Professional VMware vSphere 7.x

Exam Details (Last Updated: 7/22/2020)

The Professional VMware vSphere 7.x Exam (2V0-21.20), which leads to the VMware Certified Professional – Data Center Virtualization 2021 certification, is a 70-item exam with a passing score of 300 using a scaled method. Candidates are given an exam time of 130 minutes, which includes adequate time to complete the exam for non-native English speakers.

Exam Delivery

This is a proctored exam delivered through Pearson VUE. For more information, visit the Pearson VUE website.

Certification Information

For details and a complete list of requirements and recommendations for attainment, please reference the VMware Education Services – Certification website.

Minimally Qualified Candidate

A minimally qualified candidate (MQC) has 6-12 months hands-on experience implementing, managing and troubleshooting a vSphere 7 infrastructure. They are typically administrators, capable of performing deployment and administration of a virtual infrastructure using vSphere. The candidate also has working knowledge of storage, networking, hardware, security, business continuity and disaster recovery concepts.

Exam Sections

VMware exam blueprint sections are now standardized to the seven sections below, some of which may NOT be included in the final exam blueprint depending on the exam objectives.

Section 1 – Architecture and Technologies

Section 2 – Products and Solutions

Section 3 – Planning and Designing

Section 4 – Installing, Configuring, and Setup

Section 5 – Performance-tuning, Optimization, and Upgrades

Section 6 – Troubleshooting and Repairing

Section 7 – Administrative and Operational Tasks

If a section does not have testable objectives in this version of the exam, it will be noted below, accordingly. The objective numbering may be referenced in your score report at the end of your testing event for further preparation should a retake of the exam be necessary.

Sections Included in this Exam

Section 1 –Architectures and Technologies

- Objective 1.1 – Identify the pre-requisites and components for a vSphere implementation
- Objective 1.2 – Describe vCenter Server topology
- Objective 1.3 – Identify and differentiate storage access protocols for vSphere (NFS, iSCSI, SAN, etc.)
  - 1.3.1 – Describe storage datastore types for vSphere
  - 1.3.2 – Explain the importance of advanced storage configuration (vSphere Storage APIs for Storage Awareness (VASA), vSphere Storage APIs Array Integration (VAAI), etc.)
  - 1.3.3 – Describe storage policies
  - 1.3.4 – Describe basic storage concepts in K8s, vSAN and vSphere Virtual Volumes (vVols)
- Objective 1.4 – Differentiate between vSphere Network I/O Control (NIOC) and vSphere Storage I/O Control (SIOC)
- Objective 1.5 – Describe instant clone architecture and use cases
- Objective 1.6 – Describe ESXi cluster concepts
  - 1.6.1 – Describe Distributed Resource Scheduler (DRS)
  - 1.6.2 – Describe vSphere Enhanced vMotion Compatibility (EVC)
  - 1.6.3 – Describe how Distributed Resource Scheduler (DRS) scores virtual machines
  - 1.6.4 – Describe vSphere High Availability
  - 1.6.5 – Describe datastore clusters
- Objective 1.7 – Identify vSphere distributed switch and vSphere standard switch capabilities
  - 1.7.1 – Describe VMkernel networking
  - 1.7.2 – Manage networking on multiple hosts with vSphere distributed switch
  - 1.7.3 – Describe networking policies
  - 1.7.4 – Manage Network I/O Control (NIOC) on a vSphere distributed switch
- Objective 1.8 – Describe vSphere Lifecycle Manager concepts (baselines, cluster images, etc.)
- Objective 1.9 – Describe the basics of vSAN as primary storage
  - 1.9.1 – Identify basic vSAN requirements(networking, disk count + type)
- Objective 1.10 – Describe the vSphere Trust Authority architecture
- Objective 1.11 – Explain Software Guard Extensions (SGX)

Section 2 – VMware Products and Solutions

- Objective 2.1 – Describe the role of vSphere in the software-defined data center (SDDC)
- Objective 2.2 – Identify use cases for vCloud Foundation
- Objective 2.3 – Identify migration options
- Objective 2.4 – Identify DR use cases
- Objective 2.5 – Describe vSphere integration with VMware Skyline

Section 3 – Planning and Designing - There are no testable objectives for this section.

Section 4 – Installing, Configuring, and Setup

- Objective 4.1 – Describe single sign-on (SSO) deployment topology
  - 4.1.1 – Configure a single sign-on (SSO) domain
  - 4.1.2 – Join an existing single sign-on (SSO) domain
- Objective 4.2 – Configure VSS advanced virtual networking options
- Objective 4.3 – Set up identity sources
  - 4.3.1 – Configure Identity Federation
  - 4.3.2 – Configure Lightweight Directory Access Protocol (LDAP) integration
  - 4.3.3 – Configure Active Directory integration
- Objective 4.4 – Deploy and configure vCenter Server Appliance
- Objective 4.5 – Create and configure VMware High Availability and advanced options (Admission Control, Proactive High Availability, etc.)
- Objective 4.6 – Deploy and configure vCenter Server High Availability
- Objective 4.7 – Set up content library
- Objective 4.8 – Configure vCenter Server file-based backup
- Objective 4.9 – Analyze basic log output from vSphere products
- Objective 4.10 – Configure vSphere Trust Authority
- Objective 4.11 – Configure vSphere certificates
  - 4.11.1 – Describe Enterprise PKIs role for SSL certificates
- Objective 4.12 – Configure vSphere Lifecycle Manager/VMware Update Manager (VUM)
- Objective 4.13 – Securely Boot ESXi hosts
- Objective 4.14 – Configure different network stacks
- Objective 4.15 – Configure Host Profiles
- Objective 4.16 – Identify boot options
  - 4.16.1 – Configure Quick Boot

Section 5 – Performance-tuning, Optimization, Upgrades

- Objective 5.1 – Identify resource pools use cases
  - 5.1.1 – Explain shares, limits and reservations (resource management)
- Objective 5.2 – Monitor resources of vCenter Server Appliance and vSphere environment
- Objective 5.3 – Identify and use tools for performance monitoring
- Objective 5.4 – Configure Network I/O Control (NIOC)
- Objective 5.5 – Configure Storage I/O Control (SIOC)
- Objective 5.6 – Explain the performance impact of maintaining virtual machine snapshots
- Objective 5.7 – Plan for upgrading various vSphere components

Section 6 – Troubleshooting and Repairing - There are no testable objectives for this section.

Section 7 – Administrative and Operational Tasks

- Objective 7.1 – Create and manage virtual machine snapshots
- Objective 7.2 – Create virtual machines using different methods (Open Virtual Machine Format (OVF) templates, content library, etc.)
- Objective 7.3 – Manage virtual machines
- Objective 7.4 – Manage storage (datastores, storage policies, etc.)
  - 7.4.1 – Configure and modify datastores (expand/upgrade existing datastore, etc.)
  - 7.4.2 – Create virtual machine storage policies
  - 7.4.3 – Configure storage cluster options
- Objective 7.5 – Create Distributed Resource Scheduler (DRS) affinity and anti-affinity rules for common use cases
- Objective 7.6 – Configure and perform different types of migrations
- Objective 7.7 – Configure role-based user management
- Objective 7.8 – 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.)
- Objective 7.9 – Configure and manage host profiles
- Objective 7.10 – Utilize baselines to perform updates and upgrades
- Objective 7.11 – Utilize vSphere Lifecycle Manager
  - 7.11.1 – Describe Firmware upgrades for ESXi
  - 7.11.2 – Describe ESXi updates
  - 7.11.3 – Describe component and driver updates for ESXi
  - 7.11.4 – Describe hardware compatibility check
  - 7.11.5 – Describe ESXi cluster image export functionality
- Objective 7.12 – Configure alarms

Recommended Courses

VMware vSphere: Install, Configure, Manage [v7]

VMware vSphere: Optimize and Scale [v7]

Certification Requirements

VCP-DCV 2021

References

In addition to the recommended courses, item writers used the following references for information when writing exam questions. It is recommended that you study the reference content as you prepare to take the exam, in addition to the recommended training.