VMware IT Outcomes: Streamlined and Automated Data Center Operations
OpEx Reductions of up to 56 Percent


AT A GLANCE

A streamlined and automated data center operations solution reduces operating expenditures (OpEx) through intelligent IT operations management; health, performance, and compliance monitoring; capacity planning; and real-time log analytics, together with comprehensive visibility across applications, storage, and network devices and across physical, virtual, and cloud-based environments.

BENEFITS

• Up to 56 percent reduction in OpEx
• Health, performance, and compliance monitoring
• Predictive analytics, smart alerts, and guided remediation
• Real-time log management with log analytics
• Unified management with complete visibility from application to storage
• Support across virtual, physical, and cloud
• Open and extensible platform with third-party integration

Streamlined and Automated Data Center Operations Introduction

A software-defined data center (SDDC) based on VMware products and services delivers streamlined and automated data center operations. VMware provides intelligent operations management across physical, virtual, and cloud infrastructures, enabling correlation of data from applications to storage in an easy-to-use unified management tool. Policy-based automation increases IT efficiency and gives IT control over performance, capacity, and configuration. Predictive analytics drives proactive issue identification and resolution. Implementing the streamlined and automated data center operations IT outcome can be achieved in three stages:

1. Virtual infrastructure performance and capacity optimization
2. Data center infrastructure, operating system (OS), application monitoring, and log analytics
3. Regulatory compliance monitoring and operations automation

Stage 1: Virtual Infrastructure Performance and Capacity Optimization

VMware vSphere with Operations Management

The foundation for the streamlined and automated data center operations IT outcome is VMware vSphere with Operations Management™, which offers VMware vSphere, the most trusted virtualization platform, together with VMware vRealize™ Operations™ Standard for intelligent operations, performance monitoring, and capacity management of the virtual infrastructure.
The following are among the key benefits associated with vSphere with Operations Management in stage 1:

- **Intelligent operations** – Self-learning tools, predictive analytics, and smart alerts about infrastructure health enable proactive identification and remediation of emerging performance, capacity, and configuration issues.

- **Policy-based automation** – Out-of-the-box and customizable policies for critical IT operations are associated with smart alerts, guided remediation, and compliance standards to deliver recommendations or trigger actions that optimize performance and capacity and enforce configuration standards.

- **Capacity optimization and modeling** – Reclaim overprovisioned capacity and increase resource utilization. View consumption trends and save and commit projects to influence capacity planning.

- **Unified management** – Get complete visibility in a single console across storage and network devices.

**Stage 1 Summary**

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<th>CAPABILITY</th>
<th>PRODUCT</th>
<th>FEATURES</th>
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<tbody>
<tr>
<td>Virtual Infrastructure Performance and Capacity Optimization</td>
<td>vSphere with Operations Management</td>
<td>Intelligent operations, Policy-based automation, Capacity optimization and modeling, Unified management</td>
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Stage 2: Data Center Infrastructure Health Monitoring and Log Analytics

**VMware vRealize Operations Insight**

- **Open and extensible platform** – Get more out of vRealize Operations with third-party integration and product extensions that enable comprehensive visibility across applications and infrastructure in one place, with dashboards, reports, alerts, and remediation actions.

- **Comprehensive visibility** – OS and application agent plug-ins provide visibility across the entire application stack—from the application to storage.

- **Application dependency mapping** – Gain an understanding of service dependencies through agentless, continuous application-aware dependency mapping to simplify troubleshooting and root cause analysis.

- **Automated storage operations** – Use the Management Pack for Storage Devices (MPSD) to integrate with vSphere storage policy-based management (SPBM) and extend intelligent operations management capabilities out to VMware Virtual SAN™, Virtual Volumes, and external storage solutions.

Stage 2 also introduces VMware vRealize Log Insight™ to complement vRealize Operations with real-time log analytics. vRealize Log Insight provides the following benefits:

- **Log aggregation** – Aggregation and visualization of log data across physical, virtual, and cloud-based environments

- **Powerful log analytics** – A single solution to collect, store, and analyze logs at scale: OS, application, storage, network, and so on; intuitive UI to run interactive searches as well as deep analytical queries for quick, actionable insights

- **Intelligent grouping** – Aggregation of related data to help users detect and find problems

In stage 2, VMware vRealize Operations Insight™ extends the operations management capabilities introduced in stage 1 beyond the vSphere virtual infrastructure and out to the rest of the data center, including applications and storage.
Stage 2 Summary

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<tr>
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<tr>
<td>Data Center Infrastructure Health Monitoring and Log Analytics</td>
<td>vRealize Operations Insight</td>
<td>Support for physical, virtual, and cloud</td>
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<td>Application discovery and dependency mapping</td>
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<td>Storage awareness</td>
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<td>Log aggregation with powerful log analytics</td>
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Stage 3 Summary

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<tr>
<td>Regulatory Compliance Monitoring</td>
<td>vCloud Suite</td>
<td>Regulatory compliance</td>
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<tr>
<td>Operations Automation</td>
<td>vRealize Suite</td>
<td>Custom automation based on alerts through integration with vRealize Automation, vRealize Orchestrator, and other external tools</td>
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Stage 3: Regulatory Compliance Monitoring and Operations Automation

**VMware vCloud Suite (with vSphere)**

**VMware vRealize Suite Enterprise (extends to physical and cloud)**

Stage 3 further extends the capabilities introduced in stages 1 and 2 to include regulatory compliance and operations automation.

Upgrading a vSphere infrastructure to VMware vCloud® Suite enables OS- and application-level configuration monitoring together with enforcement of regulatory compliance (PCI, HIPAA, SOX, and so on).

With VMware vRealize Suite, users can extend these capabilities beyond the private cloud based on vSphere and out to physical servers, other hypervisors, and cloud-based solutions such as VMware vCloud Air™. The following are among the added benefits:

- **Streamlined compliance** – Automated detection, enforcement, and remediation of security-hardening guidelines, configuration standards, and regulatory compliance requirements
- **Operations automation** – Out-of-the-box integration with VMware vRealize Automation™ and VMware vRealize Orchestrator™ as well as third-party tools such as Puppet, Chef, and SaltStack, to enable customized automation based on alerts

About IT Outcomes

VMware IT outcomes provide a framework that ties select VMware solutions to key results that customers can expect when adopting the VMware software-defined data center vision.

With VMware, IT organizations can achieve critical results, or outcomes, with unique capabilities that help IT respond to business requests quickly and cost-effectively, without compromising security, control, or choice.

For more information on VMware SDDC IT outcomes, visit vmware.com/it-outcomes/.