vRealize Suite Getting Started Guide

vRealize Suite 6.0

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see http://www.vmware.com/support/pubs.

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Introduction to the VMware vRealize Suite

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VMware vRealize Suite complements VMware vCloud Suite, so that you can deliver infrastructure and applications across VMware vSphere and other hypervisors, physical infrastructure, and private and public clouds. vRealize Suite is available in Advanced and Enterprise editions.

VMware vRealize Suite Advanced

VMware vRealize Suite is a comprehensive management solution for provisioning and on-going management of infrastructure services that provides the following functions:

- Rapid, self-service infrastructure provisioning

- Infrastructure health, performance, and capacity monitoring across physical, virtual, and hybrid cloud deployments

- Rapid creation of rate cards and automatic pricing of service catalog blueprints for use in a self-service portal

- Benchmarks, usage metering, and public cloud comparison

- Planning, controlling, and recovering costs expended in providing a full IT services stack, implementing cost transparency, cost optimization, and demand management

- Detecting application dependencies, hypervisor change, and configuration management

VMware vRealize Suite Enterprise

VMware vRealize Suite is a complete management solution for deployment, on-going management, and compliance for infrastructure and applications, with the following additional benefits:

- Rapid, self-service infrastructure and application provisioning

- Automated configuration and deployment of multitier cloud applications and custom services

- Detection of application performance

- Regulatory compliance and OS-level change and configuration management

- IT service level management

- Detection of IT performance and value measures for all services and vendors, enabling IT to govern contractual commitments

This chapter includes the following topics:

- "VMware vRealize Suite Licensing," on page 6

- "vRealize Suite Components," on page 6

VMware vRealize Suite Licensing

You can license the components in VMware vRealize Suite individually or as part of VMware vRealize Suite 6.0.

Some components are available as standalone products that are licensed on a per-virtual machine basis. When the products are part of vRealize Suite, they are licensed on a per-CPU basis. You can run an unlimited number of virtual machines on CPUs that are licensed with vRealize Suite. Note that when you install a component of the VMware vRealize Operations Management Suite, such as Hyperic

vRealize Suite consists of the following products:

- VMware vRealize Automation Advanced or Enterprise

- VMware vRealize Operations Management Suite Advanced or Enterprise

- VMware vRealize Log Insight

- VMware vRealize Business Standard Advanced or Enterprise

vRealize Suite is available with the following licensing models:

- Per CPU, for on-premise private cloud or virtual environments

- Per virtual machine instance, for public cloud workloads or workloads on physical hardware

After you purchase VMware vRealize Suite, you receive four license keys, one for each of the component products.

vRealize Suite Components

A vRealize Suite edition contains individual products with different versions. To ensure interoperability, verify that the components of your vRealize Suite environment are the correct versions.

VMware vRealize Suite includes the following components or a subset of these components, based on the edition you purchased.

Table 1-1. Products of vRealize Suite

Product Name	Description
vRealize Operations Manager	Collects performance data from each object at every level of your virtual environment, from individual virtual machines and disk drives to entire clusters and datacenters. It stores and analyzes the data, and uses that analysis to provide real-time information about problems, or potential problems, anywhere in your virtual environment.
vRealize Infrastructure Navigator	Provides automated discovery of application services, displays relationships, and maps dependencies of applications on virtualized compute, storage, and network resources.
vRealize Configuration Manager (Enterprise edition)	Automates configuration and compliance management across your virtual, physical and cloud environments, assessing them for operational and security compliance.
vRealize Hyperic (Full Hyperic functionality is in Enterprise Edition)	Provides monitoring of operating systems, middleware, and applications running in physical, virtual, and cloud environments.
vRealize Log Insight	Provides scalable log aggregation and indexing for the vRealize Suite, including all editions of vSphere, with near real-time search and analytics capabilities. Log Insight collects, imports, and analyzes logs to provide real-time answers to problems related to systems, services, and applications, and derive important insights.

Table 1-1. Products of vRealize Suite (Continued)

Product Name	Description
vRealize Automation	Helps deploy and provision business-relevant cloud services across private and public clouds, physical infrastructure, hypervisors, and public cloud providers. vRealize Automation Enterprise includes vRealize Automation Application Services.
vRealize Business, Standard, Advanced, or Enterprise	Provides greater visibility into financial aspects of your cloud infrastructure and lets you optimize and improve these operations.

vRealize Suite Product Documentation

VMware vRealize Operations Manager Documentation

VMware vRealize Infrastructure Navigator Documentation

VMware vRealize Configuration Manager Documentation

VMware vRealize Hyperic Documentation

VMware vRealize Log Insight Documentation

VMware vRealize Automation Documentation

VMware vRealize Business Documentation

Deployment Overview of vRealize Suite

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You download, install, and configure vRealize Suite components separately. Individual products in vRealize Suite are delivered as either installation packages for Windows or Linux-based machines, or as virtual appliances that you can deploy on virtual machines that are running on ESXi hosts.

Ensure that the prerequisites and configuration requirements for each component are met. This guide only provides high-level design recommendations and deployment sequences. For detailed installation instructions and in-depth discussions of individual vRealize Suite components, see the documentation for those products.

This chapter includes the following topics:

- "Installing vRealize Operations Management Suite Components," on page 9
- "Installing and Configuring vRealize Log Insight," on page 12
- "About vRealize Automation Installations," on page 13
- "About vRealize Business," on page 14

Installing vRealize Operations Management Suite Components

vRealize Operations is used to monitor and manage the health, capacity, and performance of your virtual environment. vRealize Operations Management Suite includes either vRealize Operations Advanced or Enterprise editions.

The vRealize Operations suite includes the following components:

- vRealize Operations Manager
- vRealize Infrastructure Navigator
- vRealize Configuration Manager
- vRealize Hyperic

Installing and Configuring vRealize Operations Manager

vRealize Operations Manager is a virtual appliance that runs in a VMware virtual infrastructure.

You must ensure that your environment meets requirements so that you can deploy and use the vRealize Operations Manager virtual appliance. Use the following resources to prepare for your vRealize Operations Manager installation:

- VMware vRealize Operations Manager Documentation Center
- VMware vRealize Operations Manager Release Notes

To ensure interoperability with the vRealize Suite, verify that vRealize Operations Manager is the correct version. For more information about VMware-certified compatibility, see VMware Compatibility Guide for vRealize Operations Manager.

The vRealize Operations Manager virtual application installation process consists of deploying the vRealize Operations Manager OVF once for each cluster node, accessing the product to set up cluster nodes according to their role, and logging in to configure the installation.

Before you begin the installation, validate the sizing requirements for the vApp. By default, VMware offers Extra Small, Small, Medium, and Large configurations during installation. You can size the environment according to the existing infrastructure to be monitored. After the vRealize Operations Manager instance outgrows the existing size, you must expand the cluster to add nodes of the same size or add additional disk space to the existing nodes.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1 Install vRealize Operations Manager. See vRealize Operations Manager vApp Deployment and Configuration Guide.

2 Validate the system requirements for vRealize Operations Manager. The system requirements are available in the release notes at VMware vRealize Operations Manager Release Notes.

3 Deploy and power on the vRealize Operations Manager virtual appliance.

4 Run the master node setup.

5 Log in to vRealize Operations Manager.

6 Assign the vRealize Operations Manager license.

7 Define the vCenter Server system to monitor.

8 Verify that vCenter Server and inventory objects appear to confirm that the management pack installation and configuration have finished successfully.

After you install and configure vRealize Operations Manager, determine which management packs are required. For example, you might need to install the management pack for vRealize Hyperic or vRealize Configuration Manager.

Installing and Configuring vRealize Infrastructure Navigator

vRealize Infrastructure Navigator is a virtual appliance that runs in a VMware virtual infrastructure.

You must ensure that your environment meets requirements so that you can deploy and use the vRealize Infrastructure Navigator virtual appliance. Use the following resources to prepare for your vRealize Infrastructure Navigator installation:

- VMware vRealize Infrastructure Navigator Documentation Center

- VMware vRealize Infrastructure Navigator Release Notes

To ensure interoperability with the vRealize Suite, verify that vRealize Infrastructure Navigator is the correct version. For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Infrastructure Navigator.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1 Install the vRealize Infrastructure Navigator components. See the vRealize Infrastructure Navigator Installation and Configuration Guide.

a Deploy the vRealize Infrastructure Navigator virtual appliance.

b   Add the license for vRealize Infrastructure Navigator.

2   Log in to VMware vRealize Operations Management Suite and verify that
vRealize Infrastructure Navigator data appears in the Environment Overview Inventory and in the
vRealize Infrastructure Navigator dashboards to confirm that the installation and initial configuration
has finished successfully.

For more information about how to manage vRealize Infrastructure Navigator, see the vRealize
Infrastructure Navigator User's Guide.

Installing and Configuring vRealize Configuration Manager

vRealize Configuration Manager automates configuration and compliance management tasks.

Before you install vRealize Configuration Manager, decide on the appropriate configuration for your
environment. Use the following resources to prepare for your vRealize Configuration Manager installation:

■   vRealize Configuration Manager Documentation

■   vRealize Configuration Manager Release Notes

To ensure interoperability with the vRealize Configuration Manager, verify that
vRealize Infrastructure Navigator is the correct version. For more information about VMware certified
compatibility, see VMware Compatibility Guide for vRealize Configuration Manager.

A typical Installation verifies the prerequisites and assists you in correcting any that are missing. You then
enter settings such as domain account credentials and installation paths, and start the installation.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1   Install the vRealize Configuration Manager components. See VMware vRealize Configuration Manager
Installation Guide.

a   Validate hardware and software requirements.

b   Install and configure Windows Server 2008 R2.

c   Add the vRealize Configuration Manager domain account as local administrator.

d   Install the required software components.

e   Add the vRealize Configuration Manager license.

If you purchased vRealize Configuration Manager as part of
vRealize Operations Management Suite, use the same license key you use for
vRealize Operations Manager.

2   Configure vRealize Configuration Manager.

a   Configure vCenter Server integration.

b   Configure virtual environments collections.

c   Install agents.

d   Create and run virtual environment compliance, patching, and change management.

e   Configure vRealize Operations Manager integration.

f   Create and run compliance badge mappings.

g   Log in to vRealize Operations Manager and verify that vRealize Operations Manager badge
mappings and compliance appear in the UI to confirm that the installation and initial configuration
have finished successfully.

Installing and Configuring vRealize Hyperic

vRealize Hyperic is a virtual appliance that runs in a VMware virtual infrastructure. You can download vRealize Hyperic in a variety of packages. You select the format based on the operating system and if the configuration is automated or customized.

You must ensure that your environment meets the system requirements required to deploy and use the vRealize Hyperic virtual appliance. Use the following resources to prepare for your vRealize Hyperic installation:

- VMware vRealize Hyperic Documentation Center

- vRealize Hyperic Release Notes

To ensure interoperability with the vRealize Suite, verify that vRealize Hyperic is the correct version. For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Hyperic.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1   Install vRealize Hyperic. See vRealize Hyperic Installation and Configuration Guide.

   If you purchased vRealize Hyperic as part of vRealize Operations Management Suite, use the same license key you use for vRealize Operations Manager.

   a   Validate the system requirements.

   b   Install and configure the vRealize Hyperic virtual appliance.

   c   Install and deploy vRealize Hyperic agents.

2   Configure vRealize Hyperic. See vRealize Operations Management Pack for vRealize Hyperic Solution.

   a   Discover and import resources to the inventory.

   b   Log in to the vRealize Hyperic UI.

   c   Verify that vRealize Hyperic objects and metrics appear to confirm that the installation and initial configuration is successfully finished.

   d   Configure a unique mapping for vRealize Operations Manager. See vRealize Operations Management Pack for vRealize Hyperic Solution.

3   Download the Management Pack for vRealize Hyperic. See http://solutionexchange.vmware.com.

4   Install and configure the vRealize Operations Management Pack for vRealize Hyperic.

5   Verify that vRealize Hyperic objects and metrics appear in the vRealize Operations Manager UI.

6   Download and install additional vRealize Operations Management Packs for specific third-party applications and middleware. See http://solutionexchange.vmware.com.

Installing and Configuring vRealize Log Insight

vRealize Log Insight is delivered as a virtual appliance that you must deploy in your environment. To deploy the vRealize Log Insight virtual appliance, follow the standard OVF deployment procedure.

Use the following resources to prepare for your vRealize Log Insight installation:

- VMware vRealize Log Insight Documentation

- VMware vRealize Log Insight Release Notes

To ensure interoperability with the vRealize Suite, verify that vRealize Log Insight is the correct version. For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Log Insight.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1   Validate the system requirements and sizing guidelines.

2   Deploy the vRealize Log Insight virtual appliance.

3   Configure vRealize Log Insight

   a   Configure integration with vSphere.

   b   Configure integration with vRealize Operations Manager.

   c   (Optional) Deploy and configure the Windows agents.

   d   Validate that the connection between vRealize Log Insight to vRealize Operations Manager is working and view in context from the vRealize Operations Manager UI.

4   Validate that the vSphere log events are being received. See VMware vRealize Log Insight User's Guide.

5   Download and configure the vRealize Automation management component from the Solution Exchange at http://solutionexchange.vmware.com.

6   (Optional) Download and configure the management pack for Microsoft Windows from the Solution Exchange at http://solutionexchange.vmware.com.

7   Validate that the content pack data is visible in vRealize Log Insight. See VMware vRealize Log Insight User's Guide.

About vRealize Automation Installations

vRealize Automation enables IT administrators to automate delivery and life-cycle management of infrastructure and application services.

Installing vRealize Automation involves installing the following main components:

- An identity server, which provides authentication services

- The vRealize Automation appliance, which provides administration and self-service capabilities

- An Infrastructure as a Service (IaaS) Windows Server, which supports cross-product infrastructure capabilities

You can use the Identity Appliance SSO that vRealize Automation provides for authentication or some versions of the SSO that vSphere provides. For information about supported versions of SSO and the Identity Appliance, see the vRealize Automation Support Matrix in vRealize Automation documentation at https://www.vmware.com/support/pubs/vcac-pubs.html.

Installing and Configuring vRealize Automation

vRealize Automation installation includes installing and configuring single sign-on (SSO) capabilities, the user interface portal, and Infrastructure as a Service (IaaS) components.

You must ensure that your environment meets the requirements for you to deploy and use vRealize Automation. Use the following resources to prepare for your vRealize Automation installation:

- VMware vRealize Automation Documentation Center

- VMware vRealize Automation Release Notes

■ Review the vRealize Automation Reference Architecture to plan your deployment. See
http://pubs.vmware.com/vra-62/topic/com.vmware.ICbase/PDF/vrealize-automation-62-reference-architecture.pdf

To ensure interoperability with the vRealize Suite, verify that vRealize Automation is the correct version. For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Automation.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1   Install and configure vRealize Automation. See vRealize Automation Installation and Configuration Guide.

    a   If you are not using vCenter Server for your single sign-on source, deploy and configure a VMware Identity Appliance.

    b   (Optional) Deploy the load balancer for vRealize Automation appliances.

    c   Deploy, configure, and connect the vRealize Automation appliance to the single sign-on service.

    d   Complete prerequisites for an Infrastructure as a Service server.

    e   Download the Infrastructure as a Service setup file from the vRealize Automation server to the Infrastructure as a Service server.

    f   Install all components of the Infrastructure as a Service function.

    g   Verify Infrastructure as a Service services.

2   Configure vRealize Automation tenants. See vRealize Automation System Administration.

3   Log in to the tenant as the Infrastructure as a Service administrator and click the **Infrastructure** tab. If the page loads with no errors reported at the top of the screen, the installation finished successfully.

4   Create a hypervisor or cloud endpoint to be able to connect to the deployment target. See vRealize Automation IaaS Configuration for Virtual Platforms.

5   Create a new fabric group. If the compute resources from the endpoints that you configured appear in the list at the bottom of the screen, the connection to the endpoint is successfully established.

After installation, system administrators can customize the installation environment and configure one or more tenants, which sets up access to self-service provisioning and life cycle management of cloud services.

By using the secure portal Web interface, administrators, developers, or business users can request IT services and manage specific cloud and IT resources based on their roles and privileges. Users can request infrastructure, applications, desktops, and IT service through a common service catalog.

About vRealize Business

VMware vRealize Business provides capabilities that allow users to gain greater visibility into financial aspects of their infrastructure and lets them optimize and improve these operations. vRealize Business provides service costing data, showback and chargeback capabilities and cost benchmarking against known public clouds.

vRealize Business Standard Edition has tight integration with vRealize Automation.
vRealize Business Standard Edition appears as a tab, named as Business Management, in the
vRealize Automation user interface shell. vRealize Business Standard Edition uses the common services of
vRealize Automation such as SSO authentication and authorization.

The Infrastructure as a Service (IaaS) component of vRealize Automation consumes the base rate APIs of vRealize Business Standard Edition to compute blueprint price of virtual machine.
vRealize Business Standard Edition also has data integration with the IaaS component of vRealize Automation. You can define rules and categorize according to vRealize Automation hierarchy.

In addition to vRealize Business Standard, vRealize Suite also includes vRealize Business Advanced or Enterprise, depending on which edition of vRealize Suite you have purchased.

vRealize Business Advanced includes additional capabilities for IT Financial Management to allocate or translate IT costs to each IT business service. Capabilities include TCO analysis, identifying top spenders and consumers, analyzing efficiency rations, tracking actual versus planned spends and preparing a bill of IT services. This helps spot ongoing potential cost saving strategies, such as potential for virtualization, consolidation, retirement or refresh, SLA reduction, and tiering.

vRealize Business Enterprise includes additional service level management and vendor management capabilities to help customers better understand the trade-off between cost and quality and run IT more like a business.

Installing and Configuring vRealize Business Standard

vRealize Business Standard is a virtual appliance that runs in a VMware virtual infrastructure.

Ensure that your environment meets requirements so that you can deploy and use the vRealize Business Standard virtual appliance. Use the following resources to prepare for your vRealize Business Standard installation:

- vRealize Business Standard Documentation Center

- vRealize Business Standard Release Notes

For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Business Standard.

To ensure interoperability with the vRealize Suite, verify that vRealize Business Standard is the correct version. For more information about VMware certified compatibility, see VMware Compatibility Guide for vRealize Business Standard.

Deployment Sequence

The high-level deployment sequence includes the following steps.

1   Install and configure Business Management Standard. See vRealize Business Standard Installation Guide.

2   Validate the hardware requirements for the Identity Appliance and the vRealize Business Standard appliance.

3   Download virtual appliances. See https://my.vmware.com.

4   Deploy and configure the VMware Identity Appliance.

5   Deploy and configure the vRealize Business Standard appliance.

6   Register vRealize Business with SSO and the existing vRealize Automation Server.

7   Connect vRealize Business to an existing vCenter Server.

8   (Optional) Connect vRealize Business to a public cloud provider.

9   Access the vRealize Business Standard UI. Log in to vRealize Automation and select the **vRealize Business Management** tab.

10 Set or update the license for vRealize Business Standard.

Updating vRealize Operations Management Suite Components

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Updating vRealize Suite components to newer versions requires you to perform separate update procedures. Follow the recommended update order to ensure that vRealize Suite updates finish without problems.

- Verify that you have the required installation or upgrade packages.

- Verify that you have administrator privileges for all systems.

Before upgrading, review the VMware Product Interoperability Matrix for each product you plan to upgrade to ensure that you have supported, compatible product versions. See the VMware Product Interoperability Matrixes Web site.

Update the following vRealize Operations Management Suite components.

Product	Update documentation
VMware vRealize Operations Manager	Migrating a vCenter Operations Manager Deployment into this Version You can migrate data from vCenter Operations Manager to a fresh installation of VMware vRealize Operations Manager.
vRealize Infrastructure Navigator	Upgrading vCenter Infrastructure Navigator
vRealize Configuration Manager	VMware vRealize Configuration Manager Advanced Installation Guide
vRealize Hyperic	Migrating and Upgrading vRealize Hyperic Components
vRealize Log Insight	Upgrading from Previous Versions of vRealize Log Insight
vRealize Automation	Upgrading to vRealize Automation 6.2 or Later
vRealize Business Standard	Upgrading vRealize Business Standard

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