

Beta Exam Code: 3V0-653

Beta Exam Preparation Guide Version 1.2

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Disclaimer:

This preparation guide is intended to provide information about the objectives covered by this exam, as well as related resources. The material contained within this guide is not intended to guarantee that a passing score will be achieved on the exam. VMware recommends that a candidate thoroughly understands the objectives indicated in this guide and utilizes the resources recommended in this guide where needed to gain that understanding.

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1. The Exam

1.1 Purpose of Exam

The VMware Certified Advanced Professional 6 – Desktop and Mobility Beta Deployment Exam (3V0-653) tests candidates on their skills and abilities in implementation of a VMware Horizon 6.x solution, including deployment, maintenance, administration of Horizon components, desktop optimization, desktop pool management, endpoint management and storage. A given solution may include any of these products and technologies:

- VMware Horizon View
- VMware App Volumes
- VMware ThinApp
- VMware Mirage
- VMware Workspace
- vRealize Operations for Horizon
- Virtual SAN

1.2 Intended Audience

A typical candidate for the VCAP6-DTM certification has two years of experience deploying VMware Desktop and Mobility solutions. They are typically infrastructure personnel, who are capable of deploying, managing and troubleshooting a VMware Horizon 6.x solution running on vSphere 6.x architecture. The candidate possesses an understanding of basic desktop and mobility virtualization concepts, including configuration of Horizon components, desktop optimization, desktop pool management, endpoints, and desktop storage optimization. The candidate is also capable of integrating other Desktop and Mobility components into a complete solution, including the integration of any or all of the components listed in section 1.1. Candidates are required to obtain a valid VMware Certified Professional 6 certification prior to attempting this certification.

2. Objectives covered in the VCAP6-DTM Beta Deployment Exam

2.1 Introduction

It is recommended that candidates have the Skills and Abilities and skills necessary to install, configure and administer a VMware Horizon 6.x environment before taking the VCAP6-DTM Beta Deployment Exam. While there is no course requirement, VMware recommends that candidates complete the [Horizon: Design and Deploy \[V6\]](#) course. It is recommended that the candidate utilize this course and/or other materials where needed to provide background information on the objectives in the exam.

2.2 Objectives

Prior to taking this exam, candidates should understand each of the following objectives. Each objective is listed below; along with related tools the candidate should have experience with, and related documentation that contains information relevant to the objective. All objectives may also be referenced in other product documentation not specifically highlighted below. The candidate should be familiar with all relevant product documentation or have an equivalent skillset.

Section 1 – Configure Horizon Components

Objective 1.1 – Configure and Manage Horizon View Components

Skills and Abilities

- Set External URLs for a View Connection Server instance
- Configure restricted entitlements
- Manage View Connection Server SSL connections
- Configure and manage global settings
- Configure redundant View Connection/Security Server instances for availability/performance
- Configure View Composer settings according to a deployment plan
- Create and manage custom roles and permissions
- Import configuration data into a View Connection Server
- Create & install a View SSL certificate
- Configure SAML authentication with View and entitle users to desktop pools

Tools

- [View Architecture Planning](#)
- [View Installation](#)
- [Scenarios for Setting Up SSL Certificates for View](#)
- [View Administration](#)
- [Administering View Cloud Pod Architecture](#)
- [View Security](#)
- [VMware End-User-Computing Best Practices Poster](#)
- [VMware Horizon 6 Network Ports Diagram](#)
- [Horizon 6 Storage Considerations](#)
- [Horizon 6 Decision Maker](#)
- [VMware Horizon 6 Reference Architecture](#)
- View Administrator
- vdmimport

Objective 1.2 - Configure and Manage VMware Mirage Components

Skills and Abilities

- Configure/Manage Mirage permissions
- Manage bandwidth limitation to prevent Mirage from consuming all bandwidth for a single site / subnet
- Import Microsoft User State Migration Tools (USMT) files for required base layer operations
- Configure/Manage Branch Reflectors
- Configure Centralized Virtual Desktop (CVD) settings according to a deployment plan
- Configure connectivity between Mirage components

Tools

- [VMware Mirage Getting Started Guide](#)
- [VMware Mirage Installation Guide](#)
- [VMware Mirage Administrator's Guide](#)
- [Mirage Deployment and Design Considerations](#)
- [Mirage Large-Scale Reference Architecture](#)
- VMware Mirage Management Console

Objective 1.3 – Configure and Manage VMware Horizon Workspace Components

Skills and Abilities

- Prepare environment to install VMware Workspace Portal
 - Create DNS records and IP addresses
 - Determine database options (internal/external) with Workspace
 - Configure Active Directory connection
- Deploy Workspace OVF file
- Add/Edit IP pools in Workspace
- Configure Workspace settings according to a deployment plan
- Administer proxy server settings for Workspace
- Enable the Syslog server
- Configure redundancy/failover for Workspace to meet RTO requirements

Tools

- [Installing and Configuring VMware Workspace Portal](#)
- [Migrating VMware Workspace Portal](#)
- [VMware Workspace Portal Administrator's Guide](#)
- [Setting Up Resources in VMware Workspace Portal](#)
- Workspace Admin Console

Objective 1.4: Configure and Manage vRealize Operations for Horizon

Skills and Abilities

- Install and configure vRealize Operations for Horizon
 - Configure license key and associate View objects
 - Create View adapter instance(s)
 - Install and configure the vRealize Operations for Horizon Broker Agent
- Add/Remove desktop pools from the scope of monitored objects
- Modify the Broker Agent Service logging level according to a deployment plan
- Configure and manage vRealize Operations authentication for Horizon
- Edit/Modify View events database credential settings

Tools

- [VMware vRealize Operations for Horizon Installation](#)
- [VMware vRealize Operations for Horizon Administration](#)
- [Maximizing the Use of VMware vRealize Operations for Horizon](#)

Objective 1.5: Collect Diagnostic Information and Locate Log Bundles

Skills and Abilities

- Collect diagnostic information for View Connection Server using the support tool
- Adjust the View Connection Server log levels according to a deployment plan
- Collect diagnostic information for View Agent, Horizon Client, or View Connection Server from the console

Tools

- [View Administration](#)
- View Administrator

Section 2 – Configure and Optimize Horizon Desktop Images

Objective 2.1 – Configure Group Policy Settings Related to Horizon View

Skills and Abilities

- Configure View Persona Management settings
- Configure PCoIP settings
- Configure folder redirection
- Configure location-based printing

Tools

- [View Administration](#)
- Group Policy Editor
- ADM/ADMX templates

Objective 2.2 – Configure and Optimize Desktop Images for Horizon View and Mirage

Skills and Abilities

- Configure/Manage Horizon View desktop images
- Optimize Windows services and desktop settings according to best practices
- Utilize the VMware OS Optimization Tool (OSOT) to optimize Windows 7/8 images
- Install and configure the Horizon View Agent
- Modify Windows firewall settings
- Modify Windows graphics settings
- Create virtual machine snapshots
- Install the VMware Mirage client
- Optimize a CVD image according to best practices

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [Optimization Guide for Desktops and Servers in View in VMware Horizon 6 and VMware Horizon Air Desktops and VMware Horizon Air Apps](#)
- [Image Management for View Desktops using Mirage](#)
- [VMware Mirage Administrator's Guide](#)
- VMware OS Optimization Tool

Objective 2.3 – Configure vSphere Resource Management to Support Horizon Desktop Pools

Skills and Abilities

- Create vSphere Resource Pools according to a deployment plan
- Manage vSphere HA and DRS settings
- Create and configure vSphere Clusters
- Create and modify vSphere DRS Rules

Tools

- [vSphere 6.0 Resource Management Guide](#)
- [vSphere 6.0 Availability Guide](#)
- vSphere Client / Web Client

Section 3 – Create and Manage Horizon Desktop Pools

Objective 3.1 – Create and Configure Horizon Desktop Pools

Skills and Abilities

- Determine appropriate pool configurations based on a deployment plan
- Create/Configure Linked/Full clone desktop pools
- Create/Configure Dedicated/Floating desktop pools
- Configure/Manage Remote Desktop Services (RDS) pools

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- View Administrator

Objective 3.2 – Create RDS Farms and Application Pools

Skills and Abilities

- Prepare unmanaged machines
- Prepare Parent Virtual Machine for an Automated Farm:
 - Prepare an RDS Host Parent Virtual Machine
 - Activate Windows on Linked-Clone RDS Hosts
 - Optimize Parent Virtual Machine settings
- Create a Manual/Automated RDS Farm
- Create Application Pools according to a deployment plan
- Manage RDS Farms

Tools

- [View Architecture Planning](#)
- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- View Administrator

Objective 3.3 – Recompose/Refresh/Rebalance Desktop Pools

Skills and Abilities

- Based on a deployment plan, determine appropriate pool setting (Recompose/Refresh/Rebalance)
- Recompose/Refresh/Rebalance a desktop pool
- Schedule Recompose/Refresh/Rebalance operations

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- View Administrator

Objective 3.4 – Modify/Reconfigure Desktop Pools

Skills and Abilities

- Modify settings for an existing desktop pool
- Add machines to an existing desktop pool
- Change the size of an automated pool
- Reconfigure a pool based on specific types of Workers:
 - Task Workers
 - Kiosk Users
 - Skills and Abilities Workers and Power Users
- Determine and disable specific Windows Services and Tasks that affect linked clone pools

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- [View Architecture Planning](#)
- View Administrator

Objective 3.5 – Entitle Desktop Pools Based on Requirements

Skills and Abilities

- Analyze and entitle desktop/application pools according to a deployment plan
- Add/Remove entitlements to a desktop pool
- Add/Remove desktop/application pools to a global entitlement
- Add/Remove users or groups to a global entitlement

Tools

- [Administering View Cloud Pod Architecture](#)
- [Setting Up Desktop and Application Pools in View](#)
- View Administrator

Objective 3.6 – Configure/Modify View Composer Persistent Disks

Skills and Abilities

- Preserve user data for a persistent disk
- Attach/Detach persistent disk(s)
- Recreate a linked clone using a detached persistent disk
- Restore a linked clone by importing a persistent disk from vSphere
- Configure privileges for managing persistent disks
- Assign a detached persistent disk to a new pool/user

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- View Administrator

Objective 3.7 – Configure Cloud Pod Architecture for Multi-Site Pool Access

Skills and Abilities

- Configure cloud pod architecture for multi-site pool access according to a deployment plan
- Initialize the cloud pod architecture feature
- Join/Remove a pod to a pod federation
- Create/Configure global entitlements:
 - Create/Configure a site
 - Assign a home site to a user/group

Tools

- [Administering View Cloud Pod Architecture](#)
- [Setting Up Desktop and Application Pools in View](#)
- View Administrator
- `lmvutil`

Objective 3.8 – Configure and Manage App Volumes AppStacks

Skills and Abilities

- Install and Configure App Volumes Manager
- Install App Volumes Agent
- Administer AppStacks according to a deployment plan:
 - Create/Edit an AppStack
 - Provision an AppStack
 - Install applications
 - Assign users/groups/computers to AppStack

Tools

- [VMware App Volumes User's Guide](#)
- [VMware App Volumes Deployment Guide](#)
- [VMware Horizon 6 with App Volumes and Virtual SAN Reference Architecture](#)
- App Volumes Manager Console

Objective 3.9 – Configure and Deploy ThinApp Packaged Applications

Skills and Abilities

- Capture an application using ThinApp
- Deploy an application using ThinApp
- Apply application updates to a ThinApp package
- Place ThinApp packages in a centralized repository
- Assign ThinApp application to Desktop Pools
- Deploy ThinApp installation (streaming/full) according to a deployment plan

Tools

- [ThinApp User's Guide](#)
- [View Administration](#)
- View Administrator
- ThinApp Setup Capture wizard

Section 4 – Configure and Manage Horizon Endpoints

Objective 4.1: Configure and Manage Horizon Desktop/Device/Web Endpoints

Skills and Abilities

- Perform manual installation for desktop and mobile clients:
 - Windows / Windows Store
 - Linux
 - Chrome OS
 - iOS
 - Android
- Configure silent installation options for desktop clients
- Configure options for various clients
- Configure HTML Access for end users

Tools

- [Using VMware Horizon Client for iOS](#)
- [Using VMware Horizon Client for Android](#)
- [Using VMware Horizon Client for Linux](#)
- [Using VMware Horizon Client for Windows](#)
- [Using VMware Horizon Client for Windows Store](#)
- [Using VMware Horizon Client for Chrome OS](#)
- [Using HTML Access](#)
- Horizon Client

Objective 4.2: Configure a Kiosk Endpoint

Skills and Abilities

- Prepare Active Directory for kiosk clients
- Add kiosk accounts to a View Connection Server
- Configure a desktop pool for kiosk desktops
- Configure a kiosk endpoint using CLI tools

Tools

- [View Architecture Planning](#)
- [View Administration](#)
- [Setting Up Desktop and Application Pools in View](#)
- View Administrator
- vdmadmin

Section 5: Configure and Administer VMware Mirage

Objective 5.1 – Configure/Capture/Deploy Reference and Endpoint CVDs

Skills and Abilities

- Create a reference image based on design requirements
- Capture reference CVD
- Capture/Update base layer from a reference CVD
- Capture a reference CVD for application layers
- Deploy an application layer and/or a base layer from a reference CVD
- Configure and run dry-run reports

Tools

- [VMware Mirage Getting Started Guide](#)
- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Web Manager Guide](#)
- [Image Management for View Desktops using Mirage](#)
- VMware Mirage Management Console

Objective 5.2 – Configure Common VMware Mirage Management Options

Skills and Abilities

- Configure upload policies
- Archive a CVD
- Build a driver profile and driver library
- Configure base layer rules and overrides

Tools

- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Web Manager Guide](#)
- [VMware Mirage PowerCLI Reference](#)
- VMware Mirage Management Console
- VMware PowerCLI

Objective 5.3 – Restore a VMware Mirage Endpoint

Skills and Abilities

- Restore an endpoint after an application failure
- Restore an endpoint after a hardware failure
- Restore an endpoint after data loss

Tools

- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Web Manager Guide](#)
- VMware Mirage Management Console

Objective 5.4 – Configure the Mirage File Portal

Skills and Abilities

- Enable the Mirage File Portal
- Configure permissions for users and map to appropriate CVD

Tools

- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Web Manager Guide](#)
- [VMware Mirage Installation Guide](#)
- VMware Mirage Management Console

Section 6 – Configure and Administer VMware Workspace

Objective 6.1 – Configure User Access to VMware Workspace

Skills and Abilities

- Configure Active Directory users to sync with VMware Workspace
- Create/Manage Workspace groups
- Assign entitlements to users/groups according to a deployment plan
- Create/Edit Access Policy sets

Tools

- [Installing and Configuring VMware Workspace Portal](#)
- [VMware Workspace Portal Administrator's Guide](#)
- Workspace Admin Console

Objective 6.2 – Integrate Desktop and Application Resources with VMware Workspace

Skills and Abilities

- Integrate with Horizon View Connection Server(s)
- Create/Configure Workspace resource types according to a deployment plan:
 - View desktop pools
 - View hosted applications
 - Web applications
 - ThinApp packages
 - Citrix published applications
- Add resource(s) to a catalog

Tools

- [Setting Up Resources in VMware Workspace Portal](#)
- [VMware Workspace Portal Administrator's Guide](#)
- Connector Services Admin

Objective 6.3 – Integrate ThinApp Package Services with VMware Workspace

Skills and Abilities

- Configure the ThinApp Sync to bring in the ThinApp packages
- Assign ThinApp packages to a user/group
- Configure file shares and permissions
- Install components needed for ThinApp integration

Tools

- [Setting Up Resources in VMware Workspace Portal](#)
- [VMware Workspace Portal Administrator's Guide](#)

Objective 6.4 – Integrate Active Directory with VMware Workspace

Skills and Abilities

- Configure Connector Services Admin for AD integration
- Configure Workspace for multi-domain/trusted multi-forest domains
- Add multiple domain names to the sign in page
- Filter Active Directory users/groups
- Create a domain host lookup file

Tools

- [View Architecture Planning](#)
- [View Installation](#)
- [Setting Up Resources in VMware Workspace Portal](#)
- [VMware Workspace Portal Administrator's Guide](#)
- View Administrator
- Connector Services Admin

Section 7 –Configure and Manage Storage for a Horizon Deployment

Objective 7.1 – Create a Virtual SAN Cluster and Configure View for Virtual SAN

Skills and Abilities

- Configure Virtual SAN clusters according to a deployment plan
- Configure Virtual SAN storage for a Horizon View Desktop Pool
- Configure/Manage Virtual SAN storage policies for Horizon View

Tools

- [VMware Virtual SAN Design and Sizing Guide for Horizon View Virtual Desktop Infrastructures](#)
- [VMware Horizon 6 with App Volumes and Virtual SAN Reference Architecture](#)
- [VMware Virtual SAN administration Guide](#)
- [View Architecture Planning](#)
- vSphere Web Client
- View Administrator

Objective 7.2 – Configure and Optimize Storage for Horizon View Pools

Skills and Abilities

- Optimize placement of replica virtual machine
- Configure disposable files and persistent disks
- Configure and optimize storage for Floating Pools/Dedicated Pools
- Configure storage overcommit settings
- Determine implications of using local/shared storage
- Configure and optimize storage based on usage of VMFS/NFS
- Configure native NFS snapshots (VAAI)
- Configure View Storage Accelerator/Host Caching/Regeneration cycle

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Architecture Planning](#)
- [View Installation](#)
- [View Administration](#)
- View Administrator

Objective 7.3 - Configure Storage for VMware Mirage

Skills and Abilities

- Configure local cache to increase performance
- Configure Single-Instance Storage location
- Add/Edit storage volumes according to a deployment plan:
 - Add/Edit multiple storage volumes
 - Mount/Unmount storage volumes
 - Block/Unblock storage volumes

Tools

- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Installation Guide](#)
- [Mirage Large-Scale Reference Architecture](#)
- [VMware Mirage Web Manager Guide](#)
- Mirage Management Console

Section 8 - Troubleshoot and Monitor a Horizon Deployment

Objective 8.1 – Troubleshoot a Horizon View Deployment using vROPs for Horizon

Skills and Abilities

- Troubleshoot degraded performance of a Horizon View desktop
- Analyze and resolve resource constraints within a Horizon View environment
- Determine causes of faults during pool creation and configuration
- Resolve regulatory compliance issues for a given desktop pool
- Determine causes of faults for connectivity (e.g., PcolP, Blast, etc.)
- Analyze and resolve login issues

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- [VMware vRealize Operations for Horizon Administration](#)
- [vRealize Operations Manager User Guide](#)
- View Administrator

Objective 8.2 - Troubleshoot Performance Issues in Horizon Components

Skills and Abilities

- Use `esxtop` to identify performance bottlenecks
- Use PerfMon to analyze desktop workloads
- Use PCoIP Statistics Viewer to troubleshoot desktop sessions
- Monitor Horizon View Connection Server performance locally/remotely

Tools

- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- [View Architecture Planning](#)
- [View Security](#)
- [View Integration](#)
- View Administrator

Objective 8.3 - Troubleshoot Mirage Installation/Configuration Issues

Skills and Abilities

- Analyze and resolve poor network performance
- Troubleshoot File Portal installation issues
- Troubleshoot Mirage Gateway Server issues
- Configure Mirage logging settings
- Identify and interpret information in log bundles

Tools

- [VMware Mirage Administrator's Guide](#)
- [VMware Mirage Web Manager Guide](#)
- [View Installation](#)
- View Administrator

Objective 8.4 - Backup and Restore Horizon View Components

Skills and Abilities

- Backup/Restore a View Composer Database
- Test and validate scheduled backups of Horizon View components
- Backup/Restore View Configuration Data
- Change the Data Recovery Password

Tools

- [View Installation](#)
- [View Administration](#)
- View Administrator

Objective 8.5 - Troubleshooting Connectivity Issues with Horizon Components

Skills and Abilities

- Troubleshoot endpoint connectivity issues
- Analyze connectivity between a View Connection Server and an endpoint
- Verify and resolve Active Directory entitlements/group membership
- Analyze and determine the correct SSL certificate based on deployment needs for Horizon components:
 - Single Server Name Certificate
 - Subject Alternative Names
 - Wildcard Certificate
- Analyze Log Bundles to resolve ongoing connectivity issues with the following components:
 - View/Security Connection Servers
 - PCoIP protocol
 - Client endpoints
 - View agents

Tools

- [Scenarios for Setting Up SSL Certificates for View](#)
- [Setting Up Desktop and Application Pools in View](#)
- [View Administration](#)
- [VMware vRealize Operations for Horizon Administration](#)
- View Administrator

3. Additional Resources

3.1 Mock Exam

VMware provides an interactive exam simulation for the VCAP6-DTM Beta Exam. The simulation uses a sample question and lab activity to demonstrate the exam environment.

The exam simulation will be located at: TBD

3.2 VCAP/VCIX Community

VMware provides an online community for VCAP/VCIX candidates. This community contains valuable information from other candidates and senior VCAPs/VCIXs, and is moderated by VMware certification staff. The community is located at: <http://communities.vmware.com/community/vmtn/certedu/certification/vcix>

3.3 Test Driving a VMware Horizon 6 environment

VMware provides Hands-on Labs for a VMware Horizon 6 environment. These labs provide an environment where you can work with the products covered in this exam. The labs can be accessed by going here: <http://www.vmware.com/products/horizon-view/horizon6-hol>

Version	Change Notes	Date
1.0	Initial Prep Guide Creation	11/23/2015
1.1	Combined Objectives	12/01/2015
1.2	Added beta designation and changed	12/08/2015