Red Hat Enterprise Virtualization 3.0 Installation Instructions And Important Information

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Installation Instructions

Introduction

Red Hat Enterprise Virtualization (RHEV) is an end-to-end virtualization solution. RHEV 3.0 comes with an increase of virtual machine resource allocations, live migration, and increased operational efficiency.

NOTE: For instructions on installing RHEV 3.0, see **docs.redhat.com**.

The RHEV platform contains two main components:

- RHEV–Manager (RHEV–M) — Provides a graphical user interface to manage the physical and logical resources of the Red Hat Enterprise Virtualization infrastructure. RHEV–M is installed on a Red Hat Enterprise Linux 6 server and accessed from a client installed with a browser. The RHEV–Manager constitutes of:

    - Administration Portal — Used to setup, configure and manage the Red Hat Enterprise Virtualization environment.
    - User Portal — Used to connect to virtual machines. You can create virtual machine templates and virtual machines from this interface.
- RHEV–Hypervisor (RHEV–H) — Is based on Kernal-Based Virtual Machine (KVM) virtualization technology. To increase operational efficiency, you can either use RHEV–H as a standalone hypervisor or integrate it with Red Hat Enterprise Linux 6.2.

NOTE: You can download the RHEV 3.0 image from Red Hat Network.

Hardware Requirements

To set up a Red Hat Enterprise Virtualization Environment, you will require:

- A management server
- Virtualization hosts — Minimum two to support migration and power management
- Clients — One or more to access the Administration Portal
- Storage Infrastructure — Provided by NFS, iSCSI, FC, or locally attached to virtualization hosts

Management Server Requirements

NOTE: The minimum and recommended requirements are for a small to a medium size installation. The exact system requirements may vary depending upon sizing and load.

Table 1. System Requirement (Minimum)

Component	Description
Processor	Dual core
Memory	4 GB
Disk space	25 GB

Component	Description
Network	One network interface card with a bandwidth of 1 Gbps

Table 2. System Requirement (Recommended)

Component	Description
Processor	Quad core processor or multiple dual core processor
Memory	4 GB
Disk space	50 GB
Network	One network interface card with a bandwidth of 1 Gbps

Virtualization Host Requirements

This section provides information on the minimum hardware requirements to support Red Hat Enterprise Virtualization Hypervisors and Red Hat Enterprise Linux Hosts.

Processor

All processors must support Intel 64 or AMD 64 processor extensions, and the AMD-V or Intel VT hardware virtualization extensions must be enabled. Support for the No eXecute flag (NX) is also required.

Memory

It is recommended that virtualization hosts have a minimum of 2 GB RAM. The amount of RAM required varies depending on:

- Guest operating system requirements
- Guest application requirements
- Memory activity and usage of guests

KVM is able to overcommit physical RAM for virtualized guests. Overcommit allows the Red Hat Enterprise Virtualization environment to present more memory to guests than is actually physically present. The default overcommit ratio is 0.5.

Storage

Virtualization hosts require local storage to store configuration, logs, kernel dumps, and to swap space. The storage requirements for Red Hat Enterprise Linux hosts vary based on the amount of disk space used by their existing configuration but should be greater than the Red Hat Enterprise Virtualization Hypervisor.

It is recommended that each virtualization host has minimum 10 GB of internal storage comprising of:

- Root partition — 512 MB
- Configuration partition — 8 MB
- Logging partition — 2048 MB
- Swap partition — 8 MB
- Data partition — 256 MB

NOTE: The recommended size of the swap partition depends on the system the hypervisor is being installed on and the anticipated level of overcommit for the environment.

NOTE: You may not be able to upgrade the hypervisor from the Red Hat Enterprise Virtualization Manager if you use a smaller data partition. By default, disk space remaining after allocation of swap space will be allocated to the data partition.

Software Requirements

This section lists the minimum software required to work in a Red Hat Enterprise Virtualization Environment.

Operating System

To install:

- Red Hat Enterprise Linux Hypervisor, see *Red Hat Enterprise Linux - Hypervisor Deployment Guide*.
- Red Hat Enterprise Virtualization Manager, install Red Hat Enterprise Linux 6.2.

NOTE: To use Red Hat Enterprise Linux hosts install the Red Hat Enterprise Virtualization Manager.

Client

To access the **Administration Portal**, you require a client with a supported web browser. The **Administration Portal** supports the following clients and browsers:

Client	Windows XP
	Windows 7 (x86, AMD64, and Intel 64)
	Windows 2008/R2 (x86, AMD64, and Intel 64)
Browser	Internet Explorer 7 and higher on Windows, with the .NET Framework 4 installed

To access the **User Portal** , you need a thin client with a supported web browser. The **User Portal** supports the following clients and browsers:

Client	Red Hat Enterprise Linux 5.5 (i386, AMD64, and Intel 64)
	Red Hat Enterprise Linux 6.0 (i386, AMD64, and Intel 64)
	Red Hat Enterprise Virtualization Certified Linux-based thin clients
	Windows XP
	Windows XP Embedded (XPe)
	Windows 7 (x86, AMD64, and Intel 64)
	Windows 2008/R2 (x86, AMD64, and Intel 64)
	Windows Embedded Standard 2009
Browser	Internet Explorer 7 and higher on Windows, with the SPICE ActiveX control installed
	Mozilla Firefox 3.5 and higher on Red Hat Enterprise Linux, with the SPICE plugin installed

Red Hat Network Channels

To install Red Hat Enterprise Virtualization Manager the system is required to subscribe to Red Hat Network channels. These channels are used to retrieve the initial installation packages and updates as they become available. The channels are:

- Red Hat Enterprise Virtualization Manager (v.3 x86_64)

- JBoss Application Platform (v.5) for RHEL 6 Server x86_64
- RHEL Server Supplementary (v.6 64-bit x86_64)

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Important Information

Known Issues

Disk Description Unknown While Installing RHEV-H On SUT

Description   While installing RHEV-H on SUT, disk displays **UNKNOWN** in the **Description** field.

> 📝   **NOTE:** This issue occurs with SAS disks only.

Workaround   This issue will be addressed in a later version of RHEL.

Cause   In earlier versions, **ID_SCSI_COMPAT** was the value for **Description** under **Disk Details** in the storage selection screen. In case **ID_SCSI_COMPAT** was not defined for a device, the device would check for a virtio disk. If virtio disk did not exist, **UNKNOWN** would be displayed in the **Description** field.

RHEVH 3.0 Installation Fails In UEFI Mode Using Optical Or USB Media

Description   RHEVH 3.0 installation fails in UEFI mode using optical or USB media.

Workaround   UEFI is not supported in RHEV-H 6.2

RHEV 3.0 Displays Wrong Time Zone While Configuring Windows VMs

Description   While configuring Windows Virtual Machines (VMs), RHEV 3.0 displays wrong time zones as compared to the standard time zones.

Cause   RHEV-Manager has the wrong time zone values in its data base (vdsbroker).

Additional Information

- Peripherals with native support in RHEL 6.2 will have native support in RHEV Hypervisor.
- Peripherals without native support will not be supported on RHEV-H (RHEV 3.0). New add-on drivers/Red Hat DUP can use RHEL as a hypervisor.
- RHEV 3.0 is supported on currently shipping 11th generation and 12th generation Dell systems, with two or more processors.
- For information on deploying Red Hat Enterprise Virtualization, see the product documentation available on **docs.redhat.com**.