

Course Outline

6437- Designing a Windows Server 2008 Applications Infrastructure



Duration: 3 day (18 hours)

Target Audience:

The primary audience for this course is IT professionals (including Windows 2000/2003 enterprise administrators) interested in becoming a Windows Server 2008 Enterprise Administrator with a focus on application infrastructure such as web and terminal services.

The secondary audience for this course is Application Architects who want to know more about how to integrate Windows Server 2008 technologies into enterprise applications.

Prerequisites:

Before attending this course, students must have one or more of the following:

- Intermediate understanding of networking. For example, how TCP/IP functions, addressing (including DHCP), name resolution (DNS/WINS), and connection methods (wired, wireless, VPN), NET+ or equivalent knowledge
- Intermediate understanding of network operating systems. For example, Windows 2000, Windows XP, Windows Vista, Windows Server 2003 etc.
- Intermediate understanding of security best practices. For example, file system permissions, authentication methods, Kerberos etc.
- Intermediate knowledge of server and network hardware.
- Conceptual understanding of Active Directory (AD). For example, AD terminology, AD object types
- Hands-on experience with more than one application service such as:
 - IIS
 - Terminal Services
 - Windows Media Services
 - Virtual Server
 - Hyper-V
 - System Center Virtual Machine Manager

Topics Covered:

- Module 1: Designing IIS Web Farms
 - Overview of Hardware and Platform Options
 - Design Web Farm Availability and Scalability
 - Design Content Storage
 - Lab 1: Designing IIS Web Farms
 - Design Hardware Platform
 - Design Web Farm Availability and Scalability
 - Design Web Site Availability and Scalability
 - Design Website Configuration, Deployment and Consistency
 - Design Website Content, Deployment and Consistency

After completing this module, students will be able to:

- Design an appropriate platform
- Design Web farm availability and scalability
- Design content storage

➤ Module 2: Optimizing IIS Performance and Stability

- Designing Application Pools
- Designing Script Mapping
- Designing Bandwidth Allocation
- Design Website Logging
 - Lab 1: Optimizing IIS Performance and Stability
 - Design and Test Application Pools
 - Design and Test Script Maps
 - Design and Test Bandwidth Allocation
 - Design and Test Website Logging

After completing this module, students will be able to:

- Plan new application pools.
- Plan to deploy script mapping.
- Plan bandwidth allocation per site or application.
- Plan website logging.

➤ Module 3: Designing IIS Security

- Design and Verify Transport Security
- Design Authentication and Authorization
- Design Delegation Administration
 - Lab 1: Configuring IIS 7.0 Application Settings
 - Design and Verify Transport Security
 - Design and Verify Authentication and Authorization Methods
 - Design and Verify Delegation Administration

After completing this module, students will be able to:

- Design and Verify Transport Security (SSL).
- Plan site authentication and authorization.
- Plan delegation permissions and administrative access.

➤ Module 4: Design IIS Maintenance and UDDI

- Designing Internet Information Services Backup and Recovery
- Specify Monitoring Requirements
- Deploying UDDI Services
- Tuning and Troubleshooting IIS 7.0
 - Lab 1: Design IIS Maintenance and UDDI
 - Design a Web Server Backup and Recovery Strategy
 - Design and test web server monitoring
 - Design UDDI Deployment
 - Troubleshooting application pool instability

After completing this module, students will be able to:

- Design a web server backup and recovery plan
- Design for and utilize the IIS management pack for System Center.
- Design and Test UDDI services
- Troubleshoot IIS caching behavior.

➤ Module 5: Designing a Terminal Services Infrastructure

- Design Terminal Services Licensing

- Specify Terminal Services Connection Properties
- Design Device Redirection
- Design Terminal Services Gateways
- Design Terminal Services Broker
- Design RemoteApp Programs
- Design Web Access
 - Lab 1: Designing a Terminal Services Infrastructure
 - Design Terminal Services RemoteApp Programs
 - Design Terminal Services Corporate Desktop
 - Design Terminal Services Gateway and Web Access
 - Design Terminal Services Gateway Policies, Connection Authorization Policies, and Resource Access Policies

After completing this module, students will be able to:

- Design Terminal Services (TS) Licensing
- Specify Terminal Services Connection Properties
- Design Device Redirection
- Design Terminal Services Gateways
- Design Terminal Services Broker
- Design RemoteApp Programs
- Design Web Access

➤ Module 6: Designing a Terminal Services Maintenance Strategy

- Design Windows System Resource Manager (WSRM) Policies for Application Resource and Reporting
- Specify Group Policy Settings for Terminal Servers
- Design High Availability
- Specify Monitoring Requirements
- Specify Maintenance and Recovery
 - Lab 1: Designing a Terminal Services Infrastructure
 - Design highly available Terminal Services
 - Design Group Policy for Terminal Services
 - Design resource management for Terminal Services
 - Design monitoring for Terminal Services

After completing this module, students will be able to:

- Design Windows System Resource Manager (WSRM) policies for application resource and reporting
- Specify Group Policy settings for terminal servers
- Design high availability (both terminal servers and session directory servers)
- Specify monitoring requirements
- Specify maintenance and recovery

➤ Module 7: Design Windows Media Services Infrastructure Administration

- Design Windows Media for Live Streaming
- Windows Media Services for On-Demand Content
- Improving Performance for On-Demand Content
- Monitoring Windows Media Services
 - Lab 1: Design a Windows Media Infrastructure
 - Design Windows Media Services for Live Streaming
 - Design WMS infrastructure for on-demand content.
 - Troubleshooting poor performance of on-demand content

- Design and test monitoring of Windows Media Services.

After completing this module, students will be able to:

- Design Windows Media Services infrastructure for live streaming
- Design Windows Media Services infrastructure for on-demand content
- Troubleshoot poor performance of on-demand content
- Plan for monitoring of Windows Media Services.

➤ Module 8: Design Virtualization Infrastructure

- Virtualization of a Test Server Environment
- Virtualization and Migration of Legacy Applications
- Design and Test a Virtualized Development Environment
 - Lab 1: Design Virtualization Infrastructure
 - Design a Test Server Consolidation Strategy
 - Design and Test Virtualization and Migration of Legacy Server
 - Design Development Environment Isolation Using Virtual Server

After completing this module, students will be able to:

- Create a design document for server consolidation and virtualization
- Create a design document for legacy server hosting.
- Identify and document key business and technical requirements for creating an isolated development environment.

➤ Module 9: Designing Virtualization Provisioning

- Design Virtual Server Provisioning Workflow Model
- Evaluate Appropriateness for Virtualization
- Evaluate Customization to Standard Configuration
- Design Deployment for Virtualization
 - Lab 1: Design Virtualization Provisioning
 - Design virtual server host configuration
 - Design virtual server provisioning using System Center

After completing this module, students will be able to:

- Design virtual server provisioning workflow model
- Evaluate appropriateness for virtualization
- Evaluate customization to standard configuration
- Design Windows Deployment Services.