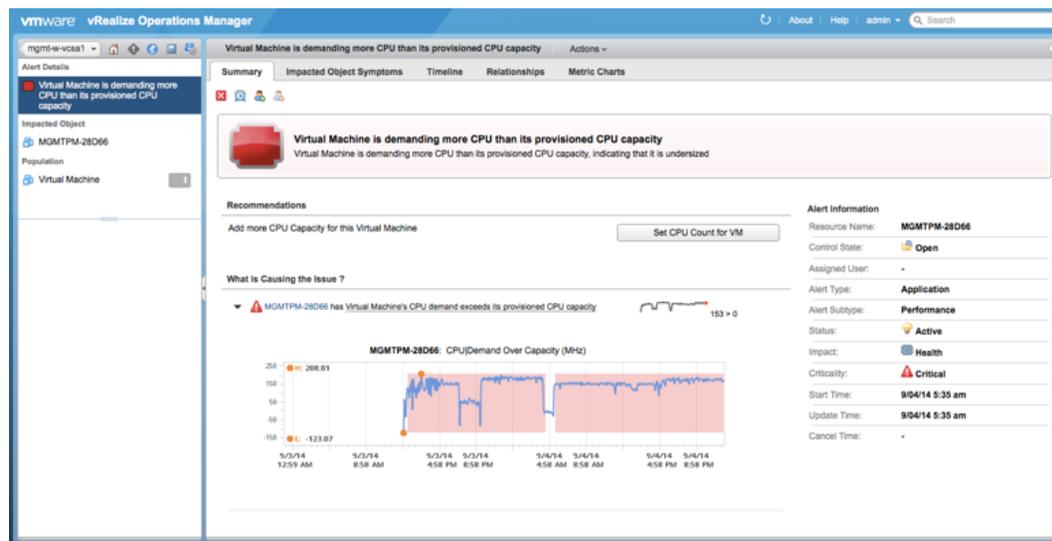


Figure 1. In this screen capture, vSphere with Operations Management shows an alert on a virtual machine that is exceeding the limits of its provisioned CPU capacity.

An example

vSphere with Operations Management alerts you to virtual machine workloads that have exceeded their CPU usage thresholds and are beginning to act abnormally. Along with the alerts, the software generates prioritized recommendations for remediation, such as giving the VM more CPUs. You can then select a recommendation and take immediate action from the vSphere with Operations Management console to set a new CPU count for the VM.

2. Capacity Optimization

Overprovisioning is a pervasive problem in today's data centers. It's common to see virtual machines with more capacity than what they need to support peak demand for the applications they are running. That built-in waste drives up IT costs.

To help you reduce overprovisioning and contain IT spending, vSphere with Operations Management arms you with capacity optimization and planning tools. For example, you can see the configured amount of CPU, memory, and disk space and the recommended amount of resources to meet your workload demands. These tools enable you to reclaim unused capacity and increase resource utilization while ensuring that your systems get the resources they need to support the workloads they are running.

Automation is built into the platform to place and balance workloads in an optimal manner. Automation is enhanced with capacity optimization and planning to help you improve resource utilization and get more done in less time.

Better still, the software's advanced capacity modeling features give you the ability to generate and save "what-if" scenarios and commit the capacity models to the analytics engine to influence capacity calculations and smart alerts. In addition, you can use the "what if" scenarios to model the resource consumption of upcoming projects so you can decide if you need to buy or defer hardware purchases. Capacity management has never been this easy.

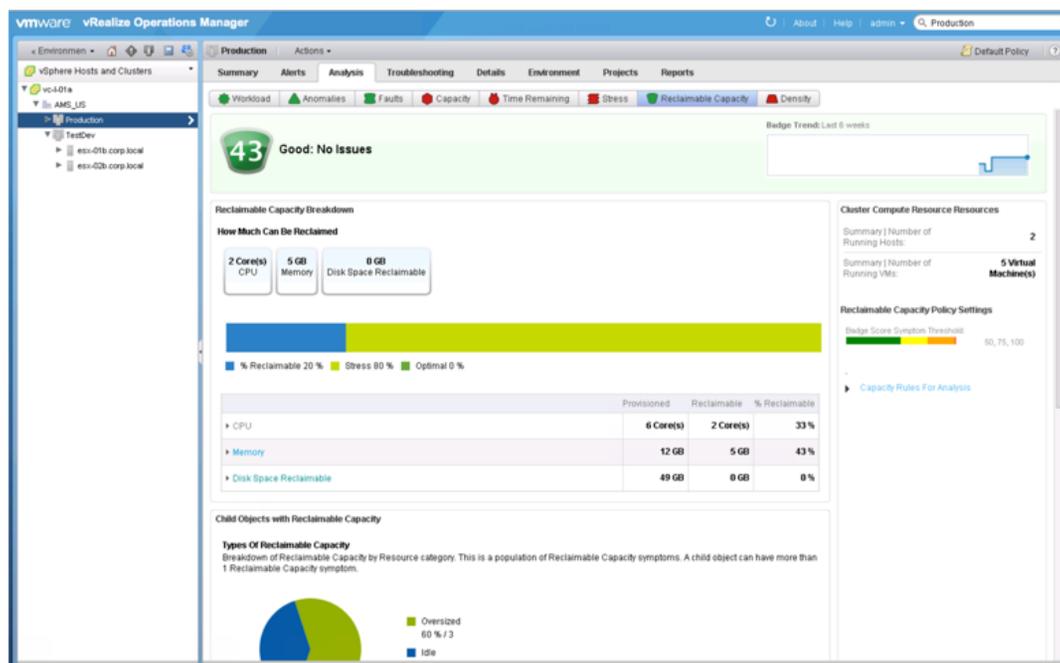


Figure 2. In this screen capture, vSphere with Operations Management provides information on reclaimable CPU, memory, and disk capacity.

An example

Via a single dashboard, you can see the configured amount of CPU, memory, and disk space and the recommended amount of resources to meet the demands of a particular workload. This information helps you identify capacity shortfalls and overprovisioning so you can right-size VMs, reclaim idle resources, and increase consolidation ratios. And to further enhance your management controls, vSphere with Operations Management allows you to reclaim overprovisioned capacity and increase utilization with automated resource optimization.

3. vSphere Security Hardening

VMware vSphere is built with security in mind. For example, vSphere uses "bare-metal" virtualization, so the hypervisor interfaces directly with computer hardware without the need for a host operating system. This approach safeguards vSphere from OS-related vulnerabilities.

Building on these inherent security features, vSphere security hardening enables your organization to implement stricter security in your environment to meet best practices and local security standards that go above and beyond common frameworks.

With the security hardening features of vSphere with Operations Management, you can continuously follow the best practices for all aspects of your virtual and physical infrastructure. Detailed templates show you the posture of your environment against hundreds of hardening conditions.

The vSphere hardening dashboard gives you a view of the conditions that have been evaluated and those that have been found to be compliant and noncompliant. These results are all linked so you can quickly and easily drill down into more detail. In addition, you can schedule compliance checking jobs to run automatically at any frequency you desire.

Ultimately, with the security hardening features in vSphere, you have the tools you need to take the necessary steps to remediate security issues and keep your environments on a best-practices track.

An example

The virtual environment guest summary dashboard shows you the total number of virtual machines, the number of hosts, the number of vCenter servers, and the average number of VMs per host. This same dashboard provides an overview of your vSphere hardening compliance and highlights the percentage of VMs that are noncompliant. From there, you can easily drill down to investigate the noncompliance issues.

4. Visualization and Reporting

Out-of-the-box reports and dashboards in vSphere with Operations Management help you visualize key performance indicators (KPIs) and status and progress reports.

The dashboards, built from powerful widgets and views, give you the ability to view your environment the way you and your users need to see it. Using the Views and Reporting workspaces or wizards, you can create powerful reports in a matter of minutes for greater visibility and better management of your environment.

Customized dashboards, reports, and views enable transparency and collaboration across infrastructure, operations, and applications teams. Reports can be tailored to a variety of teams' needs, so all stakeholders get the view they need—from DevOps specialists and virtual infrastructure admins to application owners.

With the software's intelligent grouping capabilities, you can structure your dashboard views the way you want to see them—by application, by department, by name or tag, by configuration type or any other way you like. Group membership is dynamic, which means that a new virtual machine or object matching the group policy in the environment will be added or removed automatically.

You can also define specific health, risk, and capacity thresholds; alert types and notifications; business hours; and many other configuration settings at a group level to prioritize operational activities for your business-critical applications, production workloads, or business units. Being aligned with the business has never been this easy.

An example

You can use vSphere with Operations Management to build customized views of data and add those views to reports. You might use these capabilities to create a chart that shows minimum, maximum, and average CPU utilization correlated with memory utilization for a particular compute cluster. You can then build a quick report that incorporates your utilization chart, using out-of-the-box views for reports.

Key Takeaways

vSphere with Operations Management delivers benefits across a wide range of use cases, including those depicted here. It is designed to help you achieve your unique business needs by providing better insights and better IT. It delivers virtualization with consistent management, purpose-built to help you maximize the benefits of your virtualized data center and get the best performance, availability, and efficiency out of your infrastructure and applications from day one.

vSphere with Operations Management helps you improve your performance and avoid disruption, with intelligent operations from apps to storage, providing simplified availability and comprehensive visibility in one place. And it helps you free up time so you can focus on more strategic tasks by safely automating repetitive manual tasks on your terms, with increased management control.

To learn more, visit [vSphere with Operations Management](#).

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