RH184 Red Hat Enterprise Linux Virtualization

Course Summary

Description

This course teaches system administrators how to deploy virtualized versions of Red Hat Enterprise Linux, thus taking greater advantage of hardware and other resources.

Topics

- Introduction
- Introduction to Virtualization
- Basic Paravirtualized Domain Installation
- Virtual Machine Management
- Advanced Installation and Configuration
- Live Migration
- Troubleshooting
- Hardware-assisted Virtualization

Audience

This course is designed for Linux system administrators who understand how to install and configure a Red Hat Enterprise Linux system and who wish to learn to install, configure, and manage Red Hat Enterprise Linux 5 in a virtualized environment.

Prerequisites

Students should have a current RHCT certification or have taken RH131 or RH133 courses. If none of the previous prerequisites are met students must have equivalent system administration knowledge under Red Hat Enterprise Linux. This knowledge includes: installation, service management (using service and chkconfig, for example), basic system monitoring (using ps and top, and perhaps meminfo and the /proc filesystem), filesystem management (using fdisk and mkfs), and basic troubleshooting (including managing log files, understanding dmesg, and perhaps the use of hardware probing tools such as ethtool and lspci).

Duration

Two days

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Course Outline

I. Introduction
- A. Red Hat Enterprise Linux
- B. Classroom Network
- C. Course Objectives
- D. Audience and Prerequisites
- E. Caveats

II. Introduction to Virtualization
- A. What is virtualization?
- B. Why is virtualization important?
- C. Types of virtualization
- D. Basic architecture of Xen virtualization

III. Basic Paravirtualized Domain Installation
- A. Preparing for domain installation
- B. Basic installs using virt-manager
- C. Configuring domains to automatically start at boot

IV. Virtual Machine Management
- A. Using generic libvirt-based utilities
- B. Using native Xen utilities

V. Advanced Installation and Configuration
- A. Syntax of Xen domain configuration files
- B. Virtual Block Devices and types of block storage
- C. Xen and bridged networking
- D. Manual and command-line domain installation

VI. Live Migration
- A. Live migration of Xen paravirtualized domains
- B. Advanced configuration of xend
- C. Live migration issues

VII. Troubleshooting
- A. Differences from a standard environment
- B. Viewing hypervisor log messages and log files
- C. Accessing domain virtual block devices
- D. Common issues

VIII. Hardware-assisted Virtualization
- A. Fully-virtualized vs. paravirtualized domains
- B. Installing unmodified OSes