CLOUD INTERMEDIATE 3 DAYS

Oracle Linux Virtualization Manager (OLVM) Administration

A hands-on three-day programme covering OLVM end to end: planning and deploying the engine, building clusters of Oracle Linux KVM hosts, storage domains and logical networking, virtual machine lifecycle with templates and pools, high availability and scheduling, disaster recovery, and converting workloads from VMware. Assumes working Linux administration knowledge; pairs naturally with KVM fundamentals.

Why OLVM Administration?

Management layer, not just hypervisor

Clusters, storage domains, live migration, HA and role-based access rather than single-host KVM.

Honest about the platform

Covers the support model and the upstream position so you can make an informed platform decision.

Built for the VMware exit

A full module on guest-level conversion, wave planning and what actually breaks.

Operations included

Engine backup, upgrades, monitoring and automation, not just initial deployment.

What you'll be able to do

- Explain the OLVM architecture and how the engine, hosts and agents interact
- Plan a deployment across data centres, clusters, hosts, storage and networks
- Deploy the engine in both standalone and self-hosted configurations
- Add, configure and maintain Oracle Linux KVM hosts including power management
- Build and operate storage domains across NFS, iSCSI, Fibre Channel and Gluster
- Design logical networks, bonds, VLANs and network roles correctly
- Manage the virtual machine lifecycle using templates, pools and guest customisation
- Configure high availability, fencing and cluster scheduling policies
- Apply affinity rules, quotas and resource controls across tenants
- Convert and import workloads from VMware and other sources
- Protect the environment with engine backup, VM backup and disaster recovery
- Automate operations using the REST API and Ansible
- Monitor the environment and plan capacity using built-in reporting
- Patch and upgrade the engine and hosts without unplanned downtime

Who this is for

- Linux system administrators and infrastructure engineers
- VMware administrators moving to Oracle Linux virtualization

- Oracle database and application infrastructure teams
- Data centre and private cloud operations staff
- Architects planning a hypervisor migration or consolidation

Curriculum

01 OLVM Architecture and Platform Positioning

- The engine, KVM hosts and host agent, and how the pieces communicate
- Relationship to the upstream open source project and what that means for releases
- Where OLVM sits against plain KVM, and against other KVM-based platforms
- The support and licensing model, including entitlement through cloud subscriptions
- Workload fit: where OLVM is a strong choice and where it is not
- **Hands-on:** tour a running environment and map the architecture to what you see

02 Planning the Deployment

- The object hierarchy: data centres, clusters, hosts, storage domains and networks
- Supported host and engine operating system versions, and version alignment
- Sizing the engine and the compute estate against real workload requirements
- Name resolution requirements including forward and reverse records
- Storage backend selection and its consequences for later flexibility
- Compliance considerations including FIPS mode operation
- **Hands-on:** produce a deployment plan for a stated set of requirements

03 Deploying the Engine

- Standalone against self-hosted engine, and the trade-offs of each
- Self-hosted engine benefits: lower physical footprint and management high availability
- Repository configuration, package installation and prerequisites
- Deployment through the command line and through the web console portal
- Proxy environments and why they constrain your deployment method
- Engine setup, certificate handling and first login
- **Hands-on:** deploy a self-hosted engine end to end

04 Adding and Managing KVM Hosts

- Host prerequisites, repository setup and adding a host to a cluster
- The host agent, its role, and diagnosing a host that will not activate
- Maintenance mode, activation and safe host lifecycle operations
- Power management and fencing configuration, and why it gates high availability
- Additional self-hosted engine hosts and the minimum for manager resilience
- Host patching and upgrades without evacuating the whole cluster
- **Hands-on:** add hosts, configure fencing and perform a rolling maintenance cycle

05 Storage Domains

- Data domains for virtual disks, snapshots, ISO images and templates
- The master storage domain and why its health matters disproportionately
- Attaching NFS, iSCSI and Fibre Channel backends
- Gluster deployment and its host operating system constraint
- Multipathing, path failure behaviour and validating resilience
- Disk profiles, thin against thick provisioning, expanding domains and reclaiming space
- Storage live migration and moving disks between domains under load
- **Hands-on:** build multiple storage domains and live migrate disks between them

06 Logical Networking

- Logical networks and separating management, migration, display and VM traffic
- Assigning network roles and why collapsing them causes outages later
- Host network configuration, bonding modes and link redundancy
- VLAN tagging, trunking and multi-tenant separation
- Software-defined networking through the external network provider
- MAC address pools, network filters and quality of service profiles
- **Hands-on:** build a segregated network design and validate failover

07 Virtual Machine Lifecycle, Templates and Pools

- Creating virtual machines and choosing optimisation and instance types
- Guest agent installation and what it enables for management and reporting
- Disk attachment, resizing and snapshot management
- Sealing a virtual machine and creating reusable templates
- Virtual machine pools for desktop and stateless workload patterns
- Guest customisation using cloud-init for Linux and sysprep for Windows
- Console access and remote display in the browser
- **Hands-on:** build a template and provision from it with customisation

08 High Availability, Scheduling and Resource Control

- Virtual machine high availability and the prerequisites that make it real
- Cluster scheduling policies for load distribution and power saving
- Affinity groups and labels for co-location and separation rules
- Cluster CPU compatibility level and its effect on migration freedom
- Live migration policies, bandwidth control and convergence behaviour
- Quotas, resource reservation and multi-tenant fairness
- Role-based access control and delegating administration safely
- **Hands-on:** fail a host deliberately and observe high availability in action

09 Migrating from VMware and Other Sources

- The honest position: guest-level conversion is required, there is no lift and shift
- Importing virtual machines directly from a VMware environment
- Appliance and disk image import paths for other sources
- Windows guests: paravirtual driver injection and boot configuration
- Remapping networks, storage domains and resource allocations
- Discovery, dependency mapping and sequencing a migration in waves
- Rollback design, recoverability, and what commonly breaks: tooling, licensing, MAC addresses, timing and monitoring
- **Hands-on:** convert and boot a foreign-hypervisor guest into OLVM

10 Backup, Disaster Recovery and Engine Protection

- Backing up and restoring the engine and its database
- Snapshot-based virtual machine backup and its limitations
- The backup API and integrating third-party enterprise backup tooling
- Active-active and active-passive disaster recovery topologies
- Site failover and failback, and automating it rather than improvising
- Testing restores and failover on a schedule rather than assuming them
- **Hands-on:** back up the engine, break it, and restore it

11 Operations, Automation and Monitoring

- The REST API and available software development kits
- Automating provisioning and configuration with Ansible
- Data warehouse reporting and dashboard-based monitoring
- Event notifications, alerting and integration with existing tooling
- Log collection and gathering diagnostics for support cases
- Engine and host upgrade paths, and sequencing a version upgrade
- Capacity planning and day-two runbooks: patching, evacuation and incident handling
- **Hands-on:** automate a full virtual machine build from code