

# VMware Performance and Capacity Management Deploy Service

## AT A GLANCE

VMware Performance and Capacity Management solutions increase VMware vSphere and virtual machine (VM) management efficiency by applying vRealize Operations Manager features to your environment. The VMware Performance and Capacity Management Deploy service delivers a foundational vRealize Operations Manager deployment with knowledge transfer workshops.

## KEY BENEFITS

- Reduces system outages
- Improves utilization of IT resources
- Helps more consistent infrastructure-wide performance
- Enables administrators to focus on value-added projects

## Overview

The *Performance and Capacity Management Deploy* service helps to reduce the number of system outages by implementing performance management and capacity planning tools that provide views, reports, and dashboards associated with the health of Customer's systems. Implementation of such tools helps to improve utilization and uptime of Customer's IT resource infrastructure for its end users and customers, and enables Customer IT personnel to reclaim capacity and help to reduce IT spending through accurate capacity planning. These tools also enable the Customer to discover and map applications to visualize the dependencies to understand better the relationships between applications and infrastructure. This project includes the following modules:

- **Performance and Capacity Management Deployment** – Deployment of a VMware vRealize® Operations Manager™ instance with two nodes – high availability optional. Knowledge transfer for foundational use cases as supported by out-of-the-box functionality for VMware vCenter® instances without advanced configuration. Activities delivered and limited according to the statement of work.

The following are the high-level activities included in this project:

- **Deploy** – Deployment and validation of technology components.
- **Knowledge Transfer** – Knowledge transfer of the design, deployment, and operations procedures.

This project relates to the following VMware products:

- VMware vRealize® Operations Manager™

## Service Delivery Description

Due to the heavy reliance on historical data within vRealize Operations Manager, this service includes both remote and onsite delivery activities. The remote portion of the engagement remotely installs one (1) vRealize Operations Manager virtual appliance and configures one (1) vCenter adapter for each cluster instance. The delivery team requires that the remote installation be followed by two (2) weeks of data collection prior to arrival on site. After arrival, the consultant team will scale and configure each cluster instance as required based on the scoping and workshop activities or based upon a prior Performance and Capacity Design engagement.

### Service Capabilities

This service contributes to the full development of the following capabilities:

#### Virtual Infrastructure

- Infrastructure Monitoring with Performance and Capacity

#### IT Outcomes Developed

The service being delivered by VMware Professional Services contributes to the delivery of the following IT outcomes:

- Data center virtualization and hybrid cloud extensibility
- Streamlined and automated data center operations

### Project Scope

The scope of the service includes the following:

#### Performance and Capacity Management Deployment

SPECIFICATION	PARAMETERS	DESCRIPTION
Foundational Use Cases		The following foundational use cases are included in the engagement as guidelines for product and knowledge transfer discussions. These use cases leverage out-of-the-box functionality and capabilities for vSphere.
Performance Management for Virtual Infrastructure		Customer wants to improve performance, avoid disruption, and proactively manage the Software-Defined Data Center (SDDC) with integrated performance and health monitoring. Find and investigate issues before they lead to service outages.
Analytics-Based Root Cause Analysis for Virtual Infrastructure		Customer wants to use data analytics to troubleshoot issues before they grow in severity or breadth.
Capacity Management for Virtual Infrastructure		Customer wants to reclaim over-provisioned capacity and right-size virtual machines with automated resource optimization. Use flexible capacity modelling to develop resourcing strategies and what-if scenarios according to business demand, as well as service level agreements (SLAs).
VMware Product Required		vRealize Operations Manager virtual appliance.

SPECIFICATION	PARAMETERS	DESCRIPTION
Total Cluster Instances Deployed	Up to one (1)	Deployed
Total Number of vRealize Operations Manager Analytic Nodes	Up to one (1)	Deployed
Total Number of vCenter	1	Configured
Foundational Use Case and Knowledge Transfer Configuration Limits		The following configuration limits apply to the foundational use cases. These parameters are included as part of the deployment for knowledge transfer activities.
Super Metrics	Up to one (1)	Created
Symptoms	Up to one (1)	Created
Alerts	Up to one (1)	Created
Dashboards	Up to one (1)	Created
Widgets per Dashboard	Up to six (6)	Added per dashboard
Policies	Up to one (1)	Created
Notifications (Email)	Up to one (1)	Created

## Out of Scope

The following are the out of scope items for this project:

### General

- Installation and configuration of custom or third-party applications and operating systems on deployed virtual machines.
- Operating system administration including the operating system itself or any operating system features or components.
- Management of change to virtual machines, operating systems, custom or third-party applications, databases, and administration of general network changes within Customer control.
- Remediation work associated with any problems resulting from the content, completeness, accuracy, and consistency of any data, materials, or information supplied by Customer.
- Installation or configuration of VMware products not included in the scope of this document.
- Installation and configuration of third-party software or other technical services that are not applicable to VMware components.
- Installation and configuration of Customer-signed certificates.
- Configuration of VMware products used for the service other than those implemented for the mutually agreed to use cases.
- Customer solution training other than the defined knowledge transfer session.

### Performance and Capacity Management Deployment

- Configuration of or creation of SNMP and HTTP post adapter.
- Configuration of features, data feeds, and objects not supported by a publicly available VMware adapter/management pack.
- Trial and standard licensing levels. Advanced licensing or higher is required.
- Maximum environment size other than the guidance specified by VMware for the version of vRealize Operations Manager to be installed. Maximum environment size of highly available environments must be half that of non- highly available environments unless otherwise specified in VMware documentation. See VMware knowledge base article vRealize Operations Manager Sizing Guidelines (2093783) (<http://kb.vmware.com/selfservice/kb/2093783>)
- Beta functionality provided by management packs or beta components within the Customer environment.
- Import of user groups, unless an advanced use case is selected.
- Creation of user roles, unless an advanced use case is selected.
- Creation of local accounts, unless an advanced use case is selected.
- Configuration of LDAP/Active Directory sources, unless an advanced use case is selected.
- Creation of metric interaction files, unless an advanced use case is selected.
- Configuration of vRealize Operations Manager parameters beyond those listed in the Foundational Use Case and Knowledge Transfer Configuration Limits section, unless an advanced use case is selected.

### Estimated Schedule

VMware estimates that the duration of this project will not exceed 2 weeks. VMware consulting services will operate according to a schedule agreed to by both parties. Typically, consulting services are performed during normal business hours and workdays (weekdays and non-holidays).

### Project Activities

#### Phase 1: Initiate

After the statement of work (SOW) is signed and the purchase order is received, the VMware Project Manager hosts a project initiation call with key Customer and VMware stakeholders.

Topics to be discussed include:

- Project business drivers, scope, and objectives.
- Project deadlines, timelines, scheduling, and logistics.
- Identification of key Customer team members who VMware will work with to accomplish the tasks defined in this data sheet.
- Technology prerequisites necessary for a successful project, including review of the Service Checklist for the VMware solution.
- Confirmation of team members and contact details will be exchanged to schedule the project kickoff meeting.

#### Deliverables

- Initial pre-engagement call

## Phase 2: Plan

VMware leads a project kickoff meeting with Customer project sponsors and stakeholders to review expectations about the purpose of the engagement, the delivery approach, and timelines.

The objectives of the meeting are as follows:

- Introducing the VMware team, roles, and responsibilities.
- Describing the project goals, phases and key dates.
- Explaining the expected project results and deliverables.
- Agreeing on communication and reporting processes.
- Validating the project expectations and clarifying roles and responsibilities.

After Customer and VMware agree on project expectations, the VMware Project Manager and the Customer Project Manager work together on the detailed project plan.

### Deliverables

- Project kickoff meeting minutes

## Phase 3: Execute

The key activities for this phase are organized in the following sub-phases:

- Deploy
- Knowledge Transfer

### Deploy

VMware deploys, documents, and validates the technology components according to the design.

VMware does the following:

- Installs and configures the VMware technologies according to the design.
- Finalizes the Configuration Workbook with physical design elements.
- Executes service and service component functional test validation.

### Knowledge Transfer

VMware conducts knowledge transfer sessions covering the design, deployment procedures, and operations procedures relating to the technologies in the scope of this project.

VMware does the following:

- Conducts technical knowledge transfer sessions for administrators and operators.
- Conducts up to 24 hours of knowledge transfer sessions, including fundamental operational discussions.

## Phase 4: Close

The VMware Project Manager conducts a closure meeting of up to 2 hours with the Customer covering project status, reviewing completions, next steps and how to engage further with VMware.

## Appendix – Service Checklist

The following are the prerequisites for this service engagement.

- Engagement requires an initial remote installation of one (1) vRealize Operations Manager node to be deployed for each root instance. This installation must occur one (1) week before VMware arrives on site. This period of time allows vRealize Operations Manager to collect initial data that is required for the foundation and advanced configuration workshops conducted on site.
- Sizing and performance technology prerequisites are for a minimum vRealize Operations Manager cluster of two (2) medium sized nodes (virtual appliance) without high availability enabled. In most cases, the vRealize Operations Manager cluster will be more than two (2) nodes. In these cases, the VMware sizing guidelines outlined in VMware KB2093783 (vRealize Operations Manager Sizing Guidelines) serves as the technology prerequisites.
- All technology prerequisites listed are specific to vRealize Operations Manager v7.x. Other versions might have different requirements.
- Datastore latency: Consistently lower than 10 ms with possible occasional peaks up to 15 ms.
- Network latency for data nodes: < 5 ms.
- Network latency for remote collectors: < 200 ms.
- Physical core ratio for data nodes: one (1) vCPU to one (1) physical core at scale maximums.
- Storage subsystem IOPs: See guidelines as outlined in VMware KB2093783.
- Supported browsers: Google Chrome: Version 67 and 68, Mozilla Firefox: Version 61 and 62, Microsoft Internet Explorer: Version 11, Microsoft Edge 16, Safari 10 and 11.

The following stakeholders are required to deliver this service

- VMware operations team leads.
- Application operations leads.
- Security policy team leads.
- Enterprise Architect.
- Infrastructure Architect.
- Backup/Recovery team leads.
- Network Operations team leads.

The following are the technical prerequisites required to deliver this service

- vCenter Server version 5.5.
- vRealize Operations version 7.x.
- Number of virtual appliances required 2.
- Domain Name System required Yes, two (2) static entries with reverse DNS entries.
- Number of IP addresses required two (2).
- Number of IP subnets required one (1).
- Virtualized RAM capacity (GB) minimum of 2x32 GB.
- Virtualized CPU capacity (GHz) minimum of 2x8 vCPUs.
- Firewall Ports Open (Internal) Requirement 25 (UDP/TCP), 53 (UDP/TCP), 123 (UDP), 161 (UDP), 80/443 (TCP), LDAP (389, 686, 3368,3369), vCenter (443, 8443, 10443, 9443), VMware View (3091-3095, 3099-3101), vRealize Operations Manager (54332, 5433, 6061, 8009-8011, 10000-10010, 20000- 20010).

**FOR MORE INFORMATION OR TO PURCHASE  
VMWARE PRODUCTS CALL**

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**VISIT**

<http://www.vmware.com/products>, or  
search online for an authorized reseller. For  
detailed product specifications and system  
requirements, refer to the documentation.

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