

6437 – Designing a Windows Server 2008 Applications Infrastructure

Vendor Course Code: 6437

Course Length: 3 days

Overview: This three day course will prepare IT professionals for the role of Enterprise Administrator. Students will learn how to design application infrastructure solutions based on Windows Server 2008 to meet varying business and technical requirements.

Skills Gained: After completing this course, students will be able to:

- Design IIS 7 Web Farms.
- Optimise IIS 7 for Performance and Stability.
- Design IIS 7 for Security.
- Design IIS 7 for reliability, recovery, and monitoring.
- Design and prepare a Terminal Services infrastructure.
- Design a terminal services maintenance strategy.
- Design a Windows Media Services installation for live and on-demand delivery.
- Implement virtualisation to consolidate servers, support legacy applications, and create a test environment.
- Determine virtualisation appropriateness and virtual server provisioning.

Key Topics: This course explains changes in functionality to Windows Server 2008 and how these changes affect architecture and planning issues. Topics include:

- Terminal Services
- Internet Information Services
- Windows Media Services
- Virtualisation

Module 1: Designing IIS Web Farms

Students will learn the process of designing IIS Web Farms with Windows 2008 and IIS 7. They will learn how to select the appropriate hardware and software platforms. You will learn techniques to leverage Web Farm Availability and Scalability. They will also learn how to select the proper storage.

Lessons

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: Optimising IIS Performance and Stability

The students will learn about Optimising IIS Performance and Stability.

Lessons

Designing Application Pools
Designing Script Mapping
Designing Bandwidth Allocation
Design Website Logging

Lab 1: Optimising 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

In this module students will learn to establish and maintain very tight security using Microsoft IIS 7.0.

Lessons
Design and Verify Transport Security
Design Authentication and Authorisation
Design Delegation Administration

Lab 1: Configuring IIS 7.0 Application Settings
Design and Verify Transport Security
Design and Verify Authentication and Authorisation 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 authorisation.
- Plan delegation permissions and administrative access.

Module 4: Design IIS Maintenance and UDDI

The students will learn how to plan for an IIS installation, taking into account these new features. They will also learn how to deploy UDDI services.

Lessons
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 utilise the IIS management pack for System Centre.
- Design and Test UDDI services
- Troubleshoot IIS caching behaviour.

Module 5: Designing a Terminal Services Infrastructure

The Students will learn how to design a terminal services infrastructure including how to design a terminal services licensing strategy and how to design for remote access with TS Gateways, TS Session Broker, RemoteApp programs, and TS Web Access.

Lessons

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 Authorisation 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

The students will be introduced to design and implementation planning using WSRM policies for application resource and reporting. We will also discuss group policy settings for terminal servers and how to design high availability for terminal services. Finally, we will specify monitoring, maintenance, and recovery requirements and procedures for terminal services.

Lessons

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

The students will learn about designing Windows Media Services in Windows Server 2008. They will become familiarised with live and on-demand content delivery.

Lessons

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 Virtualisation Infrastructure

The students will implement virtualisation to consolidate servers, deploy branch office infrastructure servers, support legacy applications, and create a test environment.

Lessons

Virtualisation of a Test Server Environment
Virtualisation and Migration of Legacy Applications
Design and Test a Virtualised Development Environment

Lab 1: Design Virtualisation Infrastructure
Design a Test Server Consolidation Strategy
Design and Test Virtualisation 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 virtualisation
- 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 Virtualisation Provisioning

The students will learn how to determine virtualisation appropriateness and virtual server provisioning. Students will also learn the importance of customising virtual servers to standard configurations and also learn about virtual server deployment.

Lessons

Design Virtual Server Provisioning Workflow Model
Evaluate Appropriateness for Virtualisation
Evaluate Customisation to Standard Configuration
Design Deployment for Virtualisation

Lab 1: Design Virtualisation Provisioning
Design virtual server host configuration
Design virtual server provisioning using System Centre

After completing this module, students will be able to:

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

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