

# VMWARE VREALIZE OPERATIONS MANAGER

## Install or Upgrade

### AT A GLANCE

This document outlines instructions that will assist in install or upgrade of vRealize Operations Manager Virtual Appliance. The goal of this document is to provide quick start information and tools required to help facilitate a successful install or upgrade for the most recent release of vRealize Operations Manager. Please refer to the [product documentation](#) for more complete details.

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This guide provides an overview of how to install or upgrade vRealize Operations Manager Virtual Appliance. Review the [Best Practices](#) section before installing or upgrading vRealize Operations Manager.

### Prerequisites

The following are the prerequisites to install or upgrade the most recent release of vRealize Operations Manager Virtual Appliance.

- Determine the [sizing of the vRealize Operations Manager cluster](#).
- Validate the [general vRealize Operations Manager cluster node requirements](#).
- Download the [latest version](#) of vRealize Operations Manager.
  - For new installation, download the Virtual Appliance installation (.ova) file to a location that is accessible to the vSphere client.
  - For upgrades, download the OS and Product update (.pak) files to a location that is accessible to vRealize Operations Manager Admin UI.
    - OS Update: *vRealize Operations Manager - Virtual Appliance Operating Systems upgrade*
    - Product Update: *vRealize Operations Manager - Virtual Appliance upgrade*
- [Verify the integrity](#) of the downloaded installation or upgrade media.
- For upgrades, the target vRealize Operations Manager environment must be running version 6.2.x or later.
- vRealize Operations Manager update operation has a validation process that identifies issues before the actual update of the product.
  - Resolve any issues found during the pre-update check phase for successful product updates.
- If *End Point Operations Management* is configured, vRealize Operations Manager must be updated to [version 6.3.1](#) before updating to the most recent release.
  - Upgrade the *End Point Operations Management agent* before updating vRealize Operations Manager. See [KB article 2146446](#).

### Steps to install vRealize Operations Manager for the first time

1. Create the vRealize Operations Manager [master node](#) by [deploying the .ova file](#).
2. [Configure](#) the newly deployed node.
3. Deploy and [configure additional nodes](#) based on required sizing for vRealize Operations Manager to support larger environments.

### Steps to upgrade an existing vRealize Operations Manager cluster

1. Review and [preserve customized content](#).
2. [Create a snapshot of each node](#) in the cluster before performing the upgrade.
3. Use *vRealize\_Operations\_Manager-VA-OS-xxx.pak* to [install the OS update](#).
4. Use *vRealize\_Operations\_Manager-VA-xxx.pak* to [install the Product update](#).

### What's Next?

- [Configure content](#) in vRealize Operations Manager to monitor an environment.
- [Monitor objects](#) in the managed environment using vRealize Operations Manager.
- [Plan capacity](#) for the managed environment using vRealize Operations Manager.
- [Install optional Solutions](#) in vRealize Operations Manager.

**RELEASE NOTES AND COMPATIBILITY**

- [vRealize Operations Manager 6.6 Release Notes](#)
- [VMware Compatibility Guide](#)
- [VMware Product Interoperability Matrix](#)
- [VMware Cloud Management Marketplace](#)

**vREALIZE OPERATIONS MANAGER 6.6**

- [Information Center](#)
- [Sizing Guidelines](#)
- [Deployment Guide](#)
- [Configuration Guide](#)
- [User Guide](#)
- [Definitions for Metrics, Properties, and Alerts](#)
- [Secure Configuration](#)

**END POINT OPERATIONS MANAGEMENT**

- [Agent Installation and Deployment](#)

**Best Practices**

Implement the following best practices while deploying a production instance of vRealize Operations Manager.

**Analytics Nodes**

Analytics nodes consist of master node, replica node (when [High Availability](#) enabled), and data nodes.

- Deploy analytics nodes in the same vSphere cluster in a single datacenter.
- Deploy analytics nodes on storage of the same type.
- Depending on the size and performance requirements for analytics nodes, apply Storage DRS Anti-Affinity rules to ensure that nodes are on separate datastores.
- Set Storage DRS to manual for all vRealize Operations Manager analytics nodes.
- While deploying analytics nodes into a highly consolidated vSphere cluster, configure resource reservation to ensure optimal performance. Ensure that the virtual CPU to physical CPU ratio is not negatively impacting the performance of analytics nodes by validating CPU ready time and CPU co-stop.
- Analytics nodes have a high number of vCPUs to ensure performance of the analytics computation that occurs on each node. Monitor CPU Ready time and CPU Co-Stop to ensure that analytics nodes are not competing for CPU capacity.
- All analytics nodes must reside in the same geographical location.

**New Installation**

- All nodes must run the same vRealize Operations Manager version.
- Master, replica (when High Availability enabled), and data nodes must be uniform in sizing.
- All vRealize Operations Manager nodes should use static IP address, or fully qualified domain name (FQDN) with a static IP address.
- Deploy vRealize Operations Manager OVA directly on vCenter. Nodes deployed using an OVA file have their hostnames set to the retrieved FQDN by default.
- Do not include nonstandard characters such as underscores ( \_ ) in node names, host name or anywhere in the fully qualified domain name (FQDN).
- While expanding vRealize Operations Manager cluster, add only one node at a time. Allow node addition to complete before adding another node.

**Upgrade an Existing Installation**

- Review the [latest Release Notes](#) and carefully look for any issues that may pertain to the target environment or setup.
- Review all the interoperability configurations and Management Packs installed on the vRealize Operations Manager environment, prior to upgrade.
- Review and free up space on vRealize Operations Manager nodes. See [KB article 2135651](#).
- Pre-copy the PAK files to vRealize Operations Manager nodes to reduce the upgrade time. See [KB article 2127895](#).
- Multiple snapshots can degrade vRealize Operations Manager performance, so delete pre-update snapshots after the software update completes.

**Performance**

- To ensure the availability of adequate resources and continued product performance, monitor vRealize Operations performance by checking its CPU usage, CPU ready and CPU contention time.
- To avoid a performance decrease, vRealize Operations Manager analytics cluster nodes need guaranteed resources when running at scale.

**Management Packs**

- Various management packs and adapters have specific configuration requirements. Familiarize with all prerequisites before installing a solution and configuring the adapter instance.

## LEARN MORE

Note: Some resources may be from previous versions.

- [VMware Lifecycle Product Matrix](#)
- [VMware vRealize Suite Information](#)
- [Compare vRealize Operations Manager Editions](#)
- [Load Balancing Configuration Guide](#)

## DISASTER RECOVERY / BACKUP

- Using [VMware SRM](#)
- Using [NetBackup](#)
- Using [vSphere Data Protection](#)

## RELATED PRODUCTS

- [vRealize Operations for Horizon](#)
- [vRealize Log Insight](#)
- [vRealize Operations for Published Applications](#)

## Known Issues

The following are known issues related to vRealize Operations Manager install and upgrade. If additional assistance is required, contact VMware Support.

- **Upgrading to vRealize Operations Manager 6.3 appears to hang or vRealize Operations Manager 6.3 cluster never comes online.**  
If the vRealize Operations Manager HDS index rebuild cycle happens to coincide with a restart of Analytics then the process startup will be paused until the index rebuild is complete and this can take many hours.  
**Workaround:** Upgrade to vRealize Operations Manager 6.3.1 instead.
- **Unable to communicate with newly added Remote Collector (RC) or a newly added RC will remain offline in Collector Groups.**  
As the RC node is attempting to pull down management pack configurations from the master node and due to high latency in the environment, RC node times out.  
**Workaround:**
  1. Take vRealize Operations Manager cluster offline.
  2. Backup existing `"/usr/lib/vmware-vcops/user/plugins/inbound"` directory from the RC node to a different location.
  3. Copy the entire directory `"/usr/lib/vmware-vcops/user/plugins/inbound"` from Master node to RC node.
  4. Bring the vRealize Operations Manager cluster online.
- **After upgrade, logging into Admin or Product UI does not work intermittently or "Signature on PAK file is not valid" error is displayed while upgrades.**  
While adding its certificates to product truststore, a third-party Management Pack (Cisco UCS MP), overwrites existing product certificates.  
**Workaround:** Refer to the [KB article 2149714](#).
- **Cassandra service fails immediately after starting.**  
Cassandra service fails due to the corrupt Cassandra cache file in VMware vRealize Operations Manager.  
**Workaround:** Refer to the [KB article 2144358](#).
- **User Interface screens appear blank or with old components after an upgrade.**  
If customers do not clean the browser cache after an upgrade, user interface screens might appear blank or display old components due to conflicts with the current browser cache.  
**Workaround:** Clean the browser cache after upgrading.
- **Error messages might appear during initial setup of nodes.**  
During vRealize Operation Manager 6.6 installation, when performing operations that involve initial setup of nodes, such as new installation, expanding an existing installation, or enabling HA for the first time, an error message similar to `Error:Permission denied to access property"timeStamp"` might appear. There is no impact of this error on the cluster. This is a user interface issue.  
**Workaround:** None.
- **Custom vSphere tags are not displayed in vRealize Operations Manager for vSphere versions 6.0 and higher.**  
Custom tags set in vSphere version 6.0 and higher, fail to appear in vRealize Operations Manager. The issue is applicable for both newly deployed and upgraded vCenter Servers.  
**Workaround:** Refer to the [KB article 2144602](#).

