**VMware VCP-DCV Syllabus:**

| **Section** | **Objectives** |
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| Architectures and Technologies | - Identify the pre-requisites and components for a vSphere implementation- Describe vCenter Server topology- Identify and differentiate storage access protocols for vSphere (NFS, iSCSI, SAN, etc.)* Describe storage datastore types for vSphere
* Explain the importance of advanced storage configuration (vSphere Storage APIs for Storage Awareness (VASA), vSphere Storage APIs Array Integration (VAAI), etc.)
* Describe storage policies
* Describe basic storage concepts in K8s, vSAN and vSphere Virtual Volumes (vVols)

- Differentiate between vSphere Network I/O Control (NIOC) and vSphere Storage I/O Control (SIOC)- Describe instant clone architecture and use cases- Describe ESXi cluster concepts* Describe Distributed Resource Scheduler (DRS)
* Describe vSphere Enhanced vMotion Compatibility (EVC)
* Describe how Distributed Resource Scheduler (DRS) scores virtual machines
* Describe vSphere High Availability
* Describe datastore clusters

- Identify vSphere distributed switch and vSphere standard switch capabilities* Describe VMkernel networking
* Manage networking on multiple hosts with vSphere distributed switch
* Describe networking policies
* Manage Network I/O Control (NIOC) on a vSphere distributed switch

- Describe vSphere Lifecycle Manager concepts (baselines, cluster images, etc.)- Describe the basics of vSAN as primary storage* Identify basic vSAN requirements(networking, disk count + type)

- Describe the vSphere Trust Authority architecture- Explain Software Guard Extensions (SGX) |
| VMware Products and Solutions | - Describe the role of vSphere in the software-defined data center (SDDC)- Identify use cases for vCloud Foundation- Identify migration options- Identify DR use cases- Describe vSphere integration with VMware Skyline |
| Planning and Designing |   |
| Installing, Configuring, and Setup | - Describe single sign-on (SSO) deployment topology* Configure a single sign-on (SSO) domain
* Join an existing single sign-on (SSO) domain

- Configure VSS advanced virtual networking options- Set up identity sources* Configure Identity Federation
* Configure Lightweight Directory Access Protocol (LDAP) integration
* Configure Active Directory integration

- Deploy and configure vCenter Server Appliance- Create and configure VMware High Availability and advanced options (Admission Control, Proactive High Availability, etc.)- Deploy and configure vCenter Server High Availability- Set up content library- Configure vCenter Server file-based backup- Analyze basic log output from vSphere products- Configure vSphere Trust Authority- Configure vSphere certificates* Describe Enterprise PKIs role for SSL certificates

- Configure vSphere Lifecycle Manager/VMware Update Manager (VUM)- Securely Boot ESXi hosts- Configure different network stacks- Configure Host Profiles- Identify boot options* Configure Quick Boot
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| Performance-tuning, Optimization, Upgrades | - Identify resource pools use cases* Explain shares, limits and reservations (resource management)

- Monitor resources of vCenter Server Appliance and vSphere environment- Identify and use tools for performance monitoring- Configure Network I/O Control (NIOC)- Configure Storage I/O Control (SIOC)- Explain the performance impact of maintaining virtual machine snapshots- Plan for upgrading various vSphere components |
| Troubleshooting and Repairing |   |
| Administrative and Operational Tasks | - Create and manage virtual machine snapshots- Create virtual machines using different methods (Open Virtual Machine Format (OVF) templates, content library, etc.)- Manage virtual machines- Manage storage (datastores, storage policies, etc.)* Configure and modify datastores (expand/upgrade existing datastore, etc.)
* Create virtual machine storage policies
* Configure storage cluster options

- Create Distributed Resource Scheduler (DRS) affinity and anti-affinity rules for common use cases- Configure and perform different types of migrations- Configure role-based user management- Configure and manage the options for securing a vSphere environment (certificates, virtual machine encryption, virtual Trusted Platform Module, lock-down mode, virtualization-based security, etc.)- Configure and manage host profiles- Utilize baselines to perform updates and upgrades- Utilize vSphere Lifecycle Manager* Describe Firmware upgrades for ESXi
* Describe ESXi updates
* Describe component and driver updates for ESXi
* Describe hardware compatibility check
* Describe ESXi cluster image export functionality

- Configure alarms |