

## CVA-500-2 Architecting a Citrix Virtualization Solution

The CVA-500-2 Architecting a Citrix Virtualization Solution courseware teaches Citrix architects how to analyze and design a comprehensive Citrix virtualization solution. Based on the Citrix Consulting Services Methodology, the course will provide students with the key considerations for managing the project, assessing environment readiness and risks and designing the appropriate solution according to Citrix best practices. Students will gain real-world insight from the field and practice assessment and design exercises based on challenging, enterprise-level scenarios.

### Audience

This course is intended for IT professionals, such as Server, Network and Systems Engineers. Systems Integrators, Systems Administrators and Application Engineers are also appropriate candidates for this course.

### Preparatory Recommendations

The following preparatory recommendations describe the experience and knowledge students should possess to ensure successful completion of this course.

Experience with or understanding of the following Citrix products:

- Citrix XenApp™ 4.5 or higher
- Citrix XenServer™ 5.0 or higher
- Citrix Provisioning Services™ 5.0 or higher
- Citrix XenDesktop 3.0 or higher
- Citrix Access Gateway Enterprise Edition 9.0 or higher
- Citrix Branch Repeater 5.0 or higher
- Citrix EdgeSight for Endpoints 5.0
- Citrix EdgeSight for XenApp 5.0

Experience using the following Windows Server and Microsoft technologies:

- Active Directory
- Terminal Services
- DHCP
- DNS
- Group Policy Objects
- SQL Server
- Performance monitoring tools
- Troubleshooting tools

Experience with, or strong understanding of, the following:

- Server virtualization, including hypervisor configuration and virtual machine management tools
- Server hardware, including NIC configuration, power, cooling and rack enclosure configurations
- Virtual networking, including VLANs and addressing
- Enterprise-level storage technologies
- Citrix XenApp application virtualization
- Citrix XenDesktop, including Provisioning Services
- SSL VPN functionality

Completion of the following courses or demonstrate equivalent knowledge:

- CXA-201-1 - Implementing Citrix XenApp 5.0 for Windows Server 2008
- CXS-200-1 - Implementing Citrix XenServer Enterprise Edition 5.0
- CXD-200-1 - Implementing Citrix XenDesktop 3

- CXA-300-1 - Advanced Administration for Citrix XenApp 5.0 for Windows Server 2008
- CVE-400-1 – Engineering a Citrix Virtualization Solution

## Key Skills

Upon completion of this course, learners are able to:

- Describe the phases of the Citrix Consulting Methodology and distinguish between Assessment and Design projects.
- Determine the type of information to be collected about the existing desktop infrastructure and supporting processes.
- Describe how applications can be delivered within a Citrix virtualization infrastructure.
- Identify the server performance metrics that determine whether a server is a good virtualization candidate.
- Identify areas of the network architecture that should be included in an infrastructure assessment.
- Identify which factors to check when assessing security and the user authentication process.
- Gather data about testing, control and support processes, as well as user issues, backup and recovery plans in an environment.
- Define the purpose of the conceptual architecture diagram, documentation and validation process.
- Evaluate and recommend delivery methods for application types.
- Recognize tuning and optimizations that can improve the performance of the operating system and server.
- Describe the design considerations for the Desktop Delivery Controller and Citrix XenDesktop farms.
- Identify options for providing Provisioning Services bootstrap redundancy and available network optimizations for Provisioning Services.
- Determine the optimal shared storage design to provide high availability for vDisks and the optimal vDisk type to implement in an environment.
- Determine the appropriate network design for a XenServer implementation in an environment.
- Determine how to configure an Access Gateway implementation for an environment.
- Describe general ICA protocol optimization techniques.
- Evaluate design considerations for integrating Branch Repeater into an Access Gateway design.
- Recognize how risk can impact a virtualization solution.

## Instructional Method

This course is available in either classroom or self-paced online formats, and includes access to a live lab environment, as well as demonstrations and the practical application of concepts through hands-on exercises.

## Course Length

30 hours or 5 days

## Certification Preparation

CVA-500-2 prepares learners for exam 1Y0-A16 Architecting a Citrix Virtualization Solution, one of the requirements for the CCIA for Virtualization.

## Registration

For more information and to register for this course, please go to [www.citrixeducation.com](http://www.citrixeducation.com).

## Topic Outline

Provided is the outline for CVA-500-2:

- **Project Management**
  - Overview
    - Objectives
  - Citrix Consulting Methodology

- Phases
      - Analysis
      - Design
      - Build/Test
      - Rollout/Support
    - Milestones, Checkpoints and Guidelines
  - Assessment and Design Projects
    - Assessment Projects
      - Key Benefits
      - Timeline
    - Design Projects
      - Key Benefits
      - Timeline
    - Key Activities
      - Project Team Overview
        - Roles and Responsibilities
        - Requirements and Expectations
      - Statement of Work Review
      - Project Kickoff
      - Requirements Gathering
        - Business Requirements
        - Technical Requirements
      - Findings Presentation
  - Documentation
    - Status Reports
    - Risk Memos
    - Assessment Documents
    - Design Documents
- **Business Goals**
  - 3-to-5 Year Plan
  - Growth
  - IT Projects
- **User Community**
  - User Groups
  - Endpoints
    - Operating Systems
    - New Endpoints
    - Replaced Endpoints
    - Repurposed Endpoints
    - Reused Endpoints
  - Usage Habits
  - User Locations
  - User Satisfaction
- **Operating System Delivery**
  - Desktop Images
  - Image Build Process
  - Desktop Maintenance
- **Application Delivery**
  - General Applications
    - Productivity suites
    - Foundational applications
  - Special Applications
    - Resource Intensive
    - Challenging
    - Custom
  - Application User Groups
  - Application Virtualization
    - Virtualized Applications
    - Architecture

- Virtual Application Delivery
- **Server Virtualization**
  - Current Solution
  - Physical Server Assessment
    - Data collection
    - Excluded Servers from Virtualization
    - Consolidation Scenarios
- **Infrastructure**
  - Server Hardware
  - Network Architecture
  - Windows Server and Active Directory
  - Enterprise Storage
  - Databases
- **Security and Personalization**
  - Authentication
  - Permissions
  - A/V
  - Logon Scripts
  - Profiles
  - Active Directory Policies
- **Operations and Support**
  - Monitoring and Management
  - Testing and Change Control
  - Support
  - Disaster Recovery
- **Conceptual Architecture**
  - Executive Summary
  - Enterprise Design
- **Virtualization Infrastructure Design**
  - Virtualized Components
  - Server Hardware
    - Hardware Configuration
    - Blade Considerations
  - Network Configuration
    - Addressing and VLANs
    - NIC Performance and Redundancy
    - Network Terminology
    - Internal and External Networks
    - Physical Network Connectivity
  - High Availability
  - Storage
    - Capacity and Performance
    - Storage Types
    - Storage Terminology
  - Resource Pool Design
  - Capacity Planning
  - Physical Server Migration
- **Operating System Delivery Design**
  - Provisioning Services Operating System
  - Hardware
  - Capacity Planning
  - HA
  - Cache
  - Farm Design
  - A/V
  - Bootstrap Redundancy
  - Device Collections
  - Optimization
  - SQL Database

- vDisk Storage Location
- Enterprise Storage
- vDisk Type
- Write Cache Encryption
- **Application Delivery Design**
  - Applications
  - Integration
  - Application Streaming Cache
    - Without Caching
    - Pre-Caching
  - Optimizations
- **Desktop Delivery Design**
  - Desktop Delivery Controller
  - Farm Design
  - Virtual Machine Specifications
  - Desktop Groups
  - Desktop Images
    - Internal and External Users
    - Pooled Users
    - Dedicated Users
  - Profiles Design
  - Policy Design
  - Desktop Monitoring
- **Access Design**
  - Resource Delivery
  - Access Scenarios
    - Internal Site Access
  - External Site Access
  - Access Gateway Deployment Modes
  - Server Load Balancing
- **Delivery Optimization**
  - ICA Acceleration
    - Bandwidth Allocation
    - Compression
    - Quality of Service
    - Virtual Channels
  - WAN Acceleration
    - ICA Traffic Types
      - Printing Traffic
      - File Access Traffic
      - Multimedia Traffic
      - Display Traffic
    - Application Types
      - Front Buffer
      - Back Buffer
    - Branch Repeater Deployment Modes
    - Hardware Architecture
    - Network Architecture
    - Infrastructure Services
      - Protocol Analysis
  - Branch Repeater and Access Gateway Integration
    - Deployment Modes
      - Branch Repeater with Access Gateway in One-arm Mode
      - Branch Repeater Alternative Mode
    - Repeater Plug-in Integration
    - Acceleration Rules
      - HTTP Traffic Considerations
    - Firewall Rules
    - Roaming Branch Users

- **Business Continuity Design**
  - Component Failover
  - Site Failover
- **Capstone Exercise**