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**Learning Style: Virtual Classroom**

**Provider: Citrix**

**Difficulty: Advanced**

**Course Duration: 5 Days**

## **Citrix Virtual Apps and Desktops 7 Advanced Configuration and WEM Administration (CWS-322)**

### **About this Course:**

Designed for experienced IT professionals, this course builds on the foundational implementation and management skills introducing scalability, redundancy, and security configurations. You will learn to build to implement Workspace Environment Management to improve logon times, centralize user settings management, and optimize the performance of machines. In the advanced troubleshooting section, you will learn techniques to investigate many of the common issues that can affect environment health and how to solve issues more effectively. You will leave this course with a good understanding of how to manage more complex solutions such as multi-location environments with configurations around StoreFront, the Delivery Controllers, Cloud Connectors, and HDX

### **Course Objectives:**

- How to implement advanced administration concepts such as backups, disaster recovery, scalability and redundancy for a Citrix Virtual Apps and Desktop 7 Site.
- Advanced troubleshooting techniques to troubleshoot Citrix Virtual Apps and Desktop 7.
- Security considerations and configurations for Citrix Apps and Desktop 7 site including multi-site management using zones.
- Install and initialize WEM and integrate into Citrix Virtual Apps and Desktops and Citrix DaaS.
- Configure WEM features to improve the end user environment and virtual resource consumption.
- Migrate an on-premises WEM deployment to WEM service.

## **Audience:**

- IT Professionals with Foundational Knowledge:
- Desktop and Application Virtualization Specialists:
- System Administrators and Engineers:
- Infrastructure Architects:
- IT Support and Troubleshooting Specialists

## **Prerequisites:**

Strong foundational knowledge of: Windows Server and Desktop operating systems. Active Directory, Policies, Profiles, Networking and Hypervisors

## **Course Outline:**

**Module 1:** Introduction to Citrix Virtual Apps and Desktops 7 advanced Configuration

### **Learning Objectives**

- Citrix Virtual Apps and Desktops Deployments - Advanced Configuration

**Module 2:** Planning: Redundancy and Scalability

### **Learning Objectives**

- Citrix Virtual Apps and Desktops Redundancy and Scalability
- StoreFront and Citrix Gateway Redundancy and Scalability
- Site Infrastructure Redundancy and Scalability
- Machines Running the Virtual Delivery Agent

**Module 3: Planning: Virtual Apps and Desktops Environment with Multiple Locations**

### **Learning Objectives**

- Zones
- VDA Registration in a Multi-Zone Environment
- Zone Preference • Optimal Gateway Routing and Zones
- StoreFront Resource Aggregation
- Managing StoreFront Store Subscriptions in a Multi-Location Environment

#### **Module 4: Planning: Backups and Disaster Recovery**

##### **Learning Objectives**

- Backups
- Disaster Recovery Considerations
- Disaster Recovery Process

#### **Module 5: Planning: Advanced Authentication Methods**

##### **Learning Objectives**

- Multi-factor Authentication –
- RADIUS and One Time Passwords (OTP)
- Multi-factor Authentication – Smart Card Authentication
- Federated Authentication

#### **Module 6: Planning: App and Data Security**

##### **Learning Objectives**

- Introduction to Application Security
- Preventing Jailbreak Attacks
- Minimizing the Impact of Attacks

#### **Module 7: Planning: Virtual Delivery Agent Security**

##### **Learning Objectives**

- Transport Layer Security (TLS) Virtual Delivery Agent (VDA) Encryption
- Microsoft Group Policy Objects (GPOs) and Citrix Policies
- Image Management

#### **Module 8: Introduction to Troubleshooting**

##### **Learning Objectives**

- Troubleshooting Methodology
- Resource Tools and Utilities
- Introduction to PowerShell

#### **Module 9: Troubleshoot Access Issues**

## **Learning Objectives**

- Troubleshooting StoreFront
- Citrix ADC and Citrix Gateway – Workflow and Troubleshooting Overview
- Citrix ADC and Citrix Gateway - Troubleshooting Access and Authentication
- Citrix ADC and Citrix Gateway - Troubleshooting App/Desktop Launch

## **Module 10: Troubleshoot Delivery Controller Issues**

### **Learning Objectives**

- Validating FlexCast Management Architecture (FMA) Services

## **Module 11: Troubleshoot Virtual Delivery Agent (VDA) Registration issues.**

### **Learning Objectives**

- Troubleshooting Virtual Delivery Agent (VDA) Registration

## **Module 12: Troubleshoot HDX Connection Issues**

### **Learning Objectives**

- **Troubleshooting HDX Connections**

## **Module 13: Introduction to workspace Environment Management (WEM)**

### **Learning Objectives**

- WEM Features and Benefits

## **Module 14: Planning – WEM Architecture and Component Communications**

### **Learning Objectives**

- WEM On-Premises Components and Deployments
- WEM Service Components and Deployments
- WEM Component Communication Workflows

## **Module 15: Planning – WEM On-Premises Deployment Installation**

### **Learning Objectives**

- On-Premises WEM: Leading Practice Installation Prerequisites and Steps
- On-Premises WEM: ADMX Template Configuration
- Choosing a Security Principal to run the WEM Infrastructure Service
- Creating the WEM Database
- Running the WEM Infrastructure Service Configuration Utility
- On-Premises WEM: Agent Installation

## **Module 16: Planning – WEM Service Deployment Installation**

### **Learning objectives**

- WEM On-Premises vs WEM Service
- WEM Service: Leading Practice Installation Prerequisites and Steps
- WEM Service: ADMX Template Configuration
- WEM Service: Agent Installation

## **Module 17: Planning – WEM Consoles And initial Setup**

- On-Premises WEM and WEM Service Consoles
- WEM Initial Setup
- Migrating GPO settings to WEM

## **Module 18: Planning – WEM System and Log on Optimization**

### **Learning Objectives**

- WEM System Optimization Overview
- WEM CPU Management
- WEM Memory Management
- Additional System Optimization Features
- WEM Log On Optimization Overview
- WEM Assigned Actions
- WEM Environmental Settings
- Citrix Profile Management In WEM

## **Module 19: Planning – WEM Security and Lockdown Features**

### **Learning Objectives**

- WEM Security Management Features
- Privilege Elevation and Process Hierarchy Control
- WEM Transformer

## **Module 20: Planning – The WEM Agent**

### **Learning Objectives**

- WEM Settings Processing and WEM Agent Caches
- WEM Agent Integration with Citrix Virtual Apps and Desktops and Citrix DaaS

## **Module 21: Planning – WEM Monitoring, Reporting, and Troubleshooting**

### **Learning Objectives**

- WEM Monitoring and Reporting
- WEM Agent Troubleshooting

- WEM Service Troubleshooting

## **Module 22: Planning – Upgrading WEM and Migration to WEM Service**

### **Learning Objectives**

- Upgrading Workspace Environment Management
- WEM On-Premises Migration to WEM Service

## **Module 23: Rolling Out a WEM Deployment**

### **Learning Objectives**

- WEM Agent User Options Windows Desktops

## **Module 24: Managing a WEM Deployment**

### **Learning Objectives**

- Measuring WEM Success

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