



Server Virtualization Training: VMware vSphere, Hyper-V and Private Cloud



Server Virtualization Training: VMware vSphere, Hyper-V and Private Cloud

Introduction:

Server virtualization training on VMware vSphere, Hyper-V and private cloud is a 5-day course for system administration and infrastructure engineering teams that ends with a Virtual Infrastructure Design and Capacity Plan for a case data centre. Organisations that consolidate servers onto hypervisors often inherit sprawling virtual machines, overcommitted hosts, fragile shared storage and clusters that fail over badly, so outages and licence costs rise. Nominees already administer Windows or Linux servers and work hands on in labs with ESXi, vCenter and Hyper-V hosts. CoreConcept Training Center delivers this server virtualization course.

Course Objectives:

- Install and configure ESXi and Hyper-V hosts and place them under vCenter or SCVMM management with role-based access
- Build, template, clone and retire virtual machines with right-sized vCPU, memory and disk settings
- Configure standard and distributed virtual switches, VLAN trunking and Hyper-V virtual switches for management, migration and workload traffic
- Present shared block and file storage as VMFS datastores and Cluster Shared Volumes with multipathing
- Operate clusters with high availability, resource scheduling, vMotion and Live Migration, and protect workloads with image backups and replication
- Produce a Virtual Infrastructure Design and Capacity Plan with host sizing, consolidation ratios, licensing costs and a private cloud roadmap

Target Audience:

- System administration teams responsible for running Windows and Linux server workloads on hypervisor hosts
 - Infrastructure engineering teams responsible for building and expanding virtual clusters and shared storage
 - Network operations teams responsible for virtual switching, VLANs and host uplinks in the data centre
 - Backup and recovery teams responsible for protecting virtual machines and restoring services after failures
 - IT operations teams responsible for performance monitoring, patching and capacity reporting of server estates
-

Course Outline:

Day 1: Hypervisor Foundations and Current Estate Assessment

- Type 1 and Type 2 Hypervisor Architecture Compared
- ESXi, Hyper-V and KVM Platform Feature Comparison
- Physical Server Inventory and Consolidation Candidate Screening
- CPU Virtualisation Extensions, NUMA Layout and Memory Overcommit
- Current Estate Assessment of Hosts, Guests and Utilisation

Day 2: Host Installation, Central Management and Virtual Networking

- ESXi Host Installation, DCUI Settings and Host Profiles
- vCenter Server Inventory, Folders, Permissions and Roles
- Hyper-V Role Installation and SCVMM Host Group Setup
- vSphere Standard and Distributed Switch Port Group Design
- Hyper-V Virtual Switch, VLAN Tagging and NIC Teaming

Day 3: Virtual Machine Lifecycle, Shared Storage and Datastores

- Virtual Machine Hardware Versions, Guest Tools and Sizing
- Golden Image Templates, Customisation Specifications and Cloning
- Snapshot Chains, Consolidation and Orphaned Disk Cleanup
- VMFS Datastores over iSCSI and Fibre Channel Multipathing
- Cluster Shared Volumes and SMB File Shares for Hyper-V

Day 4: Clusters, High Availability, Recovery and Hardening

- vSphere HA Admission Control and Host Isolation Response
- DRS Affinity Rules, Resource Pools and Shares
- vMotion, Storage vMotion and Hyper-V Live Migration Troubleshooting
- Image-Level Backup, Hyper-V Replica and vSphere Replication Runbooks
- Hypervisor Lockdown Mode, Encrypted Virtual Machines and Patch Baselines

Day 5: Lab Capstone for a Case Data Centre Virtual Infrastructure

- Case Cluster Performance Review with CPU Ready and Ballooning Counters
 - Host Sizing Worksheet with Consolidation Ratios and N+1 Headroom
 - Per-Core Licensing and Support Cost Comparison Model
 - Private and Hybrid Cloud Roadmap with Self-Service Catalogue
 - Virtual Infrastructure Design and Capacity Plan Completion
-

Skills You Will Gain:

- Hypervisor Host Configuration
- Virtual Machine Template Management
- Virtual Switch and VLAN Design
- Datastore and Multipath Administration
- Cluster Failover Tuning
- Virtual Machine Recovery Planning
- Hypervisor Security Hardening
- Virtual Capacity Forecasting

Why Attend This Course:

- Deliver a Virtual Infrastructure Design and Capacity Plan for a case data centre to the infrastructure manager and the change advisory board
- Decide how many hosts, which admission control policy and which licensing edition a cluster needs before buying hardware
- Avoid failed failovers, snapshot-filled datastores and stalled migrations that cause unplanned downtime and emergency spending
- Share host build checklists, template standards and the sizing worksheet with server and storage colleagues

Conclusion:

Back at work, the participant hands the infrastructure manager and the change advisory board a Virtual Infrastructure Design and Capacity Plan that sets host sizing, cluster policies, network and datastore layout, backup coverage and licence costs for the server estate. Managers use it to approve the next hardware refresh, agree consolidation targets and decide which workloads move to a self-service private cloud. After the first quarter under the plan, the unit should review host utilisation, failover test results and licence spend against the forecast.

Frequently Asked Questions FAQ:

What should participants know before server virtualization training on VMware vSphere and Hyper-V?

Participants should already administer Windows or Linux servers and understand IP addressing, VLANs and basic storage terms. Prior hypervisor use helps but is not required. Bringing a summary of their own host count, workloads and storage helps them apply the sizing exercises.

How does server virtualization training differ from a cloud architecture course?

It teaches the hands-on build and operation of on-premises hypervisor hosts, clusters, virtual networks and datastores. Cloud architecture courses design workloads on public cloud services, and migration strategy courses plan application moves, so both stay at a higher level than host administration.

Why does high availability matter in server virtualization with VMware vSphere and Hyper-V?

High availability restarts virtual machines on surviving hosts when a host fails, limiting downtime without manual action. It works only when admission control reserves spare capacity, shared storage is reachable from every host and heartbeat networks are designed to avoid false isolation events.

What do participants take back from server virtualization training on VMware vSphere and Hyper-V?

Participants take back a Virtual Infrastructure Design and Capacity Plan for a case data centre, with host sizing, cluster and network design, datastore layout, backup coverage, licensing costs and a private cloud roadmap that they can adapt to their own estate.
