

Introduction to Virtualization

A 2 day **Hands on** training course



Description

A comprehensive tour of virtualization. The course concentrates on the actual technologies involved as opposed to any one vendor solution.



Key outcomes

By the end of the course delegates will be able to:

- ✓ Explain the concepts of virtualization.
- ✓ Partition servers.
- ✓ Create Virtual Machines.



Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning. Hands on sessions are used throughout to allow delegates to consolidate their new skills.



Details

Who will benefit?

Anyone looking for an introduction to Virtualization.

Prerequisites

None.

Duration: 2 days

Customer rating: ★★★★★

Generic training



Generic training complements product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".

"Friendly environment with expert teaching that teaches the why before the how."
G.C. Fasthosts

Small class sizes



We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.

"Excellent course. The small class size was a great benefit..."
M.B. IBM

Hands On training



The majority of our courses use hands on sessions to reinforce the theory.

"Not many courses have practice added to it. Normally just the theoretical stuff is covered."
J.W. Vodafone

Our courseware



We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.

"Comprehensive materials that made the course easy to follow and will be used as a reference point."
V.B. Rockwell Collins

Customise your course



Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.

"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."
S.R. Qinetiq

Introduction to Virtualization

Course content

Virtualisation Concepts

What is Virtualisation? What are virtual machines (VMs)? Virtualisation Landscape. Network Virtualisation. Suitability for Organisations. Advantages of deploying Virtualisation. Downsides of deploying Virtualisation. Overview of Virtualisation products.

Hypervisors

What is a hypervisor? Difference between type 1 and 2 hypervisors. Available hypervisors. Hypervisors and device drivers. Hands on: Installing Oracle VirtualBox on Windows. Creating/Importing/Configuring VMs.

Virtualization Hosts

Hardware and resource requirements. Installation of the hypervisor. Hands on: Installing Hyper-V role into Windows Server. Creating/Importing/Configuring VMs.

Virtual Machines

Creating virtual machines. Resource requirements. Settings. Installation of the guest OS. Additional tools/extensions for hypervisor integration. VM files and their uses. Virtual hard disk and their formats. Hardware pass through. Hands on: Connecting to VMWare ESXi via WebGUI and using ESXi to create/import/configure VMs.

VM Snapshots/Checkpoints

What is a snapshot? How to use them and how they impact performance? Creating/deleting/merging of snapshots. Hands on: Using ESXi to create/manage snapshots.

Command Line use on the Hypervisor

Interacting with the hypervisor through the command line. Simple commands to configure the hypervisor and VMs. Simple scripts. Hands on: Connecting to VMWare ESXi via PowerCLI to manipulate VMs and snapshots.

Virtualization Storage

Different types of storage: local vs remote. Local and remote storage technologies. Configuring storage. Hands on: Using ESXi to deploy VMs on remote NFS storage.

Virtual Networking

How is networking done in virtualization environments. What is a virtual switch and vNIC and what are their performance characteristics? NIC teaming and trunking in the virtual world. Port groups and isolation. Physical NICs and their use in virtual switches. Hands on: Using ESXi to create and configure vswitches and networking.

Templates and clones

What is a template? What is a clone? When to use templates and clones to optimize VM deployment.

Migrating/Importing VMs

What is migration? Migrating compute and storage. Importing VMs from files or physical machines. Hands on: Using VMWare vCenter Server to clone/template/migrate VMs, tag resources, create local user accounts and assign permissions.

VMs and Backups

Taking backups of your VMs. Restoring your VMs from backups.

Virtualization and Licensing

Different licensing models and costs.

Containerization Concepts

What is a container and how is it different from a virtual machine. When to use containers. Docker and Kubernetes.

