

# CWS-415: Citrix Virtual Apps and Desktops 7 Architect Design Solutions



5-day ILT/vILT, and On-Demand



Citrix Certified Expert - Virtualization



Includes labs



For IT Professionals and Consultants

## Description

This advanced 5-day training course teaches the design principles for creating a Citrix Virtual Apps and Desktops virtualization solution.

In this training, you will also learn how to assess existing environments, explore different scenarios, and make design decisions based on business requirements.

This course covers the Citrix Consulting approach to design and covers the key design decisions through lectures, lab exercises, and interactive discussions. You will also learn about additional considerations and advanced configurations for multi-location solutions and disaster recovery planning. This training will help you prepare for the Citrix Certified Expert in Virtualization (CCE-V) exam.

Product Versions Covered: Citrix Virtual Apps and Desktops 7 1906

## Learning Objectives

- Identify risks and areas for improvement in a Citrix Virtual Apps and Desktops environment by assessing relevant information in an existing deployment.
- Determine core Citrix Virtual Apps and Desktops design decisions and align them to business requirements to achieve a practical solution.
- Design a Citrix Virtual Apps and Desktops disaster recovery plan and understand different disaster recovery considerations.

## Prerequisite Knowledge

This course requires extensive experience with Citrix Virtual Apps and Desktops 7 as well as experience with Citrix Gateway and supporting infrastructure.

## Recommended:

[CWS-215: Citrix Virtual Apps and Desktops 7 Deployment and Administration](#)

[CWS-315: Citrix Virtual Apps and Desktops 7 Advanced Administration](#)

# Course Outline

## Module 1: Methodology & Assessment

- The Citrix Consulting Methodology
- Citrix Consulting Methodology Use
- Business Drivers
- Prioritize Business Drivers
- User Segmentation
- User Segmentation Process
- App Assessment Introduction
- App Assessment Analysis
- Why Perform a Capabilities Assessment?
- Common Capabilities Assessment Risks

## Module 2: User Layer

- Endpoint Considerations
- Peripherals Considerations
- Citrix Workspace App Version Considerations
- Citrix Workspace App Multiple Version Considerations
- Network Connectivity and the User Experience
- Bandwidth and Latency Considerations
- Graphics Mode Design Considerations
- HDX Transport Protocols Considerations
- Media Content Redirection Considerations
- Session Interruption Management Session Reliability Feature Considerations
- Session Interruption Management Auto-Client Reconnect Feature Considerations
- Session Interruption Management ICA Keep-Alive Feature Considerations

## Module 3: Access Layer

- Access Matrix
- Access Layer
- Access Layer Communications
- Double-Hop Access Layer Considerations
- Citrix Cloud Access Layer Considerations
- Use Cases for Multiple Stores
- Define Access Paths per User Group
- Define Number of URLs
- Configuration and Prerequisites for Access Paths
- Citrix Gateway Scalability
- Citrix Gateway High Availability
- StoreFront Server Scalability
- StoreFront Server High Availability

## Module 4: Resource Layer - Images

- Flexcast Models
- VDA Machine Scalability
- VDA Machine Sizing with NUMA
- VDA Machine Sizing
- VDA Machine Scalability Cloud Considerations
- Scalability Testing and Monitoring
- Secure VDA Machines Network Traffic
- Secure VDA Machines Prevent Breakouts
- Secure VDA Machines Implement Hardening
- Secure VDA Machines Anti-Virus
- Review of Image Methods
- Citrix Provisioning Overall Benefits and Considerations
- Citrix Provisioning Target Device Boot Methods
- Citrix Provisioning Read Cache and Sizing
- Citrix Provisioning Write Cache Type
- Citrix Provisioning vDisk Store Location
- Citrix Provisioning Network Design

# Course Outline

- Citrix Provisioning Scalability Considerations
- Citrix Machine Creation Services Overall Benefits and Considerations
- Citrix Machine Creation Services Cloning Types
- Citrix Machine Creation Services Storage Locations & Sizing
- Citrix Machine Services Read and Write Cache
- App Layering Considerations
- Image Management Methods

## Module 5: Resource Layer - Applications and Personalization

- Application Delivery Options
- Determine the Optimal Deployment Method for an App
- General Application Concerns
- Profile Strategy Profile Types Review
- Citrix Profile Management Design Considerations
- Citrix Profile Management Scaling
- Citrix Profile Management Permissions
- Policies Review
- Optimize Logon Performance with Policies
- Printing Considerations

## Module 6: Control Layer

- Pod Architecture Introduction
- Pod Architecture Considerations
- Citrix Virtual Apps and Desktops Service Design Considerations
- Implement User Acceptance Testing
- Load Balancing the Machine Running the VDA
- Citrix Director Design Considerations
- Management Console Considerations
- Change Control

- Delivery Controller Scalability and High Availability
- Control Layer Security
- Configuration Logging Considerations
- Session Recording

## Module 7: Hardware/Compute Layer

- Hypervisor Host Hardware Considerations
- Separating Workloads Considerations
- Workload Considerations
- VMs Per Host and Hosts Per Pool
- Citrix Hypervisor Scalability
- VM Considerations in Azure and Amazon Web Services
- Storage Tier Considerations
- Storage I/O Considerations
- Storage Architecture
- Storage RAID & Disk Type
- Storage Sizing LUNs
- Storage Bandwidth
- Storage in Public Cloud
- Datacenter Networking Considerations
- Securing Hypervisor Administrative Access
- Secure the Physical Datacenter
- Secure the Virtual Datacenter

## Module 8: High Availability and Multiple Location Environments

- Redundancy vs. Fault Tolerance vs. High Availability
- Multi-Location Architecture Considerations
- Multi-Site Architecture Considerations
- Global Server Load Balancing
- Optimal Gateway Routing
- Zone Preference and Failover
- StoreFront Resource Aggregation
- StoreFront Subscription Sync
- Hybrid Environment Options

# Course Outline

- Citrix Provisioning Across Sites
- Site Database Scalability and High Availability
- Citrix Provisioning Across Sites Considerations
- Citrix Machine Creation Across Sites
- App Layering Across Sites
- Managing Roaming Profiles and Citrix Workspace App Configurations Across Devices
- Profile Management Multi-Site Replication Considerations
- Folder Redirections and Other User Data in a Multi-Location Environment
- Application Data Considerations
- Cloud-Based Storage Replication Options
- Multi-Location Printing Considerations
- Zone Considerations
- Active Directory Considerations

## Module 9: Disaster Recovery

- Tiers of Disaster Recovery
- Disaster Recovery Considerations
- Business Continuity Planning and Testing
- Citrix Standard of Business Continuity