

Course 617: Red Hat Xen Virtualization

(5 days)

Course Description...

Xen is a hypervisor – a software shim providing a consistent interface to the hardware for one or more guest OSs (Dom0 and DomUs). Through an intensive series of hands-on workshops you will learn to procedures for installing, networking, and managing guest OSs (DomUs) under Red Hat's implementation of Xen. With the course being 80 percent hands-on workshop, this course is designed for those who learn by doing. As an added benefit, by the end of the course, the workshop notebook becomes a customized set of procedures for working with Red Hat's Xen implementation.

Learning Objectives...

- Install Linux Guest OS (DomainU)
- How to install a Microsoft OS with virtual device drivers
- How to do a live migration
- How to clone DomU Systems
- How to manage memory and CPUs in a Xen system
- How to manage DomUs
- How to setup and test Xen security
- How to add hardware, disks, cdroms, and usb devices, permanently and temporarily
- Understanding Red Hat's default bridging
- How to setup bridge networking

Who should attend...

Anyone needing to deploy Xen on a Red Hat Enterprise System.

Prerequisites...

To get the maximum benefit from this course students need a background in Linux and Red Hat Enterprise Administration.

See next page for a detailed course outline...



Course Outline...

Unit 1: Necessary Background on Xen

- Definition of Virtualization
- Hypervisors
- Para and Full Virtualization
- Requirements to Run Xen

Unit 2: Installing Linux Systems

- Workshop: Setting up for Para-virtualization
- How Default Networking Works
- Workshop: Installing Linux Systems (virt-install)
- Workshop: Simple Access to a DomU
- Workshop: Installing Linux Systems (Virtual Machine Manager)
- Workshop: Installing Linux Systems (Importing Systems)
- Workshop: Installing Linux System (Cloning)
- Workshop: Setting up for Full Virtualization
- Workshop: Installing Solaris Fully Virtualized

Unit 3: Building Networking

- Background on Bridging, Private Networks, and VPNs
- Workshop: Building a Bridged Network
- Workshop: Building a Private Network for DomU OSs
- Workshop: Building a VPN to a DomU
- Workshop: Working with Multiple Physical NICs

Unit 4: Adding Hardware

- Workshop: Adding Hard Drives
- Workshop: Working with CDROMS, Images and physical
- Workshop: Keyboards and Mice Changes
- Workshop: Working with USB Devices

Unit 5: Installing and Working with Microsoft Systems

- Background on Virtual Device Drivers
- Workshop: Installing XP and Modifying Device Drivers
- Workshop: Installing Vista and Modifying Device Drivers
- Workshop: Interoperability

Unit 6: Xen Live Migration

- Background on Live Migration
- Workshop: Setting Up for Migration
- Workshop: Executing a Live Migration

Unit 7: Xen Security

- Background on Xen Security
- Workshop: Setting up Xen Security
- Workshop: Testing Xen Security



- Background on SELinux and Xen
- Workshop: Working with SELinux and Red Hat Xen

Unit 8: Red Hat Xen Monitoring and Management

- Workshop: Basic Management Tools
- Background on Monitoring Tools: Red Hat's and Others
- Workshop: Gathering Data With Monitoring Tools
- Background on CPU and Memory Management
- Workshop: Memory Management

Unit 9: Overview of Advanced Features

- Clustering and Xen
- Failover and Xen
- Making Xen Appliances

Please contact your ROI representative to discuss course tailoring!!!