SETC Training Corporate Logo

VMware Training: vSphere, ESXi and vCenter Complete (VCENTI, 5 jours)

Description

The course vSphere, ESXi and vCenter Virtualization (VMware Training) explores every aspect of server virtualization using VMware technologies. The training begins the installation and configuration of an ESXi server. The course then explores shared storage, virtual networking, server administration and everything that you ever wanted to know about centralized management. Having mastered the basics of VMware server virtualization, advanced topics such as resource balancing, high availability, power management, backup and recovery, vCenter redundancy, rapid deployment and storage migration are discussed in detail. This VMware essentials course will give you the needed knowledge and skills to implement a production VMware based virtualization infrastructure.

Tarifs

- Tarification: $3,500/person
- Rabais de 10% lorsque vous inscrivez 3 personnes.

Plan de cours

Virtualization Infrastructure Overview

- Virtualization explained
- How VMware virtualization compares to traditional PC deployments
- Common pain points in PC Server management
- How virtualization effectively addresses common IT issues
- VMware vSphere software products
- New Features and Improved in vSphereworkshopInfo

How to Install, Configure ESXiworkshopInfo

- Understanding ESXi
- Choosing, validating and preparing your server
- Storage controllers, disks and partitions
- Software installation and best practices
- Joining ESXi to a Domain
- Local User Management and Policies
- First look at the VMware vSphere Host Client

Virtual and Physical Networking

- vNetwork standard and distributed virtual Switches
- Virtual Switches, Ports and Port Groups
- Creating VMkernel ports
- Creating, sizing and customizing Virtual Switches

Connecting to and Using NAS Shared Storage

- Benefits Shared Storage offer to Virtual Infrastructure
- Shared Storage options
- NFS Overview
- Configuring ESX to use NFS Shares
- Configuring NFS for performance and redundancy
- NFS Use Cases
- Troubleshooting NFS connections

Virtual Hardware and Virtual Machines

- VM virtual hardware, options and limits
- Sizing and creating a new VM

- Assigning, modifying and removing Virtual Hardware
- Working with a VM's BIOS
- VMware remote console applications
- Installing an OS into a VM
- Driver installation and customization
- Use and update VMware Host Client

vCenter Server Appliance and Web Client

- The need for Identity Source management
- Installing and configuring vCenter Server Appliance with embedded Platform Service Controller
- Connecting Single Sign On (SSO) to Active Directory and other identity sources
- vCenter feature overview and components
- vCenter inventory views
- Importing ESXi hosts into vCenter management
- Installing and Using the vSphere Next Generation Web Client

VM Rapid Deployment using Templates, Clones

- Templates - Virtual Machine Golden Master images
- Creating, modifying, updating and working with Templates
- Patching, and refreshing Templates
- Cloning, one time copies of VMs
- Best practices for cloning and templating
- Adding and resizing virtual disks
- Hotplug VM virtual CPUs and Memory
- Hotplug VM virtual CPUs and Memory

ESXi and vCenter Permission Model

- VMware Security model
- Configuring local users
- Managing local permissions
- vCenter security model
- Local, Domain and Active Directory users and groups
- How permissions are applied

Using Fibre and iSCSI Shared Storage

- Fibre SAN overview
- Identifying and using Fibre Host Bus Adapters
- Scanning and Rescanning Fibre SANs
- iSCSI overview
- Virtual and physical iSCSI adapters
- Connecting to iSCSI storage
- Scanning and rescanning iSCSI SANS
- Performance and redundancy considerations and best practices
- Understanding the benefits of VMware VAAI compliant storage

VMware File System (VMFS)

- Unique file system properties of VMFS
- Managing shared Volumes
- Creating new VMFS partitions
- Introduction to VMFS 6 features and capabilities
- Managing VMFS capacity with LUN spanning and LUN expansion
- Native and 3rd party Multipathing with Fibre and iSCSI SANs
- VMFS performance considerations
- VMFS scalability and reliability

Infrastructure Monitoring with vCenter Alarms

- Alarm categories and definitions
- Creating custom alarms and actions
- Reviewing alarms and acknowledging them
- Configure vCenter so it can send E-mail and SNMP alerts
- Work with alarm conditions, triggers and actions
- Identify most useful alarms to review and enable

Resource Management and Resource Pools

- Delegate resources in bulk using Resource Pools
- How ESX delivers resources to VMs
- Shares, Reservations and Limits
- CPU resource scheduling
- Memory resource scheduling
- Resource Pools

VMotion Migration, Cold Migration, Storage VMotion

- Cold Migrations to new ESX hosts, datastores
- Hot Migrations with VMotion
- VMotion requirements and dependencies
- How VMotion works – detailed explanation
- How to test ESXi hosts and VMs for VMotion compatibility
- Troubleshooting VMotion
- Storage VMotion for hot VM disk migrations

Distributed Resource Scheduling Load Balanced Clusters

- CPU and Memory resource balanced clusters with VMware Distributed Resource Scheduler
- Resource balanced clusters with VMware Distributed Resource Scheduler
- DRS Cluster configuration and tuning
- Per-VM cluster policy overrides
- Learn the features and benefits of DRS Power Management

Failure Recovery with High Availability Clusters

- High Availability options to minimize unplanned down time
- VMware High Availability clusters
- How VMware HA protects against ESXi host, storage network and SAN volume failures
- Introduction to VMware Fault Tolerance

Disaster Preparedness with vSphere Replication

- Explain vSphere Replication features and Use Cases
- Import the vSphere Replication virtual appliance
- Configure vSphere Replication including Recovery Point Objectives (RPOs)
- Enable vSphere Replication on a VM
- Recover a VM using vSphere Replication

Patch Management with VMware Update Manager

- Configure and enable VMware Update Manager
- Establishing a patch baseline
- Verifying compliance and patching ESXi hosts

Managing Scalability and Performance

- VMkernel CPU and memory resource management mechanisms
- Tuning VM storage I/O performance
- Identifying and resolving resource contention
- Monitoring VM and ESX host performance
- Performance and capacity planning strategies

Final Thoughts

- Consolidation guidelines for VMs and Storage