

# ACCELERATE DIGITAL TRANSFORMATION WITH INTELLIGENT OPERATIONS

Evolve IT Management from Reactive to  
Proactive While Driving Strategic Initiatives  
with VMware vRealize



vmware®



# Table of Contents

<b>From Vision to Reality</b> .....	<b>2</b>
<b>Complete Visibility Across Multi-Cloud Environments</b> .....	<b>3</b>
Two Strategic Needs, One Comprehensive Solution .....	3
Consistent Operational Experience.....	4
<b>Accelerate Innovation and Focus on Strategic IT Priorities</b> .....	<b>6</b>
Operationalize SDDC.....	6
Integrate Public Clouds with Confidence.....	7
<b>Proven Results with Intelligent Operations</b> .....	<b>10</b>
<b>Increase IT and Business Agility</b> .....	<b>11</b>
<b>Intelligent Operations from vRealize Packaging</b> .....	<b>12</b>
<b>Learn More about Intelligent Operations</b> .....	<b>13</b>

# From Vision to Reality

Widespread acknowledgement that every organization must transform into a digital business to stay competitive is putting pressure on IT teams to deliver applications and business value faster. Yet IT infrastructure is complex, and keeping it optimized and running efficiently—on-premises and across public clouds—can be daunting.

Existing approaches and technologies challenge IT's abilities to achieve their goals—ensuring performance, efficiently operating software-defined data centers (SDDCs), and architecting effective public cloud strategies. Siloed teams and tools, for example, make identifying issues and conducting root-cause analysis difficult. Overprovisioning wastes valuable resources and negatively impacts performance while managing disconnected systems without a unified view leaves IT leaders few, if any, experts to focus on potentially market-disrupting priorities such as integrating public clouds.

The journey to successful digital transformation is compelling organizations to empower IT teams to operationalize their SDDC and multi-cloud environments.

Global enterprises are teaming with VMware to modernize their data centers and integrate public clouds. They are maximizing business agility and ROI by better preparing for change, ensuring performance, optimizing capacity, and understanding all costs associated with deploying workloads in their SDDCs and public clouds. Across industries, organizations are adopting Intelligent Operations delivered by VMware vRealize® to build exactly what they need, the way they need it—for today and tomorrow.

“The great myth of cloud computing is that...private clouds and public clouds would somehow interoperate easily and elegantly with each other and also with on-premises systems. ...the possibility of seamless private/public cloud integration has become much more real with the decision by private-cloud leader VMware to forge powerful partnerships with public-cloud leaders Amazon, Microsoft, IBM and Google.”<sup>1</sup>

—BOB EVANS, FORBES CONTRIBUTOR

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# Complete Visibility Across Multi-Cloud Environments

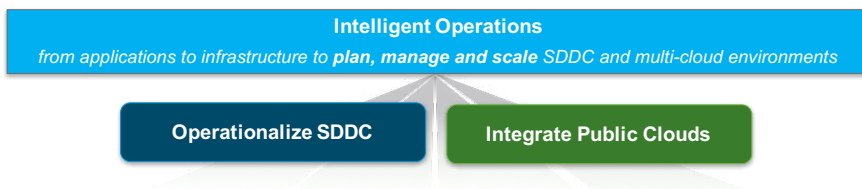
Business leaders are increasingly demanding that their IT teams deliver apps, data, and services on any device to make employees more productive, improve customer experiences, and innovate faster than competitors. Yet inefficient processes and limited visibility into IT infrastructure and operations—which have a direct impact on how quickly businesses can innovate—cause IT staff time to spend a majority of time reacting to performance and efficiency issues rather than proactively identifying and solving them.

Moreover, as cloud adoption accelerates, enterprises are challenged to manage off-site resources and the expenses associated with leveraging multi-cloud environments. For example, understanding the cost of running a workload in the data center, compared to running workloads on-premises versus in the public cloud. A new approach is needed to ensure performance and achieve greater efficiency at lower costs for multi-cloud environments.

## Two Strategic Needs, One Comprehensive Solution

A successful digital transformation strategy includes two critical initiatives. Both, enabled by Intelligent Operations, accelerate business innovation and growth:

- Modernizing and streamlining on-premises SDDC for agility, security, and scalability
- Adopting a data-driven approach to integrating public clouds with confidence



With Intelligent Operations from vRealize, IT organizations most effectively plan, manage, and scale their multi-cloud environments. They use predictive analytics, machine learning, proactive performance and capacity management, and automated workload balancing from applications to infrastructure across multiple clouds, transforming IT from reactive to proactive, even innovative partners to the business.

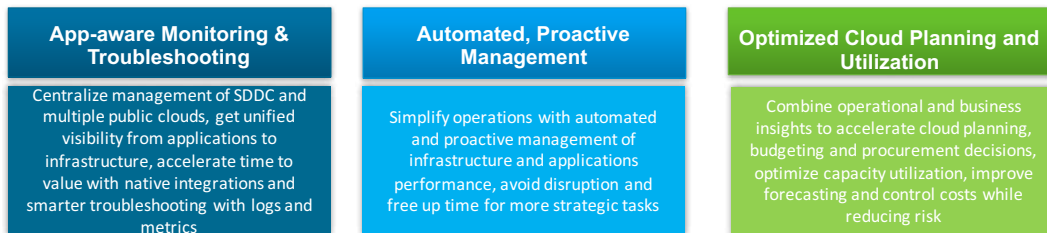
More than

# 70%

of organization's IT budgets are allocated for multi-cloud deployments. In two years, that number will be almost 92 percent.<sup>2</sup>

## Consistent Operational Experience

Intelligent Operations from vRealize includes unique management and automation capabilities for a consistent operational experience across clouds. Enterprises leverage existing IT skillsets to continuously optimize workload placement and operationalize services based on business policies.



IT teams looking to increase service quality trust Intelligent Operations from vRealize to help prevent performance degradation with application-aware monitoring and troubleshooting. They investigate smarter using line-of-sight visibility and correlated logs, and simplify operations using proactive detection and automatic remediation of issues. IT teams also ensure the health of critical VMware Cloud Foundation™ components such as VMware vSphere® and VMware vSAN™ through out-of-the-box native integrations. For example, detailed vSAN capacity and troubleshooting dashboards, alerts, and metrics help simplify SDDC operations.

Additionally, Intelligent Operations from vRealize provides operational and business insights that accelerate cloud planning and placement decisions across multiple clouds. It helps lower enterprise costs and risk by optimizing capacity utilization, accurately forecasting capacity needs, and enforcing compliance. The solution can further extend management visibility into physical, virtual, and cloud infrastructure and third-party applications through integrated Management Packs and Content Packs offered via [VMware Marketplace](#).



# Accelerate Innovation and Focus on Strategic IT Priorities

An interrupt-driven IT culture hinders invention. IT teams lose focus on strategic IT priorities without a consistent way to quickly monitor, manage, and troubleshoot issues across applications and infrastructure.

Intelligent Operations from vRealize is enabling IT teams across industries to innovate and accelerate time to value. They are operationalizing new virtual compute, storage, and networking technologies as well as application workloads by preparing teams and infrastructure. They are moving workloads to production, and scaling and optimizing them in their SDDCs. These teams are also relying on Intelligent Operations to answer stakeholder questions as they evaluate public clouds and manage all IT applications and infrastructure more efficiently across multi-cloud environments.

“Through acquisitions and organic growth, ACI’s business has expanded **300 percent** annually the last three years. Due to our rapid international expansion, we turned to VMware for centralized monitoring and capacity planning with automated action response.”

—RYAN FAY, GLOBAL CIO, ACI SPECIALTY BENEFITS

## Operationalize SDDC



### Ensure Readiness


Digital transformation is impossible without preparation, and step one for IT organizations is to ensure the readiness of both their underlying infrastructures and their teams. Intelligent Operations from vRealize includes an intuitive user interface, out-of-the box dashboards, and content plus visualizations that put information at IT’s fingertips so even those new to technologies such as vSAN become instant experts. Included health and configuration checks measure performance and provide before-and-after impact views. For example, IT can quickly compare the performance of workloads running on traditional storage versus the same workloads running on vSAN.

### Scale in Production

Infrastructure and team readiness gives IT the confidence to move production workloads onto the SDDC infrastructure. Intelligent Operations from vRealize provides the line-of-sight visibility and correlated metrics across the entire stack that help IT scale in production.

PROOF  
NOT FOR FINAL OUTPUT





IT teams troubleshoot production infrastructure like experts using guided workflows, out-of-the-box and custom dashboards, reports, and views. Using Intelligent Operations with native vSAN integration, for example, eases multi-cluster vSAN management. IT can proactively monitor infrastructure health, quickly resolve issues, increase application uptime, and lower the risk of business disruptions—all of which ultimately helps reduce costs and shift resources to more strategic initiatives.

Integrated log analytics accelerate root-cause analysis with 360-degree troubleshooting across structured and unstructured data, side-by-side, and in context. Predictive analytics, smart actionable alerts, and guided remediation also support proactive performance fixes, offering simple, actionable explanations of underlying problems and recommended corrective actions. Through integrated, add-on Management Packs and Content Packs in Intelligent Operations, IT can extend management to applications, for example SAP and Oracle, physical infrastructure such as storage arrays, and even public clouds including Amazon Web Services (AWS) and VMware Cloud™ on AWS.

#### **Automate**

Once workloads are in production, IT can rely on Intelligent Operations from vRealize to increasingly automate performance management. Capabilities such as automated workload balancing, predictive Distributed Resource Scheduler (pDRS) and guided remediation workflows help meet business requirements for utilization, performance, and costs. Intelligent Operations from vRealize takes Distributed Resource Scheduler (DRS) integration to the next level by offering full DRS management and pDRS. pDRS helps avoid contention using predictive analytics to proactively move workloads. Because workload placement can challenge any team, features in Intelligent Operations from vRealize work seamlessly with capabilities in VMware vRealize Automation™ (available in vRealize Suite Advanced and above) to optimize placement by enforcing business and IT policies relating to workload placement. The solution is responsible for governance, passing the eligible reservations for optimization, and based on operational metrics, returning a recommendation from the options presented.

#### **Optimize**

By pairing Intelligent Operations from vRealize with VMware vRealize Business for Cloud, IT teams can more effectively optimize and manage capacity utilization and costs. Correlated operational and cost insights accelerate cloud planning, budgeting, and procurement decisions, as well as control costs and reduce risk. Capacity planning helps IT model the impact of upcoming projects on utilization while capacity analytics proactively alert

Dell EMC has improved workload placement, troubleshooting, and capacity planning with vRealize to achieve optimized utilization of

80%.

teams about usage and demand. IT can further ensure optimal capacity by reclaiming unused and overprovisioned resources and right-sizing virtual machines (VMs) to increase resource utilization. Fine-grained cost analysis of various infrastructure components helps IT staff better understand how capacity is driving costs.

Because workload placement can challenge any team, features in Intelligent Operations from vRealize work seamlessly with capabilities in VMware vRealize Automation to optimize placement by enforcing business and IT policies relating to workload placement. The solution is responsible for governance, passing the eligible reservations for optimization, and based on operational metrics, returning a recommendation from the options presented.

## Integrate Public Clouds with Confidence



Cloud adoption is rising but how do enterprise leaders assess which workloads to run on which clouds, and when? Intelligent Operations from vRealize and vRealize Business for Cloud provide IT teams with data-driven answers by comparing workload costs across many clouds, unifying operations management, and tracking consumption.

### Get Ready for Cloud

IT teams can proactively identify capacity shortfalls, based on current usage and future requirements. They can rely on smart alerts and recommendations to troubleshoot and remediate, optimizing (through right-sizing and reclamation) as much usage on-premises. Should there still be capacity shortfall, vRealize features help ensure IT teams make the right cloud decisions.

Once agreement is reached about deploying a workload to the cloud, IT staff can use Intelligent Operations to simplify workload move planning by exposing all the application's dependencies. Built-in capabilities reveal the level of interconnectedness, as well as confirm the readiness of the destination cloud by looking at its health. For example, is there enough capacity at the destination or is more needed? IT teams also can use the solution to ensure they are meeting compliance requirements and have migrated a workload successfully. IT teams can then leverage Intelligent Operations from vRealize for unified management and 360-degree visibility of workloads on-premises and across public clouds.

For organization using or considering how best to leverage AWS, VMware has a solution that enables IT teams to use the SDDC technologies they know and trust, delivered as a service on the world's most popular public cloud. IT teams then manage those resources with Intelligent Operations from vRealize.

VMware Cloud on AWS ensures consistency and familiarity. It features VMware technologies, easy workload portability and hybrid capabilities, direct access to the power of native AWS services, and support for existing and new applications as well as containers and VMs. Popular use cases include regional capacity disaster recovery and backup, data center consolidation and application migration, and test and development cyclic capacity.

Intelligent Operations from vRealize supports VMware Cloud on AWS by helping enterprises.

- Plan for VMware Cloud on AWS
- Plan migration of applications with assurance to VMware Cloud on AWS
- Manage VMware Cloud on AWS, including showing resource status in a unified view of the environment, highlighting system performance, and supporting troubleshooting and capacity management at scale
- Extend management to AWS Services



The California Natural Resources Agency (CNRA) achieved a 42% reduction in capital expenditures and 35% reduction in operating expenditures while achieving a 300% increase in data center capacity for scale and agility.

# Proven Results with Intelligent Operations

A recent Forrester Total Economic Impact study outlines the business and cost-saving benefits of Intelligent Operations from vRealize:<sup>3</sup>

- **20% improvement in operational efficiency** - vRealize delivers real-time performance metrics, log analytics, and proactive capacity management, which allows for faster incident resolution and compliance monitoring activities. These functionalities ease the workload of the infrastructure operations team, allowing it to complete the same amount of work in less time.
- **More than 10% savings in hardware costs** - Workloads are proactively balanced across clusters, providing capacity scenario planning capabilities, and both rightsizing and reclaiming capacity. This functionality maximizes existing server utilization, reducing not only overall capacity requirements but also annual growth rates.
- **75% reduction in unplanned downtime** - IT operations teams receive alerts about potential issues so they can then automate an action, such as rebalancing workloads. They also receive log analytics data to conduct root-cause analysis of problems, allowing teams to solve potential issues before they become critical errors. Together, these functionalities reduce system shutdowns and the ensuing unplanned downtime.



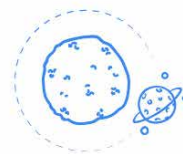
**ROI=119%**

NASDAQ  
Composite 2013-2015  
increase was 62%



**NPV=\$1.4M**

1,000 annual  
passes to the  
New York City subway



**Payback Period  
=3 months**

Time it takes  
for Mercury  
to orbit the sun



# Increase IT and Business Agility

IT organizations deploying Intelligent Operations speed the delivery and ease the management of their application and infrastructure services, achieving the following gains:

## **Operational readiness through unified visibility**

Intelligent Operations from vRealize centralizes the management of SDDC components, providing the visibility IT organizations need to understand how capabilities should work and what could go wrong, as well as the confidence to fix issues fast—then extends them to public cloud. IT staff can accelerate speed to value and troubleshoot smarter because of the full line-of-sight, unified visibility that Intelligent Operations from vRealize provides from applications to infrastructure health across the SDDC and multiple clouds.

## **Simplified, proactive operations and less disruption with automation**

With faster troubleshooting and greater confidence in every deployment, IT teams are free to automate across the SDDC and clouds. Staff members can avoid more potential issues and simplify management by automating previously manual and unpredictable processes. They can fully automate management infrastructure and application performance—preventing disruption, proactively detecting, and automatically remediating issues and anomalies before they impact end users. They can also streamline key IT processes while retaining full control of IT operations.

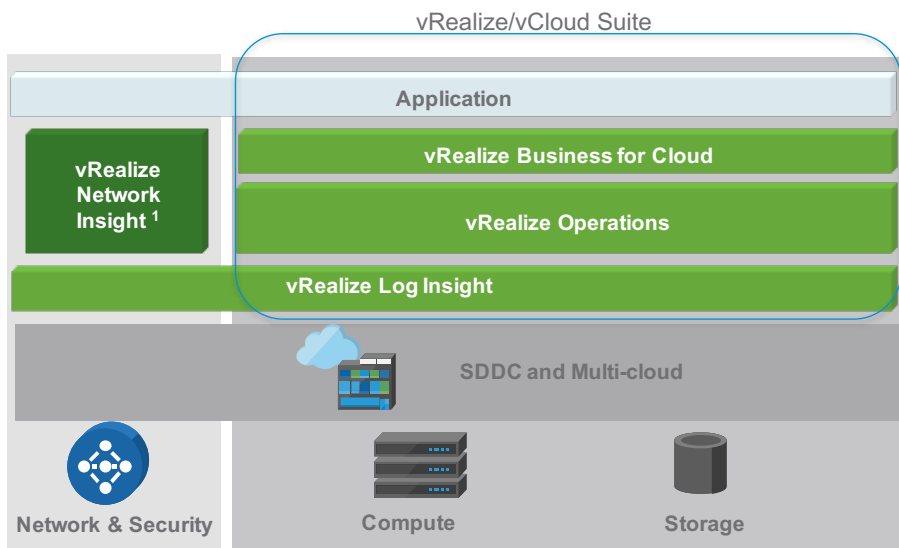
## **Improved costing through optimization, planning, and utilization**

With Intelligent Operations from vRealize, IT leaders—having built more team confidence in remediation and automating processes—can focus staff on optimizing resources, for example capacity utilization or compliance, and planning for the future. The solution supports IT staff challenged to correlate the operational and cost insights that accelerate cloud planning, budgeting, and procurement decisions, help control costs, and reduce risk. Key capabilities also enable IT teams to optimize cost and resource usage through capacity management, reclamation, and right-sizing while improving planning and forecasting and enforcing IT and configuration standards.

# Intelligent Operations from vRealize Packaging

Intelligent Operations from vRealize includes VMware vRealize Operations™ integrated with VMware vRealize Log Insight™ and vRealize Business for Cloud. It brings together all management functions—performance management, capacity, log analytics, cost analytics, planning, topology analysis, troubleshooting and automated workload balancing—in one integrated, highly intuitive, scalable, and extensible platform.

The following capabilities are available across vRealize Editions:





## Learn More about Intelligent Operations

IT organizations worldwide recognize that increasing operational efficiency is business imperative. To drive digital transformation, they are working to better align with business goals, which include staying under budget, optimizing capacity, tracking consumption and costs, and devising a data-driven public cloud strategy. They are achieving these goals and meeting their unique business needs with Intelligent Operations from vRealize.

IT teams are ensuring performance while running their SDDCs efficiently and driving an effective public cloud strategy. They are teaming with the global leader in virtualization and cloud infrastructure—with more than 500,000 customers and 75,000 partners—to plan, manage, and scale their SDDC deployments while integrating public clouds with confidence.

Visit [VMware Hands-On Labs](#) to discover how Intelligent Operations from vRealize can accelerate your organization's digital transformation journey.

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1 Forbes. "VMware Soars as New Cloud Powerhouse on Deals with Amazon, Microsoft, IBM And Google," September 17, 2017.

2 IDC. "CloudView Survey," January 2016.

3 Forrester. "The Total Economic Impact™ of vRealize Intelligent Operations Cost Savings and Business Benefits Enabled by VMware's Cloud Management Platform," November 2016.



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