

# MICROSOFT TECHNICAL

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***/training/etc***

*The Art of Knowledge.*

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# Table of Contents

## Windows Server

Updating your Network Infrastructure and Active Directory Technology Skills to Windows Server 2008 (MS6416C).....	1
Updating Your Applications Infrastructure Technology Skills to Windows Server 2008 (MS6417B).....	2
Deploying Windows Server 2008 - Beta 3 (MS6418A).....	3
Configuring and Troubleshooting a Windows Server 2008 Network Infrastructure (MS6421).....	4
Configuring and Troubleshooting Windows Server 2008 Active Directory Domain Services (MS6425).....	5
Configuring and Troubleshooting Identity and Access Solutions with Windows Server 2008 Active Directory (MS6426).....	6
Configuring and Troubleshooting Internet Information Services in Windows Server 2008 (MS6427).....	7
Configuring and Troubleshooting Windows Server 2008 Terminal Services (MS6428).....	8
Installing and Configuring Windows 7 Client (MS6292A).....	9
Planning and Managing Windows 7 Desktop Deployments and Environments (MS6294).....	10

## SQL Server

Maintaining a Microsoft SQL Server 2008 Database (MS6231B).....	11
Implementing a Microsoft SQL Server 2008 R2 Database (MS6232A).....	13
Implementing and Maintaining Microsoft SQL Server 2008 Reporting Services (MS6236A).....	14

## Exchange

Introduction to Installing and Managing Microsoft Exchange Server 2007 SP1 (MS5047B).....	15
Managing Messaging Security Using Microsoft Exchange Server 2007 (MS5049).....	16
Recovering Messaging Servers and Databases using Microsoft Exchange Server 2007 (MS5050A).....	17
Monitoring and Troubleshooting Microsoft Exchange Server 2007 (MS5051A).....	18
Configuring, Managing and Troubleshooting Microsoft Exchange Server 2010 (MS10135A).....	19

## SharePoint

SharePoint Services 3.0 Introduction.....	21
Windows SharePoint Services 3.0 Level 2.....	22
Implementing and Administering Windows SharePoint Services 3.0 in Windows Server 2008 (MS6438).....	23
Introduction to Development Using Windows SharePoint Services 3.0 (MS 50046A).....	24
Implementing Microsoft Office 2007 SharePoint Server (MS5061).....	25
SharePoint Designer 2007: Basic.....	26
SharePoint Designer 2007: Advanced.....	27
Microsoft SharePoint 2007 – Power End User.....	28
SharePoint 2007 Operations.....	29
Configuring and Administering Microsoft SharePoint 2010.....	30
Windows SharePoint Foundation 2010: Level 1.....	31
Windows SharePoint Foundation 2010: Level 2.....	32

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**Course Description:** This five-day instructor-led course provides students with the knowledge and skills to work with Network Infrastructure and Active Directory technologies in Windows Server 2008. This course is intended for individuals who already have experience with Network Infrastructure and Active Directory technologies in Windows Server 2000 or Windows Server 2003 to upgrade their skills to Windows Server 2008.

**Who Should Attend:** This course is intended for IT Professionals experienced on the technologies included in Windows Server 2000 or Windows Server 2003, and who hold an MCSE or MCSA certification and/or equivalent knowledge.

**Prerequisites:** Before attending this course, students must have experience planning, implementing, managing, maintaining, and securing Microsoft Windows Server 2000 or 2003, including Active Directory and Network Infrastructure server roles. Students should also have working knowledge of networking, for example, TCP/IP and Domain Name System (DNS). In addition, students should have experience installing, configuring, and administering Microsoft Windows 2000, Windows XP Professional, or Microsoft Vista. MCSA on Windows Server 2003 or MCSE on Windows Server 2003 is recommended.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Install and configure Windows Server 2008.
- Add and configure Windows Server Core roles.
- Explain the new backup infrastructure, including Volume Shadow Copy Service.
- Identify new and improved networking features with Windows Server 2008.
- Configure Hyper-V virtual machines.
- Identify considerations when upgrading from a Windows Server 2003 to a Windows Server 2008 Active Directory infrastructure.
- Install and configure Active Directory Federation Services, Active Directory Lightweight Directory Services, and Active Directory Rights Management Services.
- Use Read-Only Domain Controllers.
- Identify new features in AD DS auditing.
- Implement AD DS auditing.
- Configure Windows Server 2008 Failover Clustering.
- Configure Windows Server 2008 Network Load Balancing.

## Course Outline:

### Module 1: Installing and Configuring Windows Server 2008

Server Manager Roles  
Windows Server 2008 Features  
Active Directory Improvements  
Lab : Configuring Windows Server 2008  
Initial Configuration Tasks  
Server Manager Console  
Server Manager Wizards  
Windows PowerShell

### Module 2: Windows Deployment Services

Introducing Windows Deployment Services  
WDS Components  
Lab : Working With Windows Deployment Services  
Install and Configure Windows Deployment Services  
Working with Images  
Creating Images  
Using Unattend Files

### Module 3: Windows Server 2008 Server Core

Server Core Introduction  
Configuring and Managing Server Core  
Lab : Server Core  
Installing Windows Server Core  
Configure Server Core  
Add and Configure Server Roles  
Add Backup Feature  
Managing Server Core

### Module 4: Windows Backup

Backup Infrastructure  
Optical Media  
Restore Utilities  
Lab : Backup and Restore System Data  
Perform Installation Tasks  
Schedule a Backup  
Create a Manual Backup  
Schedule Daily AD DS Backup via Command Line  
Backup and Recovery with Vista Client  
Restore Files and Folders  
Perform Windows RE Tasks

### Module 5: Windows Server 2008 Updates to Networking

Networking with Windows Server 2008  
New Networking Features  
DNS with Windows Server 2008  
Configuring Routing  
Configuring Wireless Settings in Server 2008  
Lab : Reviewing Networking Defaults and Settings  
Review the Network Center  
Creating Domain Isolation Policies  
Create a Centralized QoS Policy  
Communicate with Link-Local Addresses  
Lab : DNS Management Settings  
Creating Zones in Windows Server 2008  
Create Resource Records  
Configure Zone Transfers

### Module 6: Network Policies and Access Protection

Network Policies Access Protection  
Enforcement Options  
Network Access Protection Scenarios  
Routing and Remote Access  
Lab : Using Network Access Protection  
Configuring Network Access Protection for DHCP  
Configuring Network Access Protection for VPN  
Configuring Network Access Protection for IPsec

### Module 7: Hyper-V

Introducing Hyper-V  
Configuring Hyper-V  
Lab : Configuring Hyper-V  
Install and Configure Hyper-V  
Configure Virtual Networks  
Add Virtual Machines  
Monitoring and Optimization

### Module 8: Planning for Windows Server 2008 Active Directory Services

Planning for AD DS Deployment  
Upgrade Considerations  
Lab : Installing a Windows Server 2008 Forest  
Install a New Forest  
Lab : Installing Windows Server 2008 in an Existing Forest  
Install a Windows Server 2008 DC in an Existing Forest  
Verify Active Directory Installation

### Module 9: Active Directory Domain Services

What's New in AD DS  
Manageability and Reliability  
Lab : Exploring Active Directory Domain Services  
Create Accounts  
Review Operations Masters Role  
Review Sites  
Working with Subnets  
Working with Site-Links  
AD DS and Group Policy  
Review DNS Configuration

### Module 10: Identity and Access Services in Windows Server 2008 Active Directory

Active Directory Federation Services for identity access solution.  
Active Directory Lightweight Directory Services (replaces Active Directory Account Management with Windows Server 2003), providing directory services for applications.  
Active Directory Right Management Services, enabling the creation of information-protection solutions.  
Active Directory Federation Services  
Active Directory Lightweight Directory Services  
Active Directory Rights Management Services  
Lab : Active Directory Federation Services  
Install AD FS  
Configure Certificates  
Configure Web Server  
Configure the Account Federation Server

Configure the Resource Federation Server  
Access Application from Client Computer

### Module 11: Read-Only Domain Controllers

Read-Only Domain Controllers  
Read-Only Domain Controller Operation  
Lab : Read-Only Domain Controllers  
Deploying an RODC  
Administering an RODC

### Module 12: Auditing Active Directory Domain Services Changes

What's New in AD DS Auditing  
Implementing AD DS Change Auditing  
Lab : Using AD DS Auditing  
Set-up AD DS Auditing  
Create and View Auditing Events

### Module 13: Enterprise PKI Active Directory Certificate Services (AD CS)

Certificate Authority  
Lab : PKI Enhancements in Windows Vista and Windows Server 2008  
Add a Certificate Server Role  
Exploring New Enrollment UI  
Introducing CA performance monitors UI  
Exploring delegated enrollment UI  
Introducing OCSP configuration UI  
Explore Certificate Revocation

### Module 14: High Availability Features

Failover Clustering  
Network Load Balancing  
Lab : High Availability Features  
Installing a Two-Node File Server Cluster  
Configure Network Load Balancing with IIS

### Module 15: Performance Monitoring and Optimization

Windows Reliability and Performance Monitor  
Microsoft Windows System Resource Manager  
Monitoring Events  
Lab : Performance Monitoring and Optimization  
Reviewing Performance and Reliability Monitoring  
Key Scenarios for Monitoring Performance and Reliability  
Add Windows System Resource Manager Feature  
Windows System Resource Manager Scenarios  
Configure Windows System Resource Manager for Terminal Services

### Module 16: Software Maintenance Using Windows Server Update Services

Introduction to Windows Server Update Services  
Installing and Configuring Windows Server Update Services  
Managing Windows Server Update Services  
Lab : Installing and Configuring Windows Server Update Services  
Install Prerequisites  
Install WSUS  
Restore a WSUS Installation  
Create a Computer Group and Manage Updates

**Course Description:** This three day instructor led course provides students with an understanding of Applications Infrastructure technologies in Windows Server 2008. This course is intended to allow individuals who already have experience with Applications Infrastructure technologies in Windows 2000 Server or Windows Server 2003 to upgrade their skills to Windows Server 2008.

**Who Should Attend:** This course is intended for IT Professionals experienced on the technologies included in Windows Server 2000 and Windows Server 2003, and who hold an MCSE or MCSA certification and/or equivalent knowledge.

**Prerequisites:** Before attending this course, students must have one or more of the following: On-the-job experience in planning, implementing, managing, or supporting Microsoft Windows Server 2000 or 2003, including Active Directory and Network Infrastructure; Working knowledge of networking, for example, TCP/IP and Domain Name System (DNS); Designed a Microsoft Windows Server 2003 Active Directory and Network Infrastructure; Designed Security for a Microsoft Windows Server 2003 Network; or Installed, Configured, and Administered Microsoft Windows 2000, Windows XP Professional, or Microsoft Vista.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Configure and use Windows Server as an application server with new Server Roles.
- Use new features in IIS 7.0 Application Server, including the new modular configuration system.
- Manage Web Applications with IIS 7.0.
- Troubleshoot IIS 7.0-based Web servers with automatic failed request tracing and other included features and tools.
- Plan for Windows SharePoint Services 3.0 implementation in a variety of network environments.
- Configure and manage Windows SharePoint Services 3.0 from initial setup through troubleshooting and day-to-day operation.
- Use new features in Terminal Services and describe Terminal Services Licensing.
- Use and manage Terminal Services remote programs and gateways, including troubleshooting and performance optimization.
- Configure disk storage in Windows Server 2008.

### Course Outline:

#### Module 1: Server Roles and Initial Configuration Tasks

Application Server Roles  
Application Server Features  
Implement a Volume Licensing Strategy using KMS and MAK  
Lab : Server Roles and Configuration Tasks  
Perform Initial Configuration Tasks  
Add Windows Features

#### Module 2: Overview of IIS 7.0 Application Server

Review SMTP in Windows Server 2008  
Key Improvements in IIS 7.0  
IIS 7.0 Configuration System  
Adding the SMTP Feature  
Lab : Introducing IIS 7.0  
Adding the Web Server Role and Additional Services  
Reviewing the IIS 7.0 Administration Interface  
Add an ASP.NET Application

#### Module 3: Managing Web Applications with IIS 7.0

Managing IIS 7.0  
Using Hierarchical Configuration Settings  
Delegating Configuration to Non-Administrator Users  
Lab : Managing Web Applications with IIS 7.0  
Using IIS 7.0 Configuration Files to Control Delegation  
Extending the User Interface with Custom Features  
Controlling Delegation Using Locking  
Using IIS 7.0 to Configure SSL

#### Module 4: Troubleshooting Web Servers

Troubleshooting IIS 7.0  
Using the Runtime Control and Status API  
Using Automatic Failed Request Tracing  
Adding Trace Events to Managed Modules  
Lab : Troubleshooting Web Servers  
Tracing Failed Requests  
Using RSCA to View Executing Requests  
Using Managed APIs to Access RSCA Data  
Using Trace Events in ASPX Pages  
Adding Trace Events to Managed Modules

#### Module 5: Introduction to the Windows SharePoint Services 3.0 Platform

Overview of Windows SharePoint Services  
Collaborative Technologies with WSS  
Planning the WSS 3.0 Environment  
Installing and Configuring WSS 3.0  
Lab : Introduction to the Windows SharePoint Services 3.0 Platform  
Installing and Configuring the Central Administration Site  
Creating a Site Connection

#### Module 6: Configuring and Managing Windows SharePoint Services 3.0

Creating and Configuring Sites2  
Managing Windows SharePoint Services 3.0  
Lab : Configuring and Managing Windows SharePoint Services 3.0  
Starting the Windows SharePoint Services Search Service  
Configuring Alternate Access Mappings  
Managing Site Settings  
Troubleshooting WSS 3.0 Server Performance Issues

#### Module 7: Configuring Terminal Services

Terminal Services Overview  
Terminal Services Core Functionality  
Terminal Services Web Access  
Terminal Services Licensing  
Lab : Exploring Terminal Services  
Installing Terminal Services  
Remote Desktop Connection  
Configure TS Web Access

#### Module 8: Managing Terminal Services

Terminal Services RemoteApp Programs  
Terminal Services Gateway  
Managing Terminal Services  
Lab : Managing Terminal Services  
Using Terminal Services RemoteApp Programs  
Configuring Terminal Services Gateway  
Managing TS Remote Programs  
Managing Terminal Server  
Optimizing Terminal Services Performance

#### Module 9: Configuring Storage

Preparing Disks  
Managing Disk Properties  
Managing Mounted Drives  
Converting Disks  
Creating Volumes  
Creating Fault-Tolerant Volumes  
Lab : Configuring Storage  
Configure partitions and file systems  
Configure Volumes

**Course Description:** This 3-day, instructor-led course provides students with an understanding of migrating and deploying Windows Server 2008, including installation, configuration, and upgrading. Special emphasis is given to upgrading common server configurations and using the Windows Server Deployment Solution Accelerator.

**Who Should Attend:** This course is intended for IT Professionals who are experienced with Windows 2000 Server and/or Windows Server 2003, who hold an MCSE or MCSA certification, or have equivalent knowledge.

**Prerequisites:** Before attending this course, students must have one or more of the following: on-the-job experience in planning, implementing, managing, or supporting Windows Server 2000 or Windows Server 2003, including Active Directory and Network Infrastructure, working knowledge of networking, for example, TCP/IP and Domain Name System (DNS), experience with a Microsoft Windows Server 2003 Active Directory and Network Infrastructure, experience with implementing security for a Microsoft Windows Server 2003 Network, or experience installing, configuring, and administering Microsoft Windows Server 2003, Windows XP, or Windows Vista.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Install Windows Server 2008.
- Perform initial configuration tasks for Windows Server 2008.
- Conduct an unattended install of Windows Server 2008.
- Configure Windows Server Core 2008.
- Use Windows Deployment Services to deploy Windows Server 2008.
- Utilize Windows Server Deployment.
- Upgrade to Windows Server 2008 from Windows Server 2003.
- Upgrade Active Directory to Windows Server 2008.
- Upgrade Windows Server 2003 File and Print servers to Windows Server 2008.
- Upgrade Windows Server 2003 Application and Web servers to Windows Server 2008.
- Upgrade Windows Server 2003 Branch Office servers to Windows Server 2008.
- Implement a Volume Licensing Strategy using KMS and MAK.

### Course Outline:

#### Module 1: Windows Server 2008 Installation & Configuration

Improvements in setup from Windows 2003 to Windows Server 2008 and Windows 2008 installation requirements  
Windows Server 2008 Server Core installation  
Implement a volume license strategy using KMS and MAK  
Lab 1: Install Windows Server 2008  
Install Windows Server 2008  
Install Windows Server Core 2008

#### Module 2: Windows Server Core 2008 Configuration

Basic Server Core command-line configuration tasks  
Configuring the roles available on Server Core  
Lab 1: Configure Windows Server Core 2008  
Perform command-line configuration tasks  
Configure Server Core roles

#### Module 3: Windows Server 2008 Unattended Installation

Unattended 2008 Install  
Unattended deployment infrastructure  
Unattended domain controller installation  
Lab 1: Deploying Windows Server 2008 Using an Unattend File  
Deploying Windows Server 2008 using an Unattend file  
Lab 2: Install Active Directory on Server Core Using an Unattend file  
Install Active Directory on Server Core using an Unattend file  
Lab 3: Deploy an RODC in a Branch Office Using an Unattend File  
Deploy an RODC in a branch office using an Unattend File  
Configuring BitLocker on a branch office server

#### Module 4: Using Windows Deployment Services

Working with the WIM format  
Windows Deployment Services  
Lab 1: Working with Windows Deployment Services  
Configure WDS  
Create images with WDS  
Associate a language pack with an image  
Deploy an image with WDS  
Using Unattend file with WDS to deploy images  
Custom computer naming

#### Module 5: Windows Server Deployment (WSD) Solution Accelerator

Introduction to WSD Solution Accelerator  
Creating Custom Windows Server 2008 builds  
Guidance for Zero-Touch deployment using WSD  
Lab 1: Working with WSD  
WSD Overview  
Configuring WSD for deployment  
Creating and customizing a Windows Server 2008 build

Creating and sharing deploy points  
Modifying the CustomSettings.ini file  
Use the Deployment Workbench to build and capture the reference computer  
Deploying Windows Server 2008 using WSD 2007 (includes procedures for custom computer naming)

#### Module 6: Upgrading and Migrating Active Directory

Windows Server 2008 upgrade overview  
Upgrading Windows Server 2003 domain controllers to Windows Server 2008 Domain Controllers  
Active Directory upgrade best practices  
Lab 1: Upgrading Windows Server 2003 Domain Controllers to Windows Server 2008 Domain Controllers  
Upgrading Windows Server 2003 domain controllers to Windows Server 2008 domain controllers  
Lab 2: Using WSD to deploy an RODC to a branch office  
Using WSD to deploy an RODC to a branch office

#### Module 7: Upgrading File and Print Servers

Upgrading file and print servers  
Best practices for upgrading a Windows Server 2003 file and print server to Windows Server 2008  
Lab 1: Upgrading a Windows Server 2003 File and Print Server to Windows Server 2008  
Upgrading a Windows Server 2003 File and Print Server to Windows Server 2008

#### Module 8: Upgrading Application and Web Servers

Upgrading application and Web servers  
Best practices for upgrading a Windows Server 2003 application and Web server to Windows Server 2008  
Lab 1: Upgrading a Windows Server 2003 Web Server to Windows Server 2008 and IIS 7.0  
Upgrading a Windows Server 2003 Web Server to Windows Server 2008 and IIS 7.0  
Lab 2: Upgrading a Windows Server 2003 Terminal Server to Windows Server 2008  
Upgrading a Windows Server 2003 terminal server to Windows Server 2008

#### Module 9: Upgrading Branch Office Servers

Migrating or upgrading a Windows Server 2003 branch office server to Windows Server 2008  
Low-touch branch office server deployment  
Lab 1: Upgrading a Windows Server 2003 Branch Office Server to Windows Server 2008  
Upgrading a Windows Server 2003 branch office server to Windows Server 2008

#### Module 10: Migrating Workloads to Microsoft Virtual Machines

Microsoft Server Virtualization  
Migrating Workloads to Microsoft Virtual Machines  
Lab 1: Migrating Workloads to Microsoft Virtual Server Using VSMT  
Migrate a Windows NT 4.0 server to a virtual machine

**Course Description:** This five-day instructor-led course provides students with the knowledge and skills to configure and troubleshoot a Windows Server 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies. Students will gain an understanding of the network technologies most commonly used with Windows Server 2008 and IP-enabled networks. Students will also learn how to secure servers and maintain update compliance.

**Who Should Attend:** The primary audience for this course includes Active Directory technology specialists aspiring to be Enterprise Administrators (Tier 4 daily network operations) or Network Administrators (Tier 2). Experienced Server Administrators who aspire to be Enterprise Administrators will also benefit from this course. The secondary audience for this course includes Storage Area Network Administrators who need to understand this information to deploy or extend their current storage infrastructure. Operations Managers who need this information to support troubleshooting efforts and business decisions will also benefit from this course.

**Prerequisites:** Before attending this course, students must have working experience with Windows Server 2003, basic knowledge of Active Directory, an understanding of security concepts and methodologies (for example, corporate policies), and basic knowledge of DHCP and IPsec.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Install and configure servers.
- Configure and troubleshoot DNS.
- Configure and manage WINS.
- Configure and troubleshoot DHCP.
- Configure and troubleshoot IPv6 TCP/IP.
- Configure and troubleshoot Routing and Remote Access.
- Install, configure, and troubleshoot the Network Policy Server Role service.
- Configure Network Access Protection.
- Configure IPsec.
- Monitor and troubleshoot IPsec.
- Configure and manage Distributed File System.
- Configure and manage storage technologies.
- Configure availability of network resources and content.
- Configure server security compliance.

## Course Outline:

### Module 1: Installing and Configuring Servers

Installing Windows Server 2008  
Managing Server Roles and Features  
Overview of the Server Core Installation Option  
Lab: Installing and Configuring Servers and Server Roles  
Exercise 1: Identifying Server Types  
Exercise 2: Installing and Configuring Server Roles and Features  
Exercise 3: Configuring Server Core and Performing Basic Management Tasks

### Module 2: Configuring and Troubleshooting DNS

Installing the DNS Server Role  
Configuring the DNS Server Role  
Configuring DNS Zones  
Configuring DNS Zone Transfers  
Managing and Troubleshooting DNS  
Lab: Configuring and Verifying a DNS Solution  
Exercise 1: Configuring a DNS Infrastructure  
Exercise 2: Monitoring and Troubleshooting DNS

### Module 3: Configuring and Managing WINS

Overview of the Windows Internet Name Service  
Managing the WINS Server  
Configuring WINS Replication  
Migrating from WINS to DNS  
Lab: Configuring a WINS Infrastructure  
Exercise 1: Installing WINS  
Exercise 2: Configuring WINS Burst Handling  
Exercise 3: Configuring WINS Replication  
Exercise 4: Migrating from WINS to DNS

### Module 4: Configuring and Troubleshooting DHCP

Overview of the DHCP Server Role  
Configuring DHCP Scopes and Options  
Managing a DHCP Database  
Monitoring and Troubleshooting DHCP  
Securing DHCP  
Lab: Configuring and Troubleshooting the DHCP Server Role  
Exercise 1: Installing and Authorizing the DHCP Server Role  
Exercise 2: Configuring a DHCP Scope  
Exercise 3: Troubleshooting Common DHCP Issues

### Module 5: Configuring and Troubleshooting IPv6 TCP/IP

Overview of IPv6  
Coexistence with IPv6  
IPv6 Tunneling Technologies  
Transitioning from IPv4 to IPv6  
Troubleshooting IPv6  
Lab A: Configuring an ISATAP Router  
Exercise 1: Configuring a New IPv6 Network and Client  
Exercise 2: Configuring an ISATAP Router to Enable Communication Between an IPv4 Network and an IPv6 Network  
Lab B: Converting the Network  
Exercise 1: Transitioning to an IPv6-Only Network

### Module 6: Configuring and Troubleshooting Routing and Remote Access

Configuring Network Access  
Configuring VPN Access  
Overview of Network Policies  
Overview of the Connection Manager Administration Kit

### Troubleshooting Routing and Remote Access

Lab: Configuring and Managing Network Access  
Exercise 1: Configuring Routing and Remote Access as a VPN Remote Access Solution  
Exercise 2: Configuring a Custom Network Policy  
Exercise 3: Configuring Logging  
Exercise 4: Configuring a Connection Profile

### Module 7: Installing, Configuring, and Troubleshooting the Network Policy Server Role Service

Configuring RADIUS Clients and Servers  
NPS Authentication Methods  
Monitoring and Troubleshooting a Network Policy Server  
Lab: Configuring and Managing Network Policy Server  
Exercise 1: Installing and Configuring the Network Policy Server Role Service  
Exercise 2: Configuring a RADIUS Client  
Exercise 3: Configuring Certificate Auto-Enrollment

### Module 8: Configuring Network Access Protection

Overview of Network Access Protection  
How NAP Works  
Configuring NAP  
Monitoring and Troubleshooting NAP  
Lab: Configuring NAP for DHCP and VPN  
Exercise 1: Configuring NAP for DHCP Clients  
Exercise 2: Configuring NAP for VPN Clients

### Module 9: Configuring IPsec

Overview of IPsec  
Configuring Connection Security Rules  
Configuring IPsec NAP Enforcement  
Lab: Configuring IPsec NAP Enforcement  
Exercise 1: Preparing the Network Environment for IPsec NAP Enforcement  
Exercise 2: Configuring and Testing IPsec NAP Enforcement

### Module 10: Monitoring and Troubleshooting IPsec

Monitoring IPsec Activity  
Troubleshooting IPsec  
Lab: Monitoring and Troubleshooting IPsec  
Exercise 1: Monitoring IPsec Connectivity  
Exercise 2: Configuring Connection Security  
Exercise 3: Troubleshooting IPsec

### Module 11: Configuring and Managing Distributed File System

DFS Overview  
Configuring DFS Namespaces  
Configuring DFS Replication  
Lab: Configuring DFS  
Exercise 1: Installing the Distributed File System Role Service  
Exercise 2: Creating a DFS Namespace  
Exercise 3: Configuring Folder Targets and Folder Replication  
Exercise 4: Viewing Diagnostic Reports for Replicated Folders

### Module 12: Configuring and Managing Storage Technologies

Windows Server 2008 Storage Management Overview  
Managing Storage Using File Server Resource Manager  
Configuring Quota Management  
Implementing File Screening

### Managing Storage Reports

Lab: Configuring and Managing Storage Technologies  
Exercise 1: Installing the FSRM Role Service  
Exercise 2: Configuring Storage Quotas  
Exercise 3: Configuring File Screening  
Exercise 4: Generating Storage Reports

### Module 13: Configuring Availability of Network Resources and Content

Backing Up Data  
Configuring Shadow Copies  
Providing Server and Service Availability  
Lab: Configuring Availability of Network Resources  
Exercise 1: Configuring Windows Server Backup and Restore  
Exercise 2: Configuring Shadow Copying  
Exercise 3: Configuring Network Load Balancing

### Module 14: Configuring Server Security Compliance

Securing a Windows Infrastructure  
Using Security Templates to Secure Servers  
Configuring an Audit Policy  
Overview of Windows Server Update Services  
Managing Windows Server Update Services  
Lab: Configuring Server Security Compliance  
Exercise 1: Configuring and Analyzing Security  
Exercise 2: Analyzing Security Templates  
Exercise 3: Configuring Windows Software Update Services

**Course Description:** This five-day instructor-led course provides to teach Active Directory Technology Specialists with the knowledge and skills to configure Active Directory Domain Services in a distributed environment, implement Group Policies, perform backup and restore, and monitor and troubleshoot Active Directory related issues.

**Who Should Attend:** The primary audience for this course are AD Technology Specialists, Server Administrators, and Enterprise Administrators who want to learn how to implement AD in a distributed environment, secure domains using Group Policies, and perform backup, restore, and monitor and troubleshoot AD configuration to ensure trouble free operation.

**Prerequisites:** Before attending this course, students must have basic understanding of networking, intermediate understanding of network operating systems, an awareness of security best practices, basic knowledge of server hardware. A+ or equivalent knowledge, some experience creating objects in Active Directory, foundation course (6424A) or equivalent knowledge, and basic concepts of backup and recovery in a Windows Server Environment.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Implement and configure Active Directory domain services in their enterprise environment.

## Course Outline:

### Module 1: Implementing Active Directory Domain Services

Installing Active Directory Domain Services  
Deploying Read-Only Domain Controllers  
Configuring AD DS Domain Controller Roles  
Lab: Implementing Read-Only Domain Controllers  
Exercise 1: Evaluating Forest and Server Readiness for Installing an RODC  
Exercise 2: Installing and Configuring an RODC  
Exercise 3: Configuring AD DS Domain Controller Roles

### Module 2: Configuring Domain Name Service for Active Directory Domain Services

Overview of Active Directory Domain Services and DNS Integration  
Configuring Active Directory Integrated Zones  
Configuring Read Only DNS Zones  
Lab: Configuring AD DS and DNS Integration  
Exercise 1: Configuring Active Directory Integrated Zones  
Exercise 2: Configuring Read-Only DNS Zones

### Module 3: Configuring Active Directory Objects and Trusts

Configuring Active Directory Objects  
Strategies for Using Groups  
Automating AD DS Object Management  
Delegating Administrative Access to AD DS Objects  
Configuring AD DS Trusts  
Lab A: Configuring Active Directory Objects  
Exercise 1: Configuring AD DS Objects  
Exercise 2: Implementing an AD DS Group Strategy  
Exercise 3: Automating the Management of AD DS Objects  
Lab B: Configuring Active Directory Objects and Trusts  
Exercise 1: Delegating Control of AD DS Objects  
Exercise 2: Configuring AD DS Trusts

### Module 4: Configuring Active Directory Sites and Replication

Overview of AD DS Replication  
Overview of AD DS Sites and Replication  
Configuring and Monitoring AD DS Replication  
Lab: Configuring Active Directory Sites and Replication  
Exercise 1: Configuring AD DS Sites and Subnets  
Exercise 2: Configuring AD DS Replication  
Exercise 3: Monitoring AD DS Replication

### Module 5: Creating and Configuring Group Policy

Overview of Group Policy  
Configuring the Scope of Group Policy Objects  
Evaluating the Application of Group Policy Objects  
Managing Group Policy Objects  
Delegating Administrative Control of Group Policy  
Lab: Creating and Configuring GPOs  
Exercise 1: Creating Group Policy Objects

Exercise 2: Managing the Scope of GPO Application  
Exercise 3: Verifying GPO Application  
Exercise 4: Managing GPOs  
Exercise 5: Delegating Administrative Control of GPOs

### Module 6: Configuring User Environments Using Group Policy

Configuring Group Policy Settings  
Configuring Scripts and Folder Redirection Using Group Policies  
Configuring Administrative Templates  
Group Policy Preferences  
Deploying Software Using Group Policy  
Lab: Configuring User Environments Using Group Policies  
Exercise 1: Configuring Scripts and Folder Redirection  
Exercise 2: Configuring Administrative Templates  
Exercise 3: Configuring Preferences  
Exercise 4: Verifying GPO Application

### Module 7: Implementing Security Using Group Policy

Configuring Security Policies  
Implementing Fine-Grained Password Policies  
Restricting Group Membership and Access to Software  
Managing Security Using Security Templates  
Lab: Implementing Security Using Group Policies  
Exercise 1: Configuring Account and Security Policy Settings  
Exercise 2: Implementing Fine-Grained Password Policies  
Exercise 3: Configuring Restricted Groups and Software Restriction Policies  
Exercise 4: Configuring Security Templates  
Exercise 5: Verifying the Security Configuration

### Module 8: Implementing an Active Directory Domain Services Monitoring Plan

Monitoring AD DS Using Event Viewer  
Monitoring Active Directory Domain Servers Using Reliability and Performance Monitor  
Configuring AD DS Auditing  
Lab: Monitoring Active Directory Domain Services  
Exercise 1: Monitoring AD DS Using Event Viewer  
Exercise 2: Monitoring AD DS Using Performance and Reliability Monitor  
Exercise 3: Configuring AD DS Auditing

### Module 9: Implementing an Active Directory Domain Services Maintenance Plan

Maintaining the AD DS Domain Controllers  
Backing Up Active Directory Domain Services  
Restoring Active Directory Domain Services  
Lab: Implementing an Active Directory Domain Services Maintenance Plan  
Exercise 1: Maintaining AD DS Domain Controllers  
Exercise 2: Backing Up AD DS

Exercise 3: Performing an Authoritative Restore of the AD DS Database  
Exercise 4: Restoring Data Using the AD DS Snapshot Viewer

### Module 10: Troubleshooting Active Directory, DNS, and Replication Issues

Troubleshooting Active Directory Domain Services  
Troubleshooting DNS Integration with AD DS  
Troubleshooting AD DS Replication  
Lab: Troubleshooting Active Directory, DNS, and Replication Issues  
Exercise 1: Troubleshooting Authentication and Authorization Errors  
Exercise 2: Troubleshooting the Integration of DNS and AD DS  
Exercise 3: Troubleshooting AD DS Replication

### Module 11: Troubleshooting Group Policy Issues

Introduction to Group Policy Troubleshooting  
Troubleshooting Group Policy Application  
Troubleshooting Group Policy Settings  
Lab: Troubleshooting Group Policy Issues  
Exercise 1: Troubleshooting Group Policy Scripts  
Exercise 2: Troubleshooting GPO Lab11B  
Exercise 3: Troubleshooting GPO Lab11C  
Exercise 4: Troubleshooting GPO Lab11D

### Module 12: Implementing an Active Directory Domain Services Infrastructure

Overview of the AD DS Deployment  
Planning a Group Policy Strategy  
Lab A: Deploying Active Directory Domain Services  
Exercise 1: Installing a Read-only Domain Controller (RODC) onto a Server Core, and Creating a Branch Office Site  
Exercise 2: Creating a Domain in a Separate Tree and Separate Site  
Lab B: Configuring Forest Trust Relationships  
Exercise: Upgrading the Fabrikam Domain, and Creating a Forest Trust with Woodgrove Bank  
Lab C: Planning a Group Policy Strategy  
Exercise 1: Planning Group Policy  
Exercise 2: Creating a Domain in a Separate Tree and Separate Site  
Exercise 3: Implementing the Corporate Desktop Policy

**Course Description:** This three-day instructor-led course provides the knowledge and skills that IT Professionals need to configure identity and access solutions with Windows Server 2008 Active Directory.

**Who Should Attend:** The audience for this course is IT Professionals interested in learning how to implement IDA solutions in an enterprise environment. Most students will be IT professionals who are responsible for integrating applications and platforms with enterprise directory and security services while increasing access to a growing number of customers and partners.

**Prerequisites:** Before attending this course, students must have technical knowledge equivalent to the course 6424: Fundamentals of Windows Server 2008 Active Directory, and technical background knowledge and hands-on experience of Active Directory Domain Services (AD DS from the AD TS foundation exam). This includes technical knowledge equivalent to the course 6425: Configuring and Troubleshooting Windows Server 2008 Active Directory Domain Services.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe identity and access solutions.
- Configure Active Directory Certificate Services.
- Deploy and manage certificates.
- Configure Active Directory Lightweight Directory Services.
- Configure Active Directory Federation Services.
- Configure Active Directory Rights Management Services.
- Maintain access management solutions.
- Troubleshoot identity and access solutions.

## Course Outline:

### Module 1: Exploring IDA Solutions

Overview of IDA Management  
Active Directory Server Roles in IDA Management  
Overview of ILM 2007  
Lab 1: Exploring IDA Solutions  
Explore how Active Directory Server Roles will provide IDA Management solutions

### Module 2: Configuring AD CS

Overview of PKI  
Deploying a CA Hierarchy  
Installing AD CS  
Managing CA  
Lab 2: Configuring AD CS  
Installing the AD CS Server Role  
Issuing and Installing a Subordinate Certificate  
Publishing the CRL

### Module 3: Deploying and Managing Certificates

Deploying Certificates by Using AD CS  
Deploying Certificates by Using Autoenrollment  
Revoking Certificates  
Configuring Certificate Templates  
Configuring Certificate Recovery  
Lab 3: Deploying and Managing Certificates  
Configuring AD CS Web Enrollment  
Configuring Certificate Enrollment  
Configuring AD CS Certificate Revocation  
Configuring AD CS Certificate Templates  
Managing Key Archival and Recovery

### Module 4: Configuring AD LDS

Installing and Configuring AD LDS  
Configuring AD LDS Instances  
Configuring AD LDS Replication  
Configuring AD LDS Integration with AD DS  
Lab 4: Configuring AD LDS  
Configuring an AD LDS instance and an application partition  
Configuring AD LDS Access Control  
Configuring AD LDS Replication  
Configuring AD DS and AD LDS synchronization

### Module 5: Configuring AD FS

Overview of AD FS  
AD FS Deployment Scenarios  
Deploying AD FS  
Implementing AD FS Claims  
Lab 5A: Configuring AD FS for Federated Web SSO by Using Forest Trust Scenario  
Installing the AD FS Server Role  
Configuring Certificate Requirements  
Configuring the AD FS Web Agent  
Configuring the Web Server application on a virtual computer  
Configuring the Forest Trust and the Federated Trust Policies  
Configuring the Federation Service Within the Internal Network  
Configuring the Federation Service Within the Extranet

Testing the AD FS Implementation  
Lab 5B: Configuring Active Directory Federation Services by Using Federated Web SSO Scenario  
Installing the AD FS Server Role  
Configuring Certificate Requirements  
Configuring the AD FS Web Agent  
Configuring the Web Server application on a virtual computer  
Configuring the Federation Trust Policies  
Configuring the Account Partner Federation Service  
Configuring the Resource Partner Federation Service  
Testing the AD FS implementation

### Module 6: Configuring AD RMS

Overview of AD RMS  
Installing and Configuring AD RMS Server Components  
Administering AD RMS  
Implementing AD RMS Trust Policies  
Lab 6: Configuring AD RMS  
Installing the AD RMS Server Role  
Managing AD RMS rights policy templates  
Configuring Trust Policies  
Testing AD RMS functionality

### Module 7: Maintaining Access Management Solutions

Supporting AD CS  
Maintaining AD LDS  
Maintaining AD FS  
Maintaining AD RMS  
Lab 7: Maintaining Access Management Solutions  
Configuring CA Event Auditing  
Implementing role-based administration in AD CS  
Backing up a CA  
Reconfiguring AD RMS cluster settings  
Generating AD RMS Reports  
Configuring AD RMS logging

### Module 8: Troubleshooting IDA Solutions

Troubleshooting AD CS  
Troubleshooting AD LDS  
Resolving AD FS Issues  
Solving AD RMS Issues  
Lab 8: Troubleshooting IDA Solutions  
Identifying Tools and Troubleshooting Techniques of IDA Solutions

**Course Description:** In this 3-day instructor-led course, the students will learn to install, configure, maintain, and troubleshoot an Internet Information Services (IIS) 7.0 Web Server in Windows Server 2008.

**Who Should Attend:** The primary audience for this course is individuals who want to become a Web Server Administrator in an enterprise environment. Also, individuals who are assuming a new role requiring skills to manage content served by an IIS 7.0 Web Server over an intranet, extranet, and internet would be interested in this course. The secondary audience for this course is individuals who are Web-based application developers who also possess networking skills.

**Prerequisites:** Before attending this course, students must have taken course 6420 Foundational Series: Fundamentals of a Windows Server 2008 Network Infrastructure and Application Platform or a minimum of 1 year of experience administering and supporting a Web Server role using Windows Server 2003. Network + certification is also required.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe the IIS 7.0 modular architecture and workloads.
- Configure an IIS 7.0 Web Server.
- Secure Web sites and Web application pools.
- Troubleshoot Web servers, sites and applications.
- Use command line tools and scripting tools.
- Tune IIS to improve performance.
- Maintain Web sites.
- Enable integrated technologies to extend IIS 7.0 functionality.

## Course Outline:

### Module 1: Configuring an IIS 7.0 Web Server

Introducing Internet Information Services 7.0  
 Installing the Web Server Role in Windows Server 2008  
 Configuring Application Development, Health, and HTTP Features  
 Configuring Performance, Security, and Server Component Features  
 Lab: Configuring an IIS 7.0 Web Server  
 Installing IIS using Role Manager  
 Installing IIS using Unattend Setup  
 Installing IIS on Server Core from Command Line  
 Configuring IIS and Validate Functionality

### Module 2: Configuring IIS 7.0 Web Sites and Application Pools

Introducing Web Sites and Application Pools  
 Creating a Web Site  
 Creating an Application Pool  
 Maintaining an Application Pool  
 Lab: Configuring IIS 7.0 Web Sites and Application Pools  
 Configuring Authentication Types  
 Creating a Web Site and Web Application  
 Creating an Application Pool  
 Configuring an Existing Application Pool

### Module 3: Configuring IIS 7.0 Application Settings

Configuring Application Settings  
 Configuring ASP.NET Security  
 Lab: Configuring IIS 7.0 Application Settings  
 Configuring ASP.NET  
 Configuring ASP.NET Application Development Settings  
 Configuring a Web Server to Host Multiple Web Applications with Separate Application Pools  
 Configuring ASP.NET Security

### Module 4: Configuring IIS 7.0 Modules

Configuring Native Modules  
 Configuring Managed Modules  
 Lab: Configuring IIS 7.0 Modules  
 Configuring and Editing Native Modules  
 Configuring and Edit Managed Modules

### Module 5: Securing the IIS 7.0 Web Server and Web Sites

Configuring Secure Web Sites and Servers  
 Configure Other Aspects of Web Server Security  
 Configuring Logging for IIS 7.0  
 Lab: Securing IIS 7.0 Web Server and Web Sites  
 Configuring a Secure Web Server  
 Configuring Authorization, Authentication, and Access  
 Configuring Logging

### Module 6: Configuring Delegation and Remote Administration

Configuring Remote Administration  
 Configuring Delegated Administration  
 Configuring Feature Delegation  
 Lab: Configuring Delegation and Remote Administration  
 Configuring Remote Administration  
 Configuring Delegated Administration

Configuring Feature Delegation

### Module 7: Using Command-line and Scripting for IIS 7.0 Administration

Tools for Running Administrative Tasks in IIS  
 Executing Scripts for Administrative Tasks  
 Managing IIS Tasks  
 Lab: Using Command-line and Scripting for IIS 7.0 Administration  
 Managing IIS Web Sites with PowerShell  
 Executing a Script using WAP  
 Automating IIS Administration using Scripts  
 Navigating IIS tasks using WMI and Appcmd

### Module 8: Tuning IIS 7.0 for Improved Performance

Implementing Best Practices for Improving IIS Performance  
 Configuring Options to Improve IIS Performance  
 Managing Application Pools to Improve IIS Performance  
 Lab: Tuning IIS 7.0 for Performance  
 Configuring IIS Performance Options  
 Managing Application Pools to Improve Performance  
 Deploying Applications

### Module 9: Ensuring Web Site Availability with Web Farms

Backing Up and Restoring Web Sites  
 Working with Shared Configurations  
 Configuring Network Load Balancing for IIS  
 Lab: Ensuring Web Site Availability with Web Farms  
 Backing Up an IIS Web Site  
 Restoring an IIS Web site  
 Enabling Shared Configurations  
 Configuring Network Load Balancing  
 Ensure Web site availability using Network Load Balancing.

### Module 10: Troubleshooting IIS 7.0 Web Servers

Using IIS 7.0 Logging for Troubleshooting  
 Troubleshooting Authentication  
 Troubleshooting Authorization  
 Troubleshooting Communication  
 Troubleshooting Configuration  
 Lab: Troubleshooting IIS 7.0 Web Servers  
 Troubleshooting Authentication  
 Troubleshooting Authorization Types  
 Troubleshooting Communication  
 Troubleshooting Configuration

**Course Description:** This two-day instructor-led course provides students with the knowledge and skills to configure, manage, monitor, and troubleshoot a Terminal Services (TS) environment. The course focuses on configuring of TS core functionality, licensing, Gateway, and Web Access. This is the second course in the Windows Application Platform Services Technology Specialists Who Use Windows Server 2008 curriculum and will introduce the students to the Windows 2008 Terminal Services.

**Who Should Attend:** This course is intended for an individual whose primary role is a Technology Specialist in an enterprise environment. Also, individuals who are assuming a new role requiring skills to manage connections served by a terminal server session over the intranet, extranet, and Internet would be interested in this course.

**Prerequisites:** Before attending this course, students must have technical knowledge equivalent to Course 6420 Foundational Series: Fundamentals of a Windows Server 2008 Network Infrastructure and Application Platform or Windows Server 2003 Terminal Server experience in an enterprise environment, a minimum of one year of experience administering and supporting TS, a minimum of one year of experience administering and supporting Windows Server 2003 or Windows Server 2003 R2, a minimum of one year of administering certificate services, and Network+ certification.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Install and configure the TS role.
- Configure TS settings.
- Identify the appropriate licensing scope and configure forest, domain, and workgroup licensing.
- Identify when to use the per-user and per-device licensing modes.
- Install the TS Licensing Role.
- Configure TS licensing for per-user and device licenses.
- Manage the licensing lifecycle.
- Configure TS connection properties using TS console and Group Policy.
- Troubleshoot TS connection properties for a single user and multiple users.
- Identify the considerations for the types of applications that can be installed in a TS environment.
- Install applications on TS.
- Configure TS Web Access to make TS RemoteApp programs available through a Web site.
- Configure TS Easy Print.
- Install and configure TS Web Access role service.
- Configure a TS session broker for a load-balanced TS farm.
- Configure TS Gateway properties
- Monitor active connections using TS Gateway console.
- Troubleshoot a TS Gateway connectivity issue.
- Manage TS connections to ensure availability of the TS.
- Resolve client connectivity issues by verifying end-user configuration using Remote Desktop Connection (RDC).
- Monitor TS connections to determine when to force client disconnect.
- Identify monitoring methods for TS services role.

## Course Outline:

### Module 1: Configuring Terminal Services Core Functionality

Configuring TS Role  
Configuring TS Settings  
Lab : Configuring TS Core Functionality  
Installing and Configuring TS Role  
Configuring TS Settings

### Module 2: Configuring and Managing Terminal Services Licensing

Configuring TS Licensing  
Managing TS Licenses  
Lab : Configuring and Managing TS Licensing  
Installing the TS Licensing Role  
Configuring TS Licensing  
Managing TS Licensing

### Module 3: Configuring and Troubleshooting Terminal Services Connections

Configuring TS Connection Properties  
Configuring TS Properties Using Group Policy  
Troubleshooting TS  
Lab : Configuring and Troubleshooting TS Connections  
Installing the TS Connection Properties  
Troubleshooting Connectivity Issues

### Module 4: Configuring Terminal Services Resources

Installing Applications  
Configuring Remote Applications  
Configuring Printers  
Lab : Configuring TS Resources  
Configuring and Deploying TS RemoteApp Programs  
Configuring TS Easy Print

### Module 5: Configuring Terminal Services Web Access

Installing the TS Web Access Role Service

Lab : Configuring TS Web Access  
Configuring TS Web Access  
Configuring TS RemoteApp Programs for TS Web Access

### Module 6: Configuring Session Broker

Configuring a TS Session Broker for a Load-Balanced Farm  
Lab : Configuring a Session Broker  
Configuring a Session Broker to Manage Traffic to Servers

### Module 7: Configuring and Troubleshooting Terminal Services Gateway

Configuring TS Gateway  
Troubleshooting TS Gateway Connectivity Issues  
Lab : Configuring and Troubleshooting TS Gateway  
Configuring and Monitoring TS Gateway  
Troubleshooting TS Gateway Connectivity

### Module 8: Managing and Monitoring Terminal Services

Managing Current TS Connections  
Monitoring TS Connections  
Configuring WSRM for TS  
Lab : Managing and Monitoring TS  
Managing TS Connections  
Monitoring TS Connections  
Configuring WSRM for TS

**Course Description:** This three-day instructor-led course is intended for IT professionals who are interested in expanding their knowledge base and technical skills about Windows 7 Client. In this course, students learn how to install, upgrade, and migrate to Windows 7 client. Students then configure Windows 7 client for network connectivity, security, maintenance, and mobile computing. This course helps students prepare for the Exam 70-680, TS: Windows 7, Configuring.

**Who Should Attend:** This course is intended for IT professionals who are interested in expanding their knowledge base and technical skills about Windows 7 Client, acquiring deep technical knowledge of Windows 7, learning the details of Windows 7 technologies, and focusing on the "how to" associated with Windows 7 technologies. Most of these professionals use some version of Windows client at their work place and are looking at new and better ways to perform some of the current functions.

**Prerequisites:** Before attending this course, students must have experience installing PC hardware and devices, basic understanding of TCP/IP and networking concepts, basic Windows and Active Directory knowledge, the skills to map network file shares, and experience working from a command prompt. Students must also have basic knowledge of the fundamentals of applications, basic understanding of security concepts such as authentication and authorization, and an understanding of the fundamental principles of using printers.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Perform a clean installation of Windows 7, upgrade to Windows 7, and migrate user-related data and settings from an earlier version of Windows.
- Configure disks, partitions, volumes, and device drivers to enable a Windows 7 client computer.
- Configure file access and printers on a Windows 7 client computer.
- Configure network connectivity on a Windows 7 client computer.
- Configure wireless network connectivity on a Windows 7 client computer.
- Secure Windows 7 client desktop computers.
- Optimize and maintain the performance and reliability of a Windows 7 client computer.
- Configure mobile computing and remote access settings for a Windows 7 client computer.

### Course Outline:

#### Installing, Upgrading, and Migrating to Windows 7

Preparing to Install Windows 7  
 Performing a Clean Installation of Windows 7  
 Upgrading and Migrating to Windows 7  
 Performing Image-based Installation of Windows 7  
 Configuring Application Compatibility  
 Lab : Installing and Configuring Windows 7  
 Migrating Settings by using Windows Easy Transfer  
 Configuring a Reference Image of Windows 7  
 Configuring a Reference Image

#### Configuring Disks and Device Drivers

Partitioning Disks in Windows 7  
 Managing Disk Volumes  
 Maintaining Disks in Windows 7  
 Installing and Configuring Device Drivers  
 Lab : Configuring Disks and Device Drivers  
 Configuring Disks  
 Configuring Disk Quotas (Optional)  
 Updating a Device Driver

#### Configuring File Access and Printers on Windows 7 Client Computers

Overview of Authentication and Authorization  
 Managing File Access in Windows 7  
 Managing Shared Folders  
 Configuring File Compression  
 Managing Printing  
 Lab : Configuring File Access and Printers on Windows 7 Client Computers  
 Create and Configure a Public Shared Folder for all Users  
 Configuring Shared Access to Files for Specific Users  
 Creating and Sharing a Printer

#### Configuring Network Connectivity

Configuring IPv4 Network Connectivity  
 Configuring IPv6 Network Connectivity  
 Implementing Automatic IP Address Allocation  
 Overview of Name Resolution  
 Troubleshooting Network Issues  
 Lab : Configuring Network Connectivity  
 Configuring IPv4 Addressing  
 Configuring IPv6 Addressing

Troubleshooting Network Connectivity

#### Configuring Wireless Network Connections

Overview of Wireless Networks  
 Configuring a Wireless Network  
 Lab : Configuring Wireless Network Connections  
 Determining the appropriate configuration for a wireless network  
 Troubleshooting Wireless Connectivity

#### Securing Windows 7 Desktops

Overview of Security Management in Windows 7  
 Securing a Windows 7 Client Computer by Using Local Security Policy Settings  
 Securing Data by Using EFS and BitLocker  
 Configuring Application Restrictions  
 Configuring User Account Control  
 Configuring Windows Firewall  
 Configuring Security Settings in Internet Explorer 8  
 Configuring Windows Defender  
 Lab : Configuring UAC, Local Security Policies, EFS, and AppLocker  
 Using Action Center  
 Configuring Local Security Policies  
 Encrypting Data  
 Configuring AppLocker  
 Lab : Configuring Windows Firewall, Internet Explorer 8 Security Settings, and Windows Defender  
 Configuring Windows Firewall  
 Configuring Internet Explorer 8 Security  
 Configuring Windows Defender

#### Optimizing and Maintaining Windows 7 Client Computers

Maintaining Performance by Using the Windows 7 Performance Tools  
 Maintaining Reliability by Using the Windows 7 Diagnostic Tools  
 Backing Up and Restoring Data by Using Windows Backup  
 Restoring a Windows 7 System by Using System Restore Points  
 Configuring Windows Update  
 Lab : Optimizing and Maintaining Windows 7 Client

Computers

Monitoring System Performance  
 Backing Up and Restoring Data  
 Configuring System Restore Points  
 Configuring Windows Update

#### Configuring Mobile Computing and Remote Access in Windows 7

Configuring Mobile Computer and Device Settings  
 Configuring Remote Desktop and Remote Assistance for Remote Access  
 Configuring DirectAccess for Remote Access  
 Configuring BranchCache for Remote Access  
 Lab : Configuring Mobile Computing and Remote Access in Windows 7  
 Creating a Sync Partnership  
 Configuring Power Options  
 Enabling Remote Desktop  
 Enabling BranchCache

**Course Description:** This five-day instructor-led course is intended for desktop administrators who want to specialize in desktop deployment, configuration, and management. In this course, students will learn how to plan and deploy Windows 7 desktops in large organizations. They will also learn how to design, configure, and manage the Windows 7 client environment. This course helps students prepare for the Exam 70-686, Pro: Windows 7, Enterprise Desktop Administrator.

**Who Should Attend:** This course is intended for IT Professionals who are interested in specializing in Windows 7 desktop and application deployments and managing the desktop environments for large organizations. People attending this training could be support technicians or currently in deployment roles and are looking at taking the next step in their career or enhancing their skills in the areas of planning and deploying Windows 7 desktops.

**Prerequisites:** Before attending this course, students must have a solid understanding of TCP/IP and networking concepts, a solid understanding of security concepts such as authentication and authorization, and experience performing a clean installation of Windows 7, upgrading to Windows 7, and migrating user-related data and settings from Windows XP. Students should also have configured disks, partitions, volumes, and device drivers to enable Windows 7 to function as desired. In addition, they should have experience configuring and troubleshooting permissions and other settings to allow access to resources and applications on Windows 7 Systems, configuring settings to enable network connectivity, configuring and troubleshooting a wireless network connection, and configuring and troubleshooting Windows 7 security. They should also be able to configure mobile computers and devices, have familiarity with the client administration capabilities of Windows Server and be familiar with management tools such as the System Center suite of products, familiarity with deployment, packaging, and imaging tools, the ability to work in a team/virtual team, and experience training and mentoring others.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Prepare to deploy Windows 7 business desktops.
- Assess and resolve application compatibility issues with Windows 7.
- Determine the most appropriate method to deploy Windows 7 based upon specific business requirements.
- Design a standard Windows 7 image by assessing and evaluating the business requirements.
- Deploy Windows 7 by using WAIK.
- Deploy Windows 7 by using WDS.
- Deploy Windows 7 by using Lite Touch Installation.
- Deploy Windows 7 by using Zero Touch Installation.
- Migrate user state by using Windows Easy Transfer and User State Migration Tool 4.0.
- Design, configure, and manage the Windows 7 client environment.
- Plan and deploy applications and updates to Windows 7 client computers.
- Plan and deploy Windows 7 by using LTI. (Lab-Only Module)

## Course Outline:

### Preparing to Deploy Windows 7 Business Desktops

Overview of the Desktop Lifecycle  
 Desktop Deployment: Challenges and Considerations  
 Tools and Technologies Used in the Desktop Deployment Lifecycle  
 Assessing the Current Computing Environment for Deploying Windows 7  
 Designing Windows Activation  
 Lab: Assessing the Computing Environment by Using the Microsoft Assessment and Planning Toolkit  
 Assessing the Computing Environment by Using Microsoft Assessment and Planning Toolkit  
 Lab: Recommending an Activation Strategy  
 Review the Activation Scenario

### Assessing Application Compatibility in Windows 7

Overview of Application Compatibility  
 Assessing and Resolving Application Compatibility Issues by Using ACT 5.5  
 Lab: Evaluating Application Compatibility Using the Microsoft Application Compatibility Toolkit  
 Installing and Configuring ACT  
 Collecting Application Inventory  
 Organizing the Application Inventory  
 Analyzing Application Inventory Results  
 Lab: Creating Application Compatibility Fixes  
 Identifying Application Compatibility Issues  
 Mitigating Application Issues

### Evaluating Windows 7 Deployment Methods

Evaluating In-Place Deployment  
 Evaluating Side-by-Side Deployment  
 Evaluating Lite-Touch Deployment Method  
 Evaluating Zero-Touch Deployment Method  
 Lab: Determining the Windows 7 Deployment Method  
 Determining Windows 7 Deployment Methods

### Designing Standard Windows 7 Images

Overview of Windows 7 Installation Architecture  
 Overview of the Imaging Process  
 Determining the Image Strategy  
 Selecting the Image Servicing Methods  
 Lab: Determining the Windows 7 Imaging Strategy

Determining the Windows 7 Image Strategy

### Deploying Windows 7 by Using WAIK

Overview of WAIK 2.0  
 Building a Reference Windows 7 Image by Using Windows SIM and Sysprep  
 Managing the Windows Preinstallation Environment  
 Capturing, Applying, and Servicing a Windows 7 Image  
 Lab: Installing WAIK  
 Install the Windows Automated Installation Kit  
 Identify Resources and Tools included with the Windows Automated Installation Kit  
 Lab: Building a Reference Image Using Windows SIM and Sysprep  
 Building a Custom Answer File by Using Windows SIM  
 Installing a Reference Computer using a Custom Answer File

Generalizing a Reference Computer by Using Sysprep  
 Lab: Creating Windows PE Boot Media  
 Adding Packages and Drivers to Windows PE  
 Creating a Bootable Windows PE ISO Image  
 Starting the Windows PE Operating System Environment  
 Lab: Capturing and Applying a Windows 7 Image Using ImageX  
 Capturing an Image Using ImageX  
 Apply an Image Using ImageX  
 Lab: Servicing Images by Using DISM  
 Servicing a Reference image using DISM

### Deploying Windows 7 by Using Windows Deployment Services

Overview of WDS  
 Designing and Configuring WDS for Windows 7 Deployment  
 Lab: Deploying Windows 7 by Using Windows Deployment Services  
 Designing the WDS Environment  
 Installing and Configuring the WDS Server Role  
 Adding Boot and Install Images to WDS  
 Provisioning Drivers by Using WDS  
 Deploying a Desktop Operating System Using WDS

### Deploying Windows 7 by Using Lite Touch Installation

Designing the Lite Touch Installation Environment  
 Implementing MDT 2010 for Deploying Windows 7

Lab: Planning and Configuring MDT 2010  
 Planning the MDT Lite Touch Environment  
 Installing MDT 2010 and Additional Component Files  
 Configuring the Deployment Share  
 Creating a Task Sequence  
 Lab: Deploying Windows 7 by Using Lite Touch Installation  
 Updating the Deployment Share to Generate Windows PE Media  
 Installing Windows 7 Using Lite Touch Installation

### Deploying Windows 7 by Using Zero Touch Installation

Designing the Zero Touch Installation Environment  
 Performing Zero-touch Installation of Windows 7 by using MDT 2010 and Configuration Manager 2007  
 Lab: Deploying Windows 7 by Using Zero Touch Installation  
 Planning the Zero Touch Installation Environment  
 Preparing the Zero Touch Installation Environment  
 Configuring Deployment Packages and System Images  
 Configuring and Advertising a Client Task Sequence

### Migrating User State by Using WET and USMT 4.0

Overview of User State Migration  
 Overview of USMT 4.0  
 Planning User State Migration (USMT 4.0)  
 Migrating User State by Using USMT 4.0  
 Lab: Migrating User State by Using Windows Easy Transfer  
 Preparing the Window Easy Transfer Source Files  
 Capturing User State Information from a Source Computer  
 Loading User State Information to a Target Computer  
 Lab: Migrating User State by Using the User State Migration Tool 4.0  
 Planning for the User State Migration  
 Creating USMT Migration Scripts  
 Capturing and Restoring User State by Using USMT  
 Performing a Hard-Link Migration  
 Lab: Migrating User State by Using State using Hard Link Migration  
 Performing a Hard-Link Migration

### Designing, Configuring, and Managing the Client Environment

Overview of Planning Client Configuration

Designing and Configuring Standard System Settings  
 Designing and Configuring Internet Explorer Settings  
 Designing and Configuring Security Settings  
 Designing and Implementing Group Policy  
 Troubleshooting Group Policy  
 Lab: Designing and Configuring the Client Environment  
 Designing a Client Environment  
 Implementing a Client Configuration  
 Lab: Troubleshooting GPO Issues  
 Resolving a GPO Application Problem

### Planning and Deploying Applications and Updates to Windows 7 Clients

Determining the Application Deployment Method  
 Deploying the 2007 Microsoft Office System  
 Planning and Configuring Desktop Updates by Using WSUS  
 Lab: Determining the Application Deployment Method  
 Determining the Application Deployment Method  
 Lab: Customizing the Microsoft Office Professional Plus 2007 Installation  
 Configuring the Setup Category  
 Configuring the Features Category  
 Installing Microsoft Office Professional Plus By Using the Setup Customization File  
 Lab: Planning and Managing Updates by Using WSUS  
 Planning Automatic Updates Settings  
 Configuring Automatic Updates Settings by Using Group Policy  
 Approving and Deploying an Update by Using WSUS

### Planning and Deploying Windows 7 by Using LTI

Deploying Windows 7 - Challenge Scenario  
 Lab: Planning an End-to-End Windows 7 LTI Deployment  
 Planning the MDT Lite Touch Environment  
 Lab: Deploying Windows 7 using the LTI Deployment Plan  
 Performing a Network Assessment  
 Configuring MDT 2010 for an LTI Deployment  
 Configuring WDS for a PXE and Multicast Deployment  
 Configuring an MDT 2010 Deployment Share  
 Creating the Reference Computer  
 Preparing the Deployment Task Sequences  
 Performing an Upgrade on Target Computers

**Course Description:** This five-day instructor-led course provides students with the knowledge and skills to maintain a Microsoft SQL Server 2008 R2 database. The course focuses on teaching individuals how to use SQL Server 2008 R2 product features and tools related to maintaining a database.

**Who Should Attend:** The primary audience for this course is individuals who administer and maintain SQL Server databases. This course can also be helpful for individuals who develop applications that deliver content from SQL Server databases.

**Prerequisites:** Before attending this course, students must have basic knowledge of the Microsoft Windows operating system and its core functionality as well as working knowledge of Transact-SQL and relational databases.

Some experience with database design is also required. In addition, it is recommended, but not required, that students have completed courses in Writing Queries Using Microsoft SQL Server 2005 Transact-SQL and Implementing a Microsoft SQL Server 2005 Database.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Explain SQL Server 2008 R2 architecture, resources requirements and perform pre-checks of I/O subsystems
- Plan, install and configure SQL Server 2008 R2
- Backup and restore databases
- Import and export wizards and explain how they relate to SSIS
- Use BCP and BULK INSERT to import data
- Manage security
- Assign, configure fixed database roles and create and assign user defined database roles
- Configure and assign permissions
- Implement SQL Server 2008 R2 Audits
- Manage SQL Server 2008 R2 Agent and Jobs
- Configure database mails, alerts and notifications
- Maintain databases
- Configure SQL Profiler Traces and Use the Database Tuning Advisor
- Monitor data by using Dynamic Management Views
- Execute multi-server queries and configure a central management server
- Deploy a data-tier-application
- Troubleshoot common issues

**Course Outline:**

**Module 1: Introduction to SQL Server 2008 R2 and its Toolset**

Introduction to SQL Server Platform Working with SQL Server Tools Configuring SQL Server Services Lab : Introduction to SQL Server 2008 R2 and its Toolset Verify SQL Server Component Installation Alter Service Accounts for New Instance Enable Named Pipes Protocol for Both Instances Create Aliases for AdventureWorks and Proseware Ensure SQL Browser is Disabled and Configure a Fixed TCP/IP Port Describe the SQL Server Platform Work with SQL Server Tools Configure SQL Server Services

Prepare to install SQL Server Install SQL Server Upgrade and automate the installation of SQL Server

**Module 4: Working with Databases**

Overview of SQL Server Databases Working with Files and Filegroups Moving Database Files Lab : Working with Databases Adjust tempdb configuration Create the RateTracking database Attach the OldProspects database Add multiple files to tempdb Describe the role and structure of SQL Server databases Work with files and filegroups Move database files within servers and between servers

**Module 5: Understanding SQL Server 2008 R2 Recovery Models**

Backup Strategies Understanding SQL Server Transaction Logging Planning a SQL Server Backup Strategy Lab : Understanding SQL Server 2008 R2 Recovery Models Plan a backup strategy Configure recovery models Review recovery models and strategy Describe the critical concepts surrounding backup strategies Explain the transaction logging capabilities within the SQL Server database engine Plan a SQL Server backup strategy

**Module 6: Backup of SQL Server 2008 R2 Databases**

Backing up Databases and Transaction Logs Managing Database Backups Working with Backup Options Lab : Backup of SQL Server 2008 R2 Databases Investigate backup compression Transaction log backup Differential backup Copy only backup Partial backup Back up databases and transaction logs

Manage database backups Work with more advanced backup options

**Module 7: Restoring SQL Server 2008 R2 Databases**

Understanding the Restore Process Restoring Databases Working with Point-in-time Recovery Restoring System Databases and Individual Files Lab : Restoring SQL Server 2008 R2 Databases Determine a restore strategy Restore the database Using STANDBY mode Understand the restore process Restore databases Work with Point-in-time Recovery Restore system databases and individual files

**Module 8: Importing and Exporting Data**

Transferring Data To/From SQL Server 2008 R2 Importing & Exporting Table Data Inserting Data in Bulk Lab : Importing and Exporting Data Import the Excel spreadsheet Import the CSV file Create and test an extraction package Compare loading performance Transfer data to and from SQL Server Import and export table data Insert data in bulk and optimize the bulk insert process

**Module 9: Authenticating and Authorizing Users**

Authenticating Connections to SQL Server Authorizing Logins to Access Databases Authorization Across Servers Lab : Authenticating and Authorizing Users Create Logins Correct an Application Login Issue Create Database Users Correct Access to Restored Database Describe how SQL Server authenticates connections Describe how logins are authorized to access databases Explain the requirements for

authorization across servers

**Module 10: Assigning Server and Database Roles**

Working with Server Roles Working with Fixed Database Roles Creating User-defined Database Roles Lab : Assigning Server and Database Roles Assign Server Roles Assign Fixed Database Roles Create and Assign User-defined Database Roles Check Role Assignments Work with server roles Work with fixed database roles Create user-defined database roles

**Module 11: Authorizing Users to Access Resources**

Authorizing User Access to Objects Authorizing Users to Execute Code Configuring Permissions at the Schema Level Lab : Authorizing Users to Access Resources Assign Schema-level Permissions Assign Object-level Permissions Test Permissions Authorize user access to objects Authorize users to execute code Configure permissions at the schema level

**Module 12: Auditing SQL Server Environments**

Options for Auditing Data Access in SQL Server Implementing SQL Server Audit Managing SQL Server Audit Lab : Auditing SQL Server Environments Determine audit configuration and create auditCreate server audit specificationsCreate database audit specificationsTest audit functionality Describe the options for auditing data access in SQL Server Implement SQL Server Audit Manage SQL Server Audit

**Module 13: Automating SQL Server 2008 R2 Management**

Automating SQL Server Management Working with SQL Server Agent Managing SQL Server Agent Jobs Lab : Automating SQL Server 2008 R2 Management Create a Data Extraction Job Schedule the Data Extraction Job Troubleshoot a Failing Job Automate SQL Server Management Work with SQL Server Agent Manage SQL Server Agent jobs

**Module 14: Configuring Security for SQL Server Agent**

Understanding SQL Server Agent Security Configuring Credentials Configuring Proxy Accounts Lab : Configuring Security for SQL Server Agent Troubleshoot job execution failure Resolve the security issue Perform further troubleshooting Explain SQL Server Agent security Configure credentials Configure Proxy accounts

**Module 15: Monitoring SQL Server 2008 R2 with Alerts and Notifications**

This module covers the configuration of database mail, alerts and notifications.Lessons Configuration of Database Mail Monitoring SQL Server Errors Configuring Operators, Alerts and Notifications Lab : Monitoring SQL Agent Jobs with Alerts and Notifications Configure Database Mail Implement Notifications Implement Alerts Configure database mail Monitor SQL Server errors Configure operators, alerts and notifications

**Module 16: Performing Ongoing Database Maintenance**

Ensuring Database Integrity

Maintaining Indexes Automating Routine Database Maintenance Lab : Ongoing Database Maintenance Check database integrity using DBCC CHECKDB Correct index fragmentation Create a database maintenance plan Investigate table lock performance Ensure database integrity Maintain indexes Automate routine database maintenance

**Module 17: Tracing Access to SQL Server 2008 R2**

Capturing Activity using SQL Server Profiler Improving Performance with the Database Engine Tuning Advisor Working with Tracing Options Lab : Tracing Access to SQL Server 2008 R2 Capture a trace using SQL Server Profiler Analyze a trace using Database Engine Tuning Advisor Configure SQL Trace Capture activity using SQL Server Profiler Improve performance with the Database Engine Tuning Advisor Work with tracing options

**Module 18: Monitoring SQL Server 2008 R2**

Monitoring Activity Capturing and Managing Performance Data Analyzing Collected Performance Data Lab : Monitoring SQL Server 2008 R2 Investigating DMVs Configure Management Data Warehouse Configure Instances for Data Collection Work with Data Collector Reports Monitor current activity Capture and manage performance data Analyze collected performance data

**Module 19: Managing Multiple Servers**

Working with Multiple Servers  
Virtualizing SQL Server  
Deploying and Upgrading Data-Tier Applications  
Lab : Managing Multiple Servers  
Configure CMS and execute multi-server queries  
Deploy a data-tier application  
Register and extract a data-tier application  
Upgrade a data-tier application  
Work with multiple servers  
Describe options for virtualizing SQL Server  
Deploy and upgrade Data-Tier Applications

**Module 20:  
Troubleshooting Common  
SQL Server 2008 R2**

**Administrative Issues**

SQL Server Troubleshooting  
Methodology  
Resolving Service-related Issues  
Resolving Concurrency Issues  
Resolving Login and Connectivity Issues  
Lab : Troubleshooting Common Issues  
Troubleshoot and resolve SQL Server administrative issues  
Explain SQL Server troubleshooting methodology  
Resolve service-related issues  
Resolve concurrency issues  
Resolve login and connectivity issues

**Course Description:** This five-day instructor-led course is intended for Microsoft SQL Server database developers who are responsible for implementing a database on SQL Server 2008 R2. In this course, students learn the skills and best practices on how to use SQL Server 2008 R2 product features and tools related to implementing a database server.

**Who Should Attend:** This course is intended for IT Professionals who want to become skilled on SQL Server 2008 R2 product features and technologies for implementing a database. To be successful in this course, the student should have knowledge of basic relational database concepts and writing T-SQL queries.

**Prerequisites:** Before attending this course, students must have working knowledge of Transact-SQL and relational databases, and some experience with database design. Students must also have core Windows Server skills and experience with Basic programming language.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Understand the product, its components, and basic configuration.
- Work with the data types supported by SQL Server.
- Design and implement tables and work with schemas.
- Design and implement views and partitioned views.
- Describe the concept of an index and determine the appropriate data type for indexes and composite index structures.
- Identify the appropriate table structures and implement clustered indexes and heaps.
- Describe and capture execution plans.
- Design and implement non-clustered indexes, covering indexes, and included columns.
- Design and implement stored procedures.
- Implement table types, table valued parameters, and the MERGE statement.
- Describe transactions, transaction isolation levels, and application design patterns for highly-concurrent applications.
- Design and implement T-SQL error handling and structured exception handling.
- Design and implement scalar and table-valued functions.
- Design and implement constraints.

## Course Outline:

### Module 1: Introduction to SQL Server and its Toolset

Introduction to SQL Server Platform  
Working with SQL Server Tools  
Configuring SQL Server Services  
Lab : Introduction to SQL Server and its Toolset  
Verifying SQL Server Component Installation  
Altering Service Accounts for New Instance  
Enabling Named Pipes Protocol for Both Instances  
Creating Aliases for AdventureWorks and Proseware  
Ensuring SQL Browser is Disabled and Configure a Fixed TCP/IP Port

### Module 2: Working with Data Types

Using Data Types  
Working with Character Data  
Converting Data Types  
Working with Specialized Data Types  
Lab : Working with Data Types  
Choosing Appropriate Data Types  
Writing Queries With Data Type Conversions  
Designing and Creating Alias Data Types

### Module 3: Designing and Implementing Tables

Designing Tables  
Working with Schemas  
Creating and Altering Tables  
Lab : Designing and Implementing Tables  
Improving the Design of Tables  
Creating a Schema  
Creating the Tables

### Module 4: Designing and Implementing Views

Introduction to Views  
Creating and Managing Views  
Performance Considerations for Views  
Lab : Designing and Implementing Views  
Designing, Implementing and Testing the WebStock Views  
Designing and Implementing the Contacts View  
Modifying the AvailableModels View

### Module 5: Planning for SQL Server Indexing

Core Indexing Concepts  
Data Types and Indexes  
Single Column and Composite Indexes  
Lab : Planning for SQL Server Indexing  
Exploring Existing Index Statistics  
Designing Column Orders for Indexes

### Module 6: Implementing Table Structures in SQL Server

SQL Server Table Structures  
Working with Clustered Indexes  
Designing Effective Clustered Indexes  
Lab : Implementing Table Structures in SQL Server  
Creating Tables as Heaps

Creating Tables with Clustered Indexes  
Comparing the Performance of Clustered Indexes vs. Heaps

### Module 7: Reading SQL Server Execution Plans

Execution Plan Core Concepts  
Common Execution Plan Elements  
Working with Execution Plans  
Lab : Reading SQL Server Execution Plans  
Actual vs. Estimated Plans  
Identify Common Plan Elements  
Query Cost Comparison

### Module 8: Improving Performance through Nonclustered Indexes

Designing Effective Nonclustered Indexes  
Implementing Nonclustered Indexes  
Using the Database Engine Tuning Advisor  
Lab : Improving Performance through Nonclustered Indexes  
Reviewing Nonclustered Index Usage  
Improving Nonclustered Index Designs  
Using SQL Server Profiler and Database Engine Tuning Advisor  
Nonclustered Index Design

### Module 9: Designing and Implementing Stored Procedures

Introduction to Stored Procedures  
Working With Stored Procedures  
Implementing Parameterized Stored Procedures  
Controlling Execution Context  
Lab : Designing and Implementing Stored Procedures  
Creating Stored Procedures  
Creating a Parameterized Stored Procedure  
Altering the Execution Context of Stored Procedures

### Module 10: Merging Data and Passing Tables

Using the MERGE Statement  
Implementing Table Types  
Using Table Types as Parameters  
Lab : Merging Data and Passing Tables  
Creating a Table Type  
Using a Table Type Parameter  
Using a Table Type with MERGE

### Module 11: Creating Highly Concurrent SQL Server Applications

Introduction to Transactions  
Introduction to Locks  
Management of Locking  
Transaction Isolation Levels  
Lab : Creating Highly Concurrent SQL Server Applications  
Detecting Deadlocks  
Investigating Transaction Isolation Levels

### Module 12: Handling Errors in T-SQL Code

Designing T-SQL Error Handling  
Implementing Structured Exception Handling  
Lab : Handling Errors in T-SQL Code  
Replacing @@ERROR Based Error Handling With Structured Exception Handling  
Adding Deadlock Retry Logic to the Stored Procedure

### Module 13: Designing and Implementing User-Defined Functions

Designing and Implementing Scalar Functions  
Designing and Implementing Table-valued Functions  
Implementation Considerations for Functions  
Alternatives To Functions  
Lab : Designing and Implementing User-Defined Functions  
Formatting Phone Numbers  
Modifying an Existing Function  
Resolving a Function-related Performance Issue

### Module 14: Ensuring Data Integrity through Constraints

Enforcing Data Integrity  
Implementing Domain Integrity  
Implementing Entity and Referential Integrity  
Lab : Ensuring Data Integrity through Constraints  
Designing Constraint  
Testing the Constraints

### Module 15: Responding to Data Manipulation via Triggers

Designing DML Triggers  
Implementing DML Triggers  
Advanced Trigger Concepts  
Lab : Responding to Data Manipulation via Triggers  
Creating the Audit Trigger  
Improving the Audit Trigger

### Module 16: Implementing Managed Code in SQL Server

Introduction to SQL CLR Integration  
Importing and Configuring Assemblies  
Implementing SQL CLR Integration  
Lab : Implementing Managed Code in SQL Server  
Assessing Proposed CLR Code  
Implementing a CLR Assembly  
Implementing a CLR User-defined Aggregate and User-defined Type

### Module 17: Storing XML Data in SQL Server

Introduction to XML and XML Schemas  
Storing XML Data and Schemas in SQL Server  
Implementing the XML Data Type  
Lab : Storing XML Data in SQL Server  
Appropriate Usage of XML Data Storage in SQL Server  
Investigating the Storage of XML Data in Variables  
Investigating the Use of XML Schema Collections

Investigating the Creation of Database Columns Based on XML

### Module 18: Querying XML Data in SQL Server

Using the T-SQL FOR XML Statement  
Getting Started with XQuery  
Shredding XML  
Lab : Querying XML Data in SQL Server  
Learning to Query SQL Server Data as XML  
Writing a Stored Procedure Returning XML  
Writing a Stored Procedure that Updates Using XML

### Module 19: Working with SQL Server Spatial Data

Introduction to Spatial Data  
Working with SQL Server Spatial Data Types  
Using Spatial Data in Applications  
Lab : Working with SQL Server Spatial Data  
Familiarity With Geometry Data Type  
Adding Spatial Data to an Existing Table  
Business Application of Spatial Data

### Module 20: Working with Full-Text Indexes and Queries

Introduction to Full-Text Indexing  
Implementing Full-Text Indexes in SQL Server  
Working with Full-Text Queries  
Lab : Working with Full-Text Indexes and Queries  
Implementing a Full-Text Index  
Implementing a Stoplist  
Creating a Stored Procedure to Implement a Full-Text Search

**Course Description:** This three-day instructor-led course teaches students how to implement a Reporting Services solution in an organization. The course discusses how to use the Reporting Services development tools to create reports, and how to use the Reporting Services management and administrative tools to manage a Reporting Services solution.

**Who Should Attend:** This course is intended for information technology (IT) professionals and developers who need to implement reporting solutions by using Microsoft SQL Server 2008 Reporting Services.

**Prerequisites:** Before attending this course, students must have exposure to creating reports in Microsoft Access or other third-party reporting products, such as Crystal Reports. They should also have conceptual understanding of the push and pull distribution/subscription paradigm and experience navigating the Microsoft Windows Server environment. In addition, they should have experience with Windows services (starting and stopping), creating service accounts and permissions, and Microsoft SQL Server (including SQL Server Agent., SQL Server query language, SQL Server System tables, and SQL Server accounts).

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe SQL Server Reporting Services and its components.
- Create a Reporting Services report.
- Enhance a Reporting Services report.
- Create and manipulate data sets.
- Use report models to implement reporting for business users.
- Configure report publishing and execution settings.
- Implement subscriptions for reports.
- Administer Reporting Services.
- Implement custom Reporting Services applications.

## Course Outline:

### Module 1: Introduction to Microsoft SQL Server Reporting Services

Overview of SQL Server Reporting Services  
 Installing Reporting Services  
 Reporting Services Tools  
 Lab : Introduction to Microsoft SQL Server Reporting Services  
 (Level 200) Exploring Report Designer  
 (Level 200) Exploring Report Manager

### Module 2: Authoring Basic Reports

Creating a Basic Table Report  
 Formatting Report Pages  
 Calculating Values  
 Lab : Authoring Basic Reports  
 (Level 200): Creating a Basic Table Report  
 (Level 200): Formatting Report Pages  
 (Level 200): Adding Calculated Values

### Module 3: Enhancing Basic Reports

Interactive Navigation  
 Displaying Data  
 Lab : Enhancing Basic Reports  
 (Level 200) Using Dynamic Visibility  
 (Level 200) Using Document Maps  
 (Level 200) Initiating Actions  
 (Level 200) Using a List Data Region  
 (Level 200) Creating a Tablix Report  
 (Level 200) Adding Chart Subreport to Parent Report

### Module 4: Manipulating Data Sets

Defining Report Data  
 Using Parameters and Filters  
 Using Parameter Lists  
 Lab : Manipulating Data Sets  
 (Level 200) Using Parameters to Restrict Query Results  
 (Level 200) Using Parameters to Filter Report Data  
 (Level 200) Creating Dynamic Parameter Lists  
 (Level 200) Using Parameters with a Stored Procedure  
 (Level 200) Displaying All Categories in a Parameter List

### Module 5: Using Report Models

Creating Report Models  
 Using Report Builder  
 Lab : Using Report Models  
 (Level 200) Creating a Report Model  
 (Level 200) Using Report Builder to Create a Report

### Module 6: Publishing and Executing Reports

Publishing Reports  
 Executing Reports  
 Creating Cached Instances

Creating Snapshots and Report History  
 Lab : Publishing and Executing Reports  
 (Level 200) Publishing Reports  
 (Level 200) Executing Reports  
 (Level 200) Configuring and Viewing a Cached Report  
 (Level 200) Configuring and Viewing a Snapshot Report

### Module 7: Using Subscriptions to Distribute Reports

Introduction to Report Subscriptions  
 Creating Report Subscriptions  
 Managing Report Subscriptions  
 Lab : Using Subscriptions to Distribute Reports  
 (Level 200) Creating a Standard Subscription  
 (Level 200) Creating a Data-Driven Subscription

### Module 8: Administering Reporting Services

Reporting Server Administration  
 Performance and Reliability Monitoring  
 Administering Report Server Databases  
 Security Administration  
 Upgrading to Reporting Services 2008  
 Lab : Administering Reporting Services  
 (Level 200) Using Reporting Services Configuration Manager  
 (Level 200) Securing a Reporting Services Site  
 (Level 200) Securing Items

### Module 9: Programming Reporting Services

Querying for Server Information Using a Web Service  
 Automating Report Management  
 Rendering Reports  
 Creating Custom Code  
 Lab : Programming Reporting Services  
 (Level 200) Using URL Access to Display a Report  
 (Level 200) Building a Reporting Services Web Service Client  
 (Level 200) Using the Report Viewer Control

**Course Description:** At the end of this three-day course, students who are new to Microsoft Exchange Server will learn how to configure and manage a messaging environment in accordance with technical requirements. Students will learn how to install Microsoft Exchange Server 2007 and manage routing, client access, and the backup and restore of databases. They will also learn how to manage addressing and recipient objects such as mailboxes, distribution groups, and contacts.

**Who Should Attend:** IT Professionals, IT generalists, and help desk professionals who want to learn about Exchange Server 2007 are the audience for this course. IT Professionals, IT generalists and help desk professionals should have at least 3 years experience working in the IT field—typically in the areas of network administration, help desk, or system administration. No experience with Exchange Server is necessary.

**Prerequisites:** This course requires that students have working knowledge of Windows Server operating system, working knowledge of network technologies, working knowledge of Active Directory, and conceptual understanding of e-mail technologies.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe how Exchange Server 2007 and the Active Directory directory service work together.
- Install Exchange Server 2007.
- Configure Mailbox server roles.
- Manage recipient objects.
- Manage e-mail and address lists.
- Manage client access.
- Manage Messaging Transport.
- Manage availability, backup and recovery.
- Maintain the messaging system.

## Course Outline:

### Module 1: Overview of Exchange and Active Directory

Review of Active Directory  
Introduction to the Integration of Active Directory and Exchange Server 2007  
Lab : Overview of How Exchange Server 2007 and Active Directory Work Together  
Discussion: Explaining How Exchange Server 2007 and Active Directory Work Together

### Module 2: Installing Exchange Server 2007

Introduction to the Exchange Server 2007 Server Roles  
Installing Exchange Server 2007  
Completing the Exchange Server 2007 Installation  
Lab : Installing Exchange Server 2007  
Preparing the Environment for an Exchange Server 2007 Installation  
Installing Exchange Server 2007 Client Access Server and Hub Transport Server Roles  
Lab : Verifying an Exchange Server 2007 Installation  
Verifying an Exchange Server 2007 Installation

### Module 3: Configuring Mailbox Server Roles

Overview of Exchange Server 2007 Administration Tools  
Implementing Mailbox Server Roles  
Managing Public Folder Databases  
Lab : Configuring Mailbox Servers  
Configuring Storage Groups and Database Files  
Configuring a Public Folder and Store Referrals

### Module 4: Managing Recipient Objects

Managing Mailboxes  
Managing Other Recipients  
Overview of Managing Public Folders  
Lab : Managing Recipient Objects  
Modifying Existing User Mailboxes  
Configuring New Mailboxes and Mail-Enabled Objects  
Managing Resource Mailboxes  
Managing Mailbox Removal

### Module 5: Managing E-Mail Addresses and Address Lists

Configuring E-Mail Address Policies  
Configuring Address Lists  
Overview of Bulk Recipient Management Tasks  
Lab : Managing E-Mail Addresses and Address Lists  
Managing E-Mail Address Policies  
Managing Address Lists  
Performing Recipient Bulk Management Tasks

### Module 6: Managing Client Access

Implementing Client Access Servers  
Implementing Client Access Features  
Implementing Outlook Web Access  
Introduction to Implementing Mobile Messaging  
Lab : Managing Client Access  
Managing Mobile Device Connectivity  
Managing Outlook Web Access

### Module 7: Managing Message Transport

Introduction to Message Transport  
Implementing Message Transport  
Lab : Managing Message Transport and Handling  
Troubleshooting Local Message Delivery  
Troubleshooting Remote Message Delivery  
Troubleshooting Message Transport

### Module 8: Managing Availability, Backup and Recovery

Implementing High-Availability for Mailbox Servers  
Managing a Backup Solution  
Managing a Recovery Solution  
Lab : Managing Backup and Recovery  
Restoring Data using the Recovery Storage Group

### Module 9: Maintaining the Messaging System

Overview of Implementing Change Management  
Overview of Updating Exchange Servers  
Lab : Maintaining the Messaging System  
Determining the Information Necessary for Change Implementation

**Course Description:** This one-day instructor-led course provides messaging specialists with the knowledge and skills to manage messaging security and policies. Students will learn how to manage messaging and connection security. They will also learn how to manage spam, anti-virus, and content filtering. And finally they will learn how to install and configure a gateway server.

**Who Should Attend:** This course is intended for enterprise-level messaging administrators who have at least 3 years experience working in the Information Technology field, including administering Exchange Servers. Others who may take this course include IT generalists and help desk professionals who want to learn about Microsoft Exchange Server 2007. Administrators should have some experience with Exchange Server 2007.

**Prerequisites:** This course requires that students have working knowledge of malware, how Public Key Infrastructure (PKI) is managed in the directory, Windows server operating system, network technologies, Active Directory, and Exchange Server 2007. Students should also have a conceptual understanding of firewalls, and e-mail technologies and know how to configure and manage a messaging environment in accordance with technical requirements. Finally, students should have experience with NTBackup command, NSLookup command, Windows Explorer, Microsoft Management Console (MMC), Active Directory Users and Computers, Active Directory Sites and Services, Internet Information Services (IIS) Admin, and Outlook.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Manage anti-spam and antivirus features.
- Implement messaging policies.
- Configure edge transport servers.

### Course Outline:

#### Module 1: Maintaining Antivirus and Anti-spam Systems

Introduction to Antivirus and Anti-Spam Management  
Implementing Anti-spam Features  
Implementing Antivirus Features  
Lab : Maintaining Antivirus and Anti-Spam Systems  
Reviewing the Contents of the Spam Quarantine  
Discussion: Modifying Spam and Antivirus Settings  
Modifying Spam and Antivirus Settings

#### Module 2: Configuring Edge Transport Servers

Deploying Edge Transport Servers  
Configuring Internet Message Delivery  
Configuring Security for Internet E-Mail  
Lab : Configuring Edge Transport Servers  
Configuring SMTP Connectors to Secure SMTP E-Mail  
Implementing Secure/Multipurpose Internet Mail Extensions (S/MIME)

#### Module 3: Implementing Messaging Policies

Introducing Messaging Policy and Compliance  
Implementing Messaging Records Management  
Implementing Transport Rules  
Lab : Implementing Messaging Policies  
Configuring Domain Security

**Course Description:** This one-day course teaches messaging specialists to recover Exchange mailboxes and servers in a variety of disaster scenarios. Students will learn how to perform full and dial-tone recoveries of a mailbox server, as well as repair a mailbox database. They will also learn how to perform a full recovery of Client Access servers, Hub Transport servers, Unified Messaging servers, and Edge Transport servers.

**Who Should Attend:** The audience for this course includes people who have experience with Exchange Server 2007 or previous Exchange Server versions. These people will have experience installing and configuring Exchange Server, configuring recipients and mailboxes, and supporting Exchange Server clients. People beginning this course are expected to have at least three years experience working in the Information Technology field—typically in the areas of network administration or Windows Server administration—and one year of Exchange Server administration experience.

**Prerequisites:** This course requires that students have working knowledge of malware, how PKI is managed in the directory, Windows Server 2003 operating system, network technologies, Active Directory directory service, and Exchange Server 2007. Students should also have conceptual understanding of firewalls and e-mail technologies. Finally, students should have experience NT Backup, NSLookup, Microsoft Windows Explorer, Microsoft Management Console (MMC), Active Directory Users and Computers, Active Directory Sites and Services, Internet Information Services (IIS) Admin, and Microsoft Office Outlook. Students should have also completed course 5047A: Introduction to Installing and Managing Microsoft Exchange Server 2007 or have equivalent experience.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Recover messaging databases.
- Prepare for and recover from Mailbox server failures.
- Prepare for and recover from non-Mailbox server failures.

### Course Outline:

#### Module 1: Recovering Messaging Databases

Overview of Database Recovery Scenarios  
Recovering a Messaging Database Using Dial-Tone Recovery  
Lab: Recovering Messaging Databases in Exchange Server 2007  
Performing a Storage Group Backup  
Performing a Dial-Tone Recovery  
Repairing a Damaged Database

#### Module 2: Preparing for and Recovering from Mailbox Server Failures

Preparing for a Mailbox Server Recovery  
Recovering Mailbox Servers Overview  
Lab: Preparing for and Recovering from Mailbox Server Failures  
Performing a Mailbox Server Backup  
Recovering a Mailbox Server  
Recovering Mailbox Server Data

#### Module 3: Preparing for and Recovering from Non-Mailbox Server Failures

Preparing for a Non-Mailbox Server Recovery  
Recovering Non-Mailbox Servers  
Lab: Preparing for and Recovering from Non-Mailbox Server Failures  
Performing a Non-Mailbox Server Backup  
Restoring a Client Access Server Certificate  
Restoring a Hub Transport Server  
Restoring an Edge Transport Server

**Course Description:** This two-day workshop teaches messaging specialists to monitor and troubleshoot an Exchange Server 2007 messaging system. Students will learn how to correlate client and server issues and resolve those issues. They will also learn how to monitor systems and create reports from the monitoring data.

**Who Should Attend:** The audience for this course includes people with experience with Exchange Server 2007 or previous versions of Exchange Server. These people will have experience installing and configuring Exchange Server, configuring recipients and mailboxes, and supporting Exchange Server clients. People coming into the course are expected to have at least three years experience working in the Information Technology field—typically in the areas of network administration or Windows Server administration—and one year of Exchange Server administration experience.

**Prerequisites:** This workshop requires that students have experience with Windows Server 2003 operating system, Active Directory directory service in Windows Server 2003, and managing backup and restore on Windows Servers. Students should also have experience administering Exchange Server 2007. Students should have fundamental knowledge of network technologies including DNS and firewall technologies, and experience using Windows management and monitoring tools such as Microsoft Management Console, Active Directory Users and Computers, Performance Monitor, Event Viewer, and IIS Administrator. Finally, students should have experience using Windows networking and troubleshooting tools such as Network Monitor, Telnet, and NSLookup.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Use the Microsoft Exchange Server 2007 Management Pack for Microsoft Operations Manager (MOM) 2005 to monitor Exchange servers.
- Monitor and troubleshoot client performance and connectivity.
- Identify and resolve issues related to access of resources and messages.
- Monitor and troubleshoot mail flow.
- Monitor and troubleshoot Mailbox servers.
- Monitor and troubleshoot external and additional services.
- Identify trends in a messaging system.

## Course Outline:

### Session 1: Unit 1: Introduction to Exchange Server Monitoring and Troubleshooting

Overview  
Introduction to Microsoft Operations Manager  
Introduction to Troubleshooting Exchange Server 2007  
Demonstration: Using MOM to Monitor Exchange Servers  
Lab : Introduction to Exchange Server Monitoring and Troubleshooting  
Developing a Monitoring and Troubleshooting Process

### Session 2: Unit 2: Monitoring and Troubleshooting Client Performance and Connectivity

Overview  
Tools for Monitoring Client Performance and Connectivity  
Process for Troubleshooting MAPI Clients  
Process for Troubleshooting Client Access Server Clients  
Lab : Monitoring and Troubleshooting Client Performance and Connectivity  
Monitoring Client Connectivity  
Troubleshooting AutoDiscover Issues  
Troubleshooting a Client Access Server Issue

### Session 3: Unit 3: Troubleshooting Access to Resources and Messages

Overview  
How Public Folder Access Works  
How Calendaring Works  
Process for Troubleshooting Client Access Server Issues  
Lab : Troubleshooting Access to Messaging Contents  
Troubleshooting a Public Folder Access Issue  
Troubleshooting a Calendaring Issue  
Troubleshooting an Outlook Web Access Issue

### Session 4: Unit 4: Monitoring and Troubleshooting Mail Flow

Overview  
Discussion: Tools for Monitoring Mail Flow  
Demonstration: Troubleshooting Message Transport Using Exchange Server 2007 Tools  
Process for Troubleshooting Internal Mail Flow  
Process for Troubleshooting External Mail Flow  
Lab : Monitoring and Troubleshooting Mail Flow  
Configuring MOM to Monitor Message Flow  
Troubleshooting Internet E-Mail Delivery  
Troubleshooting Spam Filtering  
Troubleshooting Outbound Internet E-mail Delivery

### Session 5: Unit 5: Monitoring and Troubleshooting Mailbox Servers

Overview  
Tools for Monitoring and Troubleshooting Mailbox Servers

Process for Troubleshooting Mailbox Servers  
Demonstration: Troubleshooting Mailbox Server Performance Issues  
Lab : Monitoring and Troubleshooting Mailbox Servers  
Configuring the monitoring of Mailbox servers  
Troubleshooting a Mailbox Logon Issue  
Troubleshooting a Hard Disk Failure  
Troubleshooting a Mailbox Database Mounting Issue

### Session 6: Unit 6: Monitoring and Troubleshooting External and Additional Services

Overview  
Discussion: External and Additional Services Required by Exchange Server 2007  
External Services Required for Unified Messaging in Exchange Server 2007  
Monitoring External Services with MOM 2005  
Lab : Monitoring and Troubleshooting External and Additional Services  
Configuring the Monitoring of External Services  
Troubleshooting an External Services Dependency for Exchange Server 2007  
Discussion: Impact of External and Additional Services on Exchange Environments

### Session 7: Unit 7: Identifying Trends in a Messaging System

Overview  
Tools for Identifying Trends in a Messaging System  
Exchange Server 2007 Management Pack MOM Reports  
Discussion: Information Required to Identify and Resolve Trends  
Lab : Identifying Trends in a Messaging System  
Evaluating Messaging Reports  
Recommending Configuration Changes

**Course Description:** This five-day, instructor-led course will provide you with the knowledge and skills to configure and manage an Exchange Server 2010 messaging environment. This course does not require previous Exchange Server experience, but does require that students have significant experience in managing Windows Server and Active Directory directory services or Active Directory Domain Services (AD DS). This course will teach you how to configure Exchange Server 2010, as well as provide guidelines, best practices, and considerations that will help you optimize your Exchange Server deployment.

**Who Should Attend:** This course is intended for people aspiring to be enterprise-level messaging administrators. Others who may take this course include IT generalists and help desk professionals who want to learn about Exchange Server 2010. People coming into the course are expected to have at least three years experience working in the IT field, typically in the areas of network administration, help desk, or system administration. They are not expected to have experience with previous Exchange Server versions.

**Prerequisites:** In addition to their professional experience, students who attend this training should have the following prerequisite knowledge: fundamental knowledge of network technologies including Domain Name System (DNS) and firewall technologies; experience with the Windows Server 2003 and Microsoft Windows Server 2008 operating systems; experience with Active Directory directory services in Windows Server 2003 or AD DS Windows Server 2008; experience managing backup and restore on Windows Servers; experience using Windows management and monitoring tools such as Microsoft Management Console, Active Directory Users and Computers, Performance Monitor, Event Viewer, and Internet Information Services (IIS) Administrator; experience using Windows networking and troubleshooting tools such as Network Monitor, Telnet, and NSLookup; fundamental knowledge of certificates and Public Key Infrastructure (PKI); and basic experience with Windows Mobile.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Install and deploy Exchange Server 2010.
- Configure Mailbox servers and Mailbox server components.
- Manage recipient objects.
- Configure the Client Access server role.
- Manage message transport.
- Configure the secure flow of messages between the Exchange Server organization and the Internet.
- Implement a high availability solution for Mailbox servers and other server roles.
- Plan and implement backup and restore for the server roles.
- Plan and configure messaging policy and compliance.
- Configure Exchange Server permissions and security for internal and external access.
- Monitor and maintain the messaging system.
- Transition an Exchange Server 2003 or Exchange Server 2007 organization to Exchange Server 2010.
- Configure the Unified Messaging server role and Unified Messaging components.
- Implement High Availability across multiple sites and implement Federated Sharing.

## Course Outline:

**Module 1: Deploying Microsoft Exchange Server 2010**This module describes how to prepare for, and perform, an Exchange Server 2010 installation. It also provides details on the Exchange Server 2010 deployment.Lessons  
Overview of Exchange Server 2010 Requirements  
Installing Exchange Server 2010 Server Roles  
Completing an Exchange Server 2010 Installation  
Lab : Installing Exchange Server 2010 Evaluating Requirements for an Exchange Server Installation  
Preparing for an Exchange Server 2010 Installation  
Installing Exchange Server 2010 Lab : Verifying an Exchange Server 2010 Installation  
Verifying an Exchange Server 2010 Installation

**Module 2: Configuring Mailbox Servers**This module describes the management tools that you can use to manage Exchange Server 2010. It also describes the Mailbox server role, some of the new Exchange Server 2010 features, the most common Mailbox server role post-installation tasks, and public folders.Lessons  
Overview of Exchange Server 2010 Administrative Tools  
Configuring Mailbox Server Roles

Configuring Public Folders  
Lab : Configuring Mailbox Servers  
Configuring Mailbox Databases  
Configuring Public Folders

**Module 3: Managing Recipient Objects**This module describes how you can manage recipient objects, address policies, and address lists in Exchange Server 2010. It also describes procedures for performing bulk management tasks in Exchange Management Shell.Lessons  
Managing Mailboxes  
Managing Other Recipients  
Configuring E-Mail Address Policies  
Configuring Address Lists  
Performing Bulk Recipient Management Tasks  
Lab : Managing Recipient Objects  
Managing Recipients  
Configuring E-Mail Address Policies  
Configuring Address Lists  
Performing Bulk Recipient Management Tasks

**Module 4: Managing Client Access**This module provides details on how to implement the Client Access server role in Exchange Server 2010.Lessons  
Configuring the Client Access Server Role  
Configuring Client Access Services for Outlook Clients  
Configuring Outlook Web App  
Configuring Mobile Messaging  
Lab : Configuring Client Access

Servers for Outlook Anywhere Access  
Configuring Client Access Servers  
Configuring Outlook Anywhere  
Lab : Configuring Client Access Servers for Outlook Web App and Exchange ActiveSync  
Configuring Outlook Web App  
Configuring Exchange ActiveSync

**Module 5: Managing Message Transport**This module details how to manage message transport in Exchange Server 2010. It also describes how to deploy and configure the Hub Transport server.Lessons  
Overview of Message Transport  
Configuring Message Transport  
Lab : Managing Message Transport  
Configuring Internet Message Transport  
Troubleshooting Message Transport  
Troubleshooting Internet Message Delivery

**Module 6: Implementing Messaging Security**This module describes how to plan for and deploy the Edge Transport server role and the security issues related to the deployment. It also describes how to configure secure SMTP messaging as well as Domain Security.Lessons  
Deploying Edge Transport Servers  
Deploying an Antivirus Solution  
Configuring an Anti-Spam Solution  
Configuring Secure SMTP Messaging

Lab : Configuring Edge Transport Servers and Forefront Protection 2010  
Configuring Edge Transport Servers  
Configuring ForeFront Protection 2010 for Exchange Servers  
Lab : Implementing Anti-Spam Solutions  
Configuring an Anti-Spam Solution on Edge Transport Servers

**Module 7: Implementing High Availability**This module describes the high availability technology built into Exchange Server 2010 and some of the outside factors that affect highly available solutions.Lessons  
Overview of High Availability Options  
Configuring Highly Available Mailbox Databases  
Deploying Highly Available Non-Mailbox Servers  
Lab : Implementing High Availability  
Deploying a DAG  
Deploying Highly Available Hub Transport and Client Access Servers  
Testing the High Availability Configuration

**Module 8: Implementing Backup and Recovery**This module describes the backup and restore features built into Exchange Server 2010 and considerations for creating a suitable backup plan.Lessons  
Planning Backup and Recovery  
Backing Up Exchange Server 2010  
Restoring Exchange Server 2010

Lab : Implementing Backup and Recovery  
Backing Up Exchange Server 2010  
Restoring Exchange Server Data  
Restoring Exchange Servers (optional)

**Module 9: Configuring Messaging Policy and Compliance**This module describes how to configure the Exchange Server 2010 messaging policy and compliance features.Lessons  
Introducing Messaging Policy and Compliance  
Configuring Transport Rules  
Configuring Journaling and Multi-Mailbox Search  
Configuring Messaging Records Management  
Configuring Personal Archives  
Lab : Configuring Transport Rules, Journal Rules, and Multi-Mailbox Search  
Configuring Transport Rules  
Configuring Journal Rules and Multi-Mailbox Search  
Lab : Configuring Messaging Records Management and Personal Archives  
Configuring Messaging Records Management  
Configuring Personal Archives

**Module 10: Securing Microsoft Exchange Server 2010**This module describes how to configure administrative permissions with Role Based Access Control and how to secure the Exchange Server configuration.Lessons  
Configuring Role Based Access Control  
Configuring Security for Server Roles in Exchange Server 2010  
Configuring Secure Internet Access  
Lab : Securing Exchange Server 2010  
Configuring Exchange Server Permissions  
Configuring a Reverse Proxy for Exchange Server Access

**Module 11: Maintaining Microsoft Exchange Server 2010**This module describes how to monitor and maintain Exchange Server 2010. It also describes how to troubleshoot Exchange Server when problems arise.Lessons  
Monitoring Exchange Server 2010  
Maintaining Exchange Server 2010  
Troubleshooting Exchange Server 2010  
Lab : Maintaining Exchange Server 2010  
Monitoring Exchange Server 2010  
Troubleshooting Database Availability  
Troubleshooting Client Access Servers

**Module 12: Upgrading from Exchange Server 2003 or Exchange Server 2007 to Exchange Server 2010**This module describes how to upgrade an existing Exchange Server 2003 or Exchange Server 2007 organization to an Exchange Server 2010 organization. It also describes the various considerations for implementing coexistence between the two messaging systems after an Exchange Server 2010 deployment.**Lessons**

Overview of Upgrading to Exchange Server 2010

Upgrading from Exchange Server 2003 to Exchange Server 2010

Upgrading from Exchange Server 2007 to Exchange Server 2010

**Module 13: Implementing Unified Messaging**This appendix describes how Unified Messaging integrates Exchange Server with telephony networks. It also describes how to configure Unified Messaging.**Lessons**

Overview of Telephony

Introducing Unified Messaging

Configuring Unified Messaging

Lab : Implementing Unified

Messaging

Installing and Configuring Unified

Messaging Features

**Module 14: Advanced Topics in Exchange Server 2010**

This appendix provides an overview of how to implement a highly available Exchange Server 2010 deployment across multiple data centers. It also describes how to deploy Federated Sharing.

**Lessons**

Deploying Highly Available Solutions for Multiple Sites

Implementing Federated Sharing

**Course Description:** In this course, you will explore the core components of SharePoint Services 3.0 as well as the types of solutions that it provides. In addition, you will learn about the administrative tools and security model of SharePoint 3.0.

**Who Should Attend:** This course is for SharePoint Site Administrators and Site Contributors and others wishing to learn about SharePoint Services 3.0.

**Prerequisites:** Students should have experience implementing, managing, and supporting Microsoft Windows Server 2003, including Internet Information Services (IIS). They should also have working knowledge of networking, for example, TCP/IP and Domain Name System (DNS). It is also recommended that students have on-the-job experience implementing, managing, and supporting Windows SharePoint Services 2.0.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe the design goals, solutions, and core components of SharePoint Services 3.0.
- Describe the solutions provided by integrating SharePoint Services 3.0 with Office 2007 client applications, Exchange Server 2007, and other technologies.
- Describe the administrative considerations, administration model, tools, and tasks, and the security model of SharePoint Services 3.0.

## Course Outline:

### Introduction to Windows SharePoint Services

Understanding the Components of Site Collections

### Introduction to a Site Collection Administration

Security  
Creating Subsites  
Creating and Managing Lists and Libraries  
Announcements  
Contacts  
Discussion Boards  
Tasks  
Links  
Calendar  
Survey

### Using with SharePoint Sites

Navigation  
Working with a Document Library  
Using Workflows in a Document Library  
SharePoint Lists

### Introduction to Web Parts

**Course Description:** This class builds on the lessons taught in SharePoint Services 3.0 Introduction and teaches more advanced topics.

**Who Should Attend:** This course is for SharePoint Site Administrators and Site Contributors and for students who have a need to set up and use a collaborative environment using a web based environment.

**Prerequisites:** Students should have taken Windows SharePoint Services 3.0 Introduction, and have working knowledge of web skills (i.e. using links, typing in URL's) and Microsoft Office Applications, especially Outlook.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Use the more advanced features of SharePoint Services 3.0.

### Course Outline:

#### Lists – Additional Topics

List Advanced Options  
Additional Column Types  
Additional Views and View Features  
Working with Excel 2007  
Working with Access 2207  
Sending an E-Mail to a SharePoint List

#### Libraries – Additional Topics

Creating a Form Library  
Document Libraries

#### Document Workspaces

Creating in SharePoint  
Creating within Office 2007  
Accessing a Document Workspace  
Using Office 2007 Document Management Task Pane  
Publishing a Document Back to a Document Library

#### Meeting Workspaces

Creating a Meeting Workspace  
Adding Items  
Creating a Meeting Workspace from Outlook 2007

#### Discussion Boards

Enabling for E-Mail  
Viewing in Outlook 2007

#### Managing Site Content Syndication (RSS)

Using RSS  
Using RSS with a Blog  
Configuring an RSS Feed

#### Workflows

Work with Workflow in Outlook 2007

#### Permissions

Library-Level Permissions (Securing a Library)  
Item-Level Permissions  
Creating Groups with Unique Permissions

#### Sites

Creating a New Part Page by Using a Browser  
Managing Site Features (specifically Team Collaboration Lists)  
Saving and Using a Site Template

**Course Description:** This two-day instructor-led course provides students with the knowledge and skills to successfully implement Microsoft Windows SharePoint Services (WSS) version 3.0 in their organizations. It emphasizes that students should think about the architecture of their entire environment, including business and application needs, during the planning and deployment phases. The course covers how to perform a clean installation of WSS 3.0 and also describes all the prerequisites required to select the most appropriate method for upgrading WSS from 2.0 to 3.0 in a specific scenario. In addition, the course focuses on how to manage WSS after it is configured.

**Who Should Attend:** This course is intended for Business Application Administrators (BAAs) who are engaged in the planning, design, and selection of Line of Business (LOB) applications, including Microsoft Office SharePoint Server (MOSS), in conjunction with internal business customers. Their primary responsibility is the deployment, customization, management, and support of LOB applications. They routinely monitor application status and troubleshoot application problems. The audience is expected to have at least two years of experience in implementing, managing, and supporting Microsoft Windows Server 2003, including Internet Information Services (IIS).

**Prerequisites:** Before attending this course, students must have on-the-job experience in implementing, managing, and supporting Microsoft Windows Server 2003, including IIS; working knowledge of networking; and basic knowledge of key benefits of Microsoft Office SharePoint Server (MOSS), new features and functionality of MOSS, and WSS acting as a platform for MOSS.

In addition, it is recommended, but not required, that students have completed a clinic on getting started with Windows SharePoint Service 3.0.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe how the Windows SharePoint Services 3.0 platform helps address collaboration challenges.
- Plan the Windows SharePoint Services 3.0 environment.
- Install Windows SharePoint Services 3.0.
- Identify the most appropriate method to upgrade Windows SharePoint Services from 2.0 to 3.0 in a given scenario.
- Manage Windows SharePoint Services 3.0.

### Course Outline:

#### Introduction to the Windows SharePoint Services 3.0 Platform

Overview of Windows SharePoint Services 3.0  
Collaboration Technologies Offered by Windows SharePoint Services 3.0  
Lab: Identifying How WSS Helps Address Collaboration Challenges  
Identifying the Collaboration Challenges in Your Organization  
Identifying the Windows SharePoint Services 3.0 Features that Help Address Collaboration Challenges

#### Planning the Windows SharePoint Services 3.0 Environment

Determining Organizational and User Needs  
Planning Site Creation, Maintenance, and Security  
Planning Server Requirements and Topologies  
Lab: Planning the Topology for WSS Installation  
Determining Disk Space Requirements  
Determining Peak Throughput  
Identifying the Topology for a Windows SharePoint Services 3.0 Installation  
Justifying Your Topology Plan

#### Installing Windows SharePoint Services 3.0

Performing a Clean Installation of Windows SharePoint Services 3.0  
Installing and Configuring the Central Administration Site  
Creating and Configuring Sites  
Lab: Installing and Configuring the Central Administration Site  
Installing the Central Administration Site  
Configuring the Services on the Windows SharePoint Services 3.0 Server  
Lab: Creating a Web Application and Site Collection  
Creating a Web Application  
Creating a Site Collection  
Starting the Windows SharePoint Services Search Service  
Configuring the Alternate Access Mappings

#### Upgrading from Windows SharePoint Services 2.0 to 3.0

Planning for an Upgrade of Windows SharePoint Services  
Preparing to Perform an Upgrade  
Lab: Determining Upgrade Methods and Remedies to Possible Upgrade Issues  
Identifying the Appropriate Upgrade Method  
Identifying the Solutions to Possible Upgrade Issues

#### Managing Windows SharePoint Services 3.0

Managing Windows SharePoint Services 3.0 Sites  
Managing the Windows SharePoint Services 3.0 Server  
Lab: Managing Windows SharePoint Services 3.0  
Managing Site Settings  
Troubleshooting Windows SharePoint Services 3.0 Server Performance Issues

**Course Description:** This in-depth, two-day, instructor-led course provides students with the knowledge of using Windows SharePoint Services 3.0 to create reusable and modular Web sites for use in intranet, extranet, or Internet scenarios. Students will learn how to manage access to information stored within a SharePoint environment, how to perform common object model tasks, and how to create Web parts to customize user interfaces. Participants will also learn how to use Web services for data requests transactions, how to create and deploy event receivers, and how to utilize Windows Workflow Foundation.

**Who Should Attend:** This course is intended for Developers and IT Professionals.

**Prerequisites:** There are no prerequisites.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Discuss the Windows SharePoint Services 3.0 architecture and the key elements in Windows SharePoint Services 3.0, such as site collections, Webs, lists, and Web Parts.
- Understand the new Windows SharePoint Services 3.0 features, such as galleries, master pages, site columns, content types, and workflow.
- Understand the new features available only through Microsoft Office SharePoint Server 2007.
- Extend an existing Web application with the ASP.NET 2.0 pluggable authentication.
- Configure user access to a Windows SharePoint Services 3.0 environment and configure user permissions, and implement security with Users/Groups, SharePoint objects, and permission levels.
- Understand the ASP.NET 2.0 and Windows SharePoint Services 3.0 Web Part infrastructure, and the SharePoint Page and Web Part life cycles.
- Use the Microsoft Visual Studio Extensions for Windows SharePoint Services Framework to build a custom Web Part.
- Understand the advantages and limitations of Web service orientation in SharePoint technologies.
- Use Windows SharePoint Services 3.0 Web services in development projects.
- Create an application that uses SharePoint's Web services to extend SharePoint functionality.

### Course Outline:

#### Module 1: SharePoint Primer: Overview and Enhancements from Earlier Versions

Windows SharePoint Services 3.0 Architecture  
Key Elements in Windows SharePoint Services 3.0  
New Features in Windows SharePoint Services 3.0  
New Features in Office SharePoint Server

#### Module 2: Authentication and Authorization

Background  
IIS Built-In Authentication  
ASP.NET 2.0 Pluggable Authentication  
Windows SharePoint Services Authorization  
Advanced Authorization  
Lab : Configure Multiple Authentication Providers in C#  
Exercise 1: Extend Existing Web Application  
Exercise 2: Prepare Membership Provider  
Exercise 3: Modify Web.Config  
Exercise 4: Establish Central Administration Settings  
Exercise 5: Test Dual Authentication  
Lab : Configure Multiple Authentication Providers in Visual Basic  
Exercise 1: Extend Existing Web Application  
Exercise 2: Prepare Membership Provider  
Exercise 3: Modify Web.Config  
Exercise 4: Establish Central Administration Settings  
Exercise 5: Test Dual Authentication

#### Module 3: Fundamentals of the Object Model and Web Parts

Overview of ASP.NET 2.0 and Windows SharePoint Services 3.0 Object Model  
Windows SharePoint Services 3.0 Web Part Infrastructure  
Page and Web Part Life Cycles  
Custom Web Part Development  
Visual Studio Extensions for Windows SharePoint Services 3.0  
10 Steps to Creating Custom Web Parts  
Lab : Create a Web Part Using VSeWSS in C#

Exercise 1: Create a Custom Web Part Using VSeWSS  
Exercise 2: Modify a Custom Web Part Using VSeWSS  
Exercise 3: Sharpen the Logic and Rendering of the Web Part  
Lab : Create a Web Part Using VSeWSS in Visual Basic  
Exercise 1: Create a Custom Web Part Using VSeWSS  
Exercise 2: Modify a Custom Web Part Using VSeWSS  
Exercise 3: Sharpen the Logic and Rendering of the Web Part

#### Module 4: Web Services

Advantages and Limitations of Web Services Orientation in Windows SharePoint Services  
Introduction to Web Services Provided in Windows SharePoint Services 3.0  
Windows SharePoint Services 3.0 Web Services in Development Projects  
Lab : C# Coding with Lists.aspx Web Service  
Exercise 1: Build the Windows Central Application  
Exercise 2: Add Controls to the Form  
Exercise 3: Add the Code Behind  
Exercise 4: Run the Application  
Lab : Visual Basic Coding with Lists.aspx Web Service  
Exercise 1: Build the Windows client application  
Exercise 2: Add Controls to the Form  
Exercise 3: Add the Code Behind  
Exercise 4: Run the Application

#### Module 5: Events

Event Receiver Basics  
SharePoint Objects that Support Event Receivers  
Steps to Create an Event Receiver  
Deploying Event Receivers  
Lab : Creating and Deploying a Preprocess Web Event Receiver in C#  
Exercise 1: Create Event Receiver  
Exercise 2: Building and Deploying Event Receiver  
Exercise 3: Activate Event Receiver through Object Model  
Exercise 4: Test Event Receiver

Lab : Creating and Deploying a Preprocess Web Event Receiver in Visual Basic  
Exercise 1: Event Receiver Creation  
Exercise 2: Building and Deploying Event Receiver  
Exercise 3: Activate Event Receiver through Object Model  
Exercise 4: Test Event Receiver

#### Module 6: Workflow

Implementation in Windows SharePoint Services 3.0  
Create Workflows with SharePoint Designer 2007  
Lab : Creating a Workflow Using SharePoint Designer  
Exercise 1: Author Bug Testing Workflow  
Exercise 2: Set Up Conditions and Actions  
Exercise 3: Process Bug Test Result  
Exercise 4: Create Instance of Submission Approval Workflow  
Exercise 5: Review Workflow Objects Created in SharePoint Designer

**Course Description:** This three-day instructor-led course provides students with the knowledge and skills required to implement Microsoft Office 2007 SharePoint Server successfully in their organization

**Who Should Attend:** The audience for this course is Business Application Administrators (BAAs), Web Administrators and Server Administrators who are engaged in the planning, design, and selection of line-of-business (LOB) applications (including Office SharePoint Server) in conjunction with internal business customers. Their primary responsibility is the deployment, customization, management, and support of LOB applications. They routinely monitor application status and troubleshoot application problems.

**Prerequisites:** Before attending this course, students must have experience in implementing, managing, and supporting a Microsoft Windows SharePoint Services 3.0 environment. They must also have basic knowledge of Windows SharePoint Services and Microsoft Office 2007 SharePoint Server interoperability; at least two years of experience implementing, managing, and supporting Microsoft Windows Server 2003 and implementing, managing, and supporting Internet Information Services (IIS). Students should also have working knowledge of networking.

In addition, it is recommended, but not required, that students have completed Implementing Windows SharePoint Services 3.0., First Look: Getting Started with Microsoft Office 2007 SharePoint Server, and Administering Microsoft SharePoint Portal Server 2003.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Describe Microsoft Office 2007 SharePoint Server.
- Plan for and design a Microsoft Office 2007 SharePoint Server implementation.
- Deploy Microsoft Office 2007 SharePoint Server.
- Administer Microsoft Office 2007 SharePoint Server.
- Implement a portal solution with Microsoft Office 2007 SharePoint Server.
- Implement a content management solution with Microsoft Office 2007 SharePoint Server.
- Implement a business intelligence solution with Microsoft Office 2007 SharePoint Server.
- Implement a search and indexing solution with Microsoft Office 2007 SharePoint Server.
- Maintain and optimize Microsoft Office 2007 SharePoint Server.

## Course Outline:

### Overview of Microsoft Office 2007 SharePoint Server

Introduction to Microsoft Office 2007 SharePoint Server  
Integrating Microsoft Office 2007 SharePoint Server in the Enterprise  
Microsoft Office 2007 SharePoint Server Architecture

### Planning and Designing for Microsoft Office 2007 SharePoint Server

Preparing for a Microsoft Office 2007 SharePoint Server Implementation  
Planning and Designing for Non-Functional Requirements  
Lab: Documenting Non-Functional Requirements for Microsoft Office 2007 SharePoint Server Solutions

Preparing for a Microsoft Office 2007 SharePoint Server Implementation  
Defining Non-Functional Requirements for Microsoft Office 2007 SharePoint Server

### Deploying Microsoft Office 2007 SharePoint Server

Microsoft Office 2007 SharePoint Server Deployment Architecture  
Installing Microsoft Office 2007 SharePoint Server  
Managing Shared Service Providers  
Lab: Planning for and Deploying Microsoft Office 2007 SharePoint Server  
Creating Deployment Plans for Microsoft Office 2007 SharePoint Server  
Installing Microsoft Office 2007 SharePoint Server

### Administering Microsoft Office 2007 SharePoint Server

Creating Microsoft Office 2007 SharePoint Server Sites  
Managing Microsoft Office 2007 SharePoint Server Features  
Lab: Managing Sites and Features  
Creating and Managing Microsoft Office 2007 SharePoint Server Sites  
Activating and Deactivating Microsoft Office 2007 SharePoint Server Features

### Implementing Portal Solutions

Creating Portal Sites  
Implementing Collaborative Features  
Implementing Users Profiles and Audiences  
Lab: Implementing Collaborative Features in Portal Sites  
Creating and Managing Portal Sites  
Managing Personal Sites  
Managing User Profiles and Targeting

### Implementing Content Management Solutions

Overview of Content Management  
Managing Documents and Content with Microsoft Office 2007 SharePoint Server  
Implementing Content Management Processes  
Implementing Content Management Policies  
Lab: Implementing Content Management Sites and Processes

Creating Content Management Sites  
Managing Authoring Workflows and Processes  
Lab: Implementing Auditing and Policies  
Planning Records Management Solutions  
Implementing Records Management Solutions  
Creating Records Management Solutions

### Implementing Business Intelligence Solutions

Configuring and Incorporating Business Data Catalog Applications into Portal Solutions  
Implementing Microsoft Office 2007 SharePoint Server Excel Services  
Implementing Business Intelligence Dashboards  
Creating Report Center Web Sites  
Implementing Microsoft Office 2007 SharePoint Server Forms Server  
Lab: Implementing Business Intelligence Solutions with Microsoft Office 2007 SharePoint Server  
Creating Business Data Catalog Applications  
Implementing Excel Services  
Creating Business Intelligence Dashboards  
Creating Server-Side InfoPath Forms  
Deploying Server-Side InfoPath Forms

### Implementing Search and Indexing

Overview of Implementing Microsoft Office 2007 SharePoint Server Search and Indexing  
Implementing Search  
Lab: Implementing Microsoft Office 2007 SharePoint Server Search and Indexing  
Defining Content Sources and Scopes  
Building Indexes  
Performing Searches

### Maintaining and Optimizing Microsoft Office 2007 SharePoint Server

Implementing Microsoft Office 2007 SharePoint Server Backup and Restore  
Monitoring Microsoft Office 2007 SharePoint Server  
Performance Tuning and Optimization of Microsoft Office 2007 SharePoint Server Solutions  
Lab: Backing Up and Restoring Microsoft Office 2007 SharePoint Server Configurations and Data  
Performing Backups Operations  
Performing Restore Operations  
Lab: Monitoring and Optimizing Microsoft Office 2007 SharePoint Server Solutions  
Monitoring Microsoft Office 2007 SharePoint Server  
Optimizing Microsoft Office 2007 SharePoint Server

**Course Description:** In this course, students will learn the core features and functions of SharePoint Designer 2007.

**Who Should Attend:** This course is for anyone interested in learning the basics of SharePoint Designer 2007.

**Prerequisites:** Students should have Windows XP: Basic or equivalent experience.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Create and apply templates
- Control layout and spacing
- Create and apply style sheets
- Create tables and forms
- Fix typical website problems

### Course Outline:

#### Getting started

Internet basics  
The SharePoint Designer workspace  
Page editing  
HTML

#### Web sites

Site planning basics  
Creating a Web site  
Templates

#### Text formatting

Text basics  
Structural formatting SharePoint Designer 2007: Basic Activity-Level Outline  
Cascading Style Sheets

#### Web page layout

Basic CSS layout  
Basic layout techniques

#### Images

Image formats and properties  
Working with images

#### Hyperlinks

Basic hyperlinks  
Link styles  
Image maps

#### Tables

Working with tables  
Table-based layouts

#### Publishing

Proofing tools  
Web site publishing

**Course Description:** The course uses a combination of lecture, hands-on practice, and independent exercises to build on the skills and concepts taught in SharePoint Designer 2007: Basic. Students learn how to create dynamic components, work with multimedia files, create interactive content, design with layers, and create tables and forms. Students also learn the basics of data-driven Web sites, and how to fix typical Web site problems.

This SharePoint Designer course teaches you how to build web pages with SharePoint Designer software. Web pages can be used on SharePoint sites and other web sites as well. This course does not teach you how to use SharePoint.

**Who Should Attend:** This course is intended for persons familiar SharePoint Designer.

**Prerequisites:** Students should have taken SharePoint Designer 2007: Basic or have equivalent experience.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Create a dynamic date and time stamp, create a site map, insert Flash animations, Windows Media Player files, and QuickTime movies, and set their display properties
- Create basic rollovers, apply behaviors, specify the events and actions that comprise behaviors, create custom rollovers, and apply the Swap Images behavior to create rollovers and disjoint rollovers.
- Create layers and assign IDs, position layers, control the stacking order of layers, set specific values to position a layer precisely, control layer visibility, and create dynamic layers.
- Create layout tables and layout cells to build a page layout, draw layout cells, create a fluid layout, and apply basic formatting options to layout tables and cells.
- Create forms and insert and modify a variety of input fields, apply validation rules to text fields and option buttons, and test the validations to verify their functionality.
- Identify the functionality and advantages of dynamic Web sites, discuss the basics of database connectivity and Web Parts, identify basic concepts regarding the applications students can create by using Web Parts, and apply an XML data source to a Web page.

### Course Outline:

#### Web Components and Multimedia

Web components  
Multimedia

#### Interactive Content

Interactive buttons  
Behaviors  
Rollovers

#### Layers

Creating layers  
Layer visibility

#### Layout Tables

Creating layout tables  
Working with layout tables

#### Web Forms

Creating forms  
Input validation

#### Data-Driven pages

Introduction to dynamic pages  
Web Parts  
Data Views

#### Site Management

Basic search engine optimization  
Compatibility testing  
Reports  
Accessibility

**Course Description:** This 4-day class combines 'Site Member' and 'Site Owner' courses, to provide comprehensive training that will present students with a ground-up understanding for how to use, operate and build sites in a Microsoft Office SharePoint Server 2007 environment. Students first learn about site navigation, data storage and retrieval through instructor-led modules covering navigation, search and effective use of lists and libraries. Building on this information, students then take a deeper dive into site administration, learning how to create and manage sites, lists, libraries, views and workflows. Security and rights administration are also covered. Functional concepts and best practices are interwoven into the material, providing a framework for the topics discussed. This course is oriented to Microsoft Office SharePoint Server, but is also applicable to Windows SharePoint Services 3.0.

**Purpose**

**Who Should Attend:** This course combines focus and understanding for those contributing to, building, or managing MOSS 2007 sites, MOSS 2007 users who want to develop a better understanding of how to efficiently find content, use and contribute to collaborative sites, MOSS 2007 users who are responsible for managing one or more sites or site components, such as lists and libraries, and Help Desk personnel who provide support to end users that use or manage MOSS 2007 sites.

**Prerequisites:** Students taking this course should have basic knowledge of Microsoft Office 2007 products and be familiar with Internet Explorer.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Understand the use, creation and management of Microsoft Office SharePoint Server 2007 sites.
- Effectively navigate and contribute content within the framework of a collaborative environment.
- Build and manage site components, structured around efficient maintenance and consumption.
- Understand core best practices provide students with context for employment of the functionality taught.

**Course Outline:****Module 1: Introduction to Microsoft Office SharePoint Server 2007**

Overview of SharePoint  
Get Started in SharePoint  
Search for Content  
Use Alerts  
Welcome User Links  
Personalize SharePoint Page

**Module 2: Work with Lists**

How to add and modify content  
Overview of Default Lists and List Templates  
Add, Modify and Delete Content in SharePoint Lists  
Sort and Filter Content  
Advanced List Features  
Use Default and Custom Views  
Connect a List to Microsoft Outlook

**Module 3: Work with Document Libraries**

Overview of Document Libraries  
Create and Upload Documents  
View and Edit Documents and Document Properties  
Document Management Features  
Use Workflows in a Document Library

**Module 4: Lists and Libraries**

Create Lists and Libraries  
Manage List and Library settings  
Create and manage individual list and library columns and Site Columns  
Create and manage of Views

**Module 5: Customize SharePoint Sites Using Web Parts**

Introduction to Web Parts  
Add, close, and delete Web Parts  
Customize Web Part properties  
Web Parts that allow content targeting

**Module 6: Create Sites and Web Pages**

Create new sites  
Create Basic and Web Part Pages

**Module 7: Secure SharePoint Sites**

Introduction to SharePoint Security  
Manage User Access to SharePoint Sites  
Manage SharePoint Groups and Users  
Best practices for assigning permissions in SharePoint

**Module 8: Manage the Look and Feel of Sites**

Customize the site title, description, and icon  
Configure navigation settings  
Left Navigation Panel Options  
Apply site themes  
Create site templates

**Module 9: Manage Workflows**

Overview of workflows  
Workflow administration  
Build custom workflows

**Module 10: Content Types**

Overview of Content Types  
Create New Content Types  
Add Columns to Content Types  
Associate Content Types with Workflows

**Module 11: Site Administration**

Introduction to site administration settings  
Manage regional settings  
View site usage data  
Manage user alerts  
Manage RSS Usage  
Manage sites and workspaces  
Site Features

**Module 12: Use Collaborative Sites**

Document Workspaces  
Meeting Workspaces  
Wiki Sites  
Blog Sites

**Module 13: Effective Use of My Sites**

Benefits and creation of a My Site  
Navigation and modification of a My Site  
Use a My Site to advertise information about yourself  
Collaborate with colleagues  
Keep track of content  
Use a My Site to store personal and public files  
Office 2007 integration with a My Site  
Using Outlook Web Access Web Parts  
Best practices for using a My Site

**Course Description:** This 5-day deep-dive will guide individuals through the process of architecting and setting up SharePoint 2007 applications and customizations from an Operations viewpoint.

**Who Should Attend:** This course is intended for individuals who access information on a Windows SharePoint team site or SharePoint site owners who are responsible for creating and managing a team website. This includes managers, developers, designers, and every day knowledge workers, anyone that uses SharePoint sites and lists on an everyday basis.

**Prerequisites:** Before attending this course, students must have experience managing windows server environments and an understanding of database and web application architecture fundamentals.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Understand every aspect of managing a SharePoint 2007 Server farm.
- Integrate with applications such as IRM, ForeFront, and Performance Point.
- Understand the many ways to back up and restore SharePoint environments.

### Course Outline:

#### Module 1: OverviewLessons

What is SharePoint?  
Why SharePoint 2007?  
SharePoint 2007 Benefits

#### Module 2: InstallingLessons

Installing SharePoint  
SharePoint Farms  
Lab : Installing  
Install WSS  
Install MOSS  
Detach/Attach to SharePoint Farm

#### Module 3: SharePoint ArchitectureThis module contains only labs.Lab : Site Definitions

Create One of Each WSS/MOSS Site Definition  
Lab : SharePoint Architecture 1  
Explore a SharePoint config file  
Lab : SharePoint Architecture 2  
Learn Content Database structure  
Use SQL Profiler to reverse engineer the web front end and stsadm  
Lab : SharePoint Architecture 3  
Create a Customized Page  
Analyze a Customized Page  
Lab : 12 Hive  
Explore the 12 Hive

#### Module 4: StsAdmLessons

Overview  
Commands  
Extending  
Lab : Stsadm  
Use StsAdm command line tool  
Lab : Extend Stsadm  
Review the stsadmcommands.xml file  
Extend StsAdm

#### Module 5: SharePoint ServicesLessons

Document Conversions Launcher  
Document Conversions Load Balancer  
Excel Calculation Services  
Officer SharePoint Server Search  
Windows SharePoint Services Search  
Windows SharePoint Services Web Application  
Lab : SharePoint Services  
Explore the SharePoint Services

#### Module 6: PowerShellLessons

Commandlets  
PowerShell variables  
Using With SharePoint  
Lab : Install PowerShell  
PowerShell Basics – Command Lets  
Create An Object  
Static Properties  
Lab : PowerShell With SharePoint  
Load SharePoint Dll into PowerShell  
Set PowerShell Execution Policy  
Enumerate Webs  
Create a site with PowerShell  
Create/Update an item with PowerShell  
Backup SharePoint with PowerShell

#### Module 7: General Operations TasksLessons

Email Settings  
Migrating File Shares  
Master Site Directory  
Alternate Access Mappings  
External Service Connections  
Language Packs  
Features & Solutions  
Lab : Email Settings  
Configure the Outgoing Email Settings  
Load balance Email Load  
Configure the Incoming Email Settings  
Lab : Distribution Groups

Create Active Directory Distribution Groups

Lab : Migration File Shares  
Migrate a File Share  
Blocked File Types  
NTFS Permissions  
Lab : Master Site Directory  
Setup the Master Site Directory  
Lab : Alternate Access Mappings  
Configure Alternate Access Mappings  
Test Alternate Access Mappings  
Lab : External Service Connections  
Records Center  
Document Conversion  
Lab : Features and Solutions  
Features  
Solutions

#### Module 8: Information Rights ManagementLessons

Information Rights Management  
SharePoint IRM  
Lab : Information Rights Management  
Install Information Rights Management (IRM)  
Configure IRM  
Use IRM

#### Module 9: AntiVirusLessons

Microsoft ForeFront  
ForeFront for SharePoint  
Installing  
Configuring SharePoint  
Configuring ForeFront  
Lab : Forefront  
Install Microsoft Forefront  
Configure Microsoft ForeFront

#### Module 10: Information Management PolicyLessons

There are only labs in this module.  
Lab : Information Management Policy  
Create a basic policy (Manual)  
Use a policy

#### Module 11: Single Sign OnLessons

Setup  
Configuring  
Using  
Applications Scenarios  
Lab : Single Sign On  
Learn how to Configure Single Sign On  
Program web parts to use Single Sign On

#### Module 12: Logging SettingsLessons

There is only a lab in this module.  
Lab : Logging Settings  
Learn to Debug SharePoint via Log Files

#### Module 13: Usage Analysis ProcessingLessons

Configuring  
Architecture  
Reports  
Troubleshooting  
Custom Log Processing  
Lab : Usage Analysis Processing  
Enable Usage Analysis Processing (UAP)  
Use UAP

#### Module 14: Content DeploymentLessons

There is only a lab in this module.  
Lab : Content Deployment  
Setup Content Deployment Path and Jobs  
Quick Deployment  
Debug Content Deployment

#### Module 15: Back Up and RestoreLessons

Backup Techniques  
Disaster Recover Techniques  
Restore Techniques

Lab : Backup Central Administration  
Use Central Administration to Back up and Restore (Farm)  
Lab : Back up SQL Server  
Use SQL Server to Back up SharePoint  
Lab : Backup Stsadm  
Use Stsadm to back up and restore a Farm  
Use Stsadm to export a site collection  
Use Stsadm to export a single site  
Lab : Back up SiteList Template  
Create a List Template  
Create a Site Template  
Create a Site from the new Site Template  
Create a List from the new List Template  
Lab : Back up SharePoint Designer  
SharePoint Designer Backup (Web Package)  
SharePoint Designer Backup (Content Migration)  
SharePoint Designer Backup (Site Template)

#### Module 16: Timer JobsLessons

Timer Service  
Timer Job  
SP.JobDefinition Class  
WSS Timer Jobs  
MOSS Timer Jobs  
Lab : TimerJobs  
Explore SharePoint Timer Jobs  
Disable a job  
Disable the Timer Service

#### Module 17: Shared Services ProviderLessons

Shared Services Overview  
Shared Services Components  
Shared Services Features  
Life with and without SSP  
Installing  
Lab : Shared Services Provider  
Create an Shared Service Provider  
Configure multiple SSPs  
Configure global "My Sites"

#### Module 18: Application SecurityLessons

SharePoint Security  
Custom Authentication  
Code Access Security  
Securing Communications  
Lab : Application Security  
Application Pools  
Web Application Security  
SiteList/Item level Security  
SSL Security  
Lab : Custom Authentication  
Change the default Authentication Method of SharePoint to use a custom Membership Provider (ASP.NET 2.0)

#### Module 19: InfoPath ServicesLessons

InfoPath 2007  
InfoPath and Windows Workflow  
InfoPath Forms Services  
Best Practices  
Lab : InfoPath Services  
Review MOSS Forms  
Publish/Upload a Form to Forms Library  
Verify/Upload/Activate a Form with IFS

#### Module 20: Business Data CatalogLessons

Business Data Catalog Overview  
Lab : Business Data Catalog  
Import an application definition file  
Utilize BDC web parts  
Utilize Filter web parts  
Lab : BDC Application Definition Files  
Review BDC Schema  
Create a BDC File (manually)  
Create a BDC File (Code Gen)  
Lab : BDC Permissions  
DataSource Permission Errors  
Application Permission Errors

Entity Permission Errors  
Lab : BDC Authentication  
Modify BCD to Use Database Credentials  
Modify BCD to Use Single Sign On  
Custom Single Sign On Solution  
Lab : BDC Profiles  
Search and BDC Integration  
BDC Entity Profile

#### Module 21: SearchLessons

Search Overview  
Performing Searches  
Tuning Search  
Extending Search  
Lab : Search  
Create Content Source  
Create Crawl Schedules  
Crawl All Scopes  
Create Crawl Rule  
Create Search Scopes  
Add a File Type  
Set Default Access Account  
Query Crawl Logs  
Lab : Tuning Search  
Relevance  
Keyword and Best Bets  
Thesaurus  
Noise Words  
Lab : Customizing Search  
Customize Search Results

#### Module 22: Excel ServicesLessons

Excel Services Trusted Locations  
Shared Data Connections  
User Defined Functions  
Excel Services Web Parts  
Excel Services Object Model/Web Service  
Lab : Excel Services  
Learn to use Excel Services  
Create/Publish to Excel Services  
Configure Excel Services  
Shared Data Connections  
Single Sign On Data Connections

#### Module 23: User Profiles My SitesLessons

User Profile Overview  
User Profile Settings  
My Sites  
Lab : User Profiles  
Configure User Profiles (Active Directory)  
Configure Import Connections  
Configure Profile Properties  
Lab : My Sites  
Create your My Site  
Your Profile  
Colleagues  
Colleagues - Tracking Changes  
Explore Memberships  
Explore in Common With  
Documents  
Configuring My Calendar Web Part  
RSS Viewer  
Personal vs Shared Views  
My Links

#### Module 24: Performance OptimizationLessons

Capacity Planning  
Performance Optimization Techniques  
Lab : Performance Optimization  
Database Tuning (Recovery Mode)  
Database Tuning (TempDB)  
Database Tuning (Indexes)  
Warm-up Scripts and Application Pool Timeout

**Course Description:** The course teaches students how to install, configure and administer SharePoint, and also manage and monitor sites and users by using SharePoint 2010.

**Who Should Attend:** This course is intended for IT Professionals who are experienced Windows Server 2003 or 2008 administrators and are interested in learning how to administer SharePoint 2010. The course is also intended for part time Business Application Administrators (BAAs) who are engaged in the administering line-of-business (LOB) applications in conjunction with internal business customers.

**Prerequisites:** In addition to their professional experience, students who attend this training should have experience administering Active Directory, administering network infrastructure, general conceptual awareness of Microsoft .NET Framework as it relates to SharePoint 2010, administering SQL Server 2005 or 2008, one year experience using Windows PowerShell cmdlets, and general security and authentication practices.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Prepare for and install SharePoint 2010
- Configure the fundamental service and logical components of a SharePoint implementation
- Administer SharePoint using the user interface, the command line, and Windows PowerShell
- Manage content in Lists and Libraries
- Administer identities and authentication
- Secure content in SharePoint sites
- Manage customizations to a SharePoint implementation
- Configure SharePoint services and applications
- Configure SharePoint social networking features
- Manage SharePoint search
- Configure farms, servers, service applications, and web applications
- Install, upgrade, configure, and operate a SharePoint farm
- Configure high availability and recoverability
- Monitor and optimize SharePoint performance

## Course Outline:

### Introducing SharePoint 2010

Evaluate the Features of SharePoint 2010  
Prepare for SharePoint 2010  
Install SharePoint 2010  
Advanced Installation of SharePoint 2010  
Lab : Install SharePoint 2010  
Exercise 1: Create Active Directory Accounts for SharePoint  
Exercise 2: Install SharePoint Server Prerequisites  
Exercise 3: Install SharePoint Server  
Exercise 4: Run the SharePoint Products Configuration Wizard  
Exercise 5: Configure the Farm with the Farm Configuration Wizard  
Exercise 6 (Optional): Install a Language Pack

### Creating a SharePoint 2010 Intranet

Perform Initial Farm Configuration  
Configure the SharePoint Logical Structure  
Explore the SharePoint Web Application and Physical Architecture  
Lab : Create a SharePoint 2010 Intranet  
Exercise 1: Create a Web Application  
Exercise 2: Create a Site Collection  
Exercise 3: Create a Site Collection in a New Content Database  
Describe the high level structure, components, and functioning of the farm  
Perform configuration of a SharePoint farm using the Farm Configuration Wizard  
Understand the logical topology of SharePoint web apps, site collections, and sites  
Experience SharePoint user-facing functionality  
Create a Web application  
Create a site collection  
Configure managed paths  
Create a content database

### Administering and Automating SharePoint

Configure Central Administration  
Administer SharePoint from the Command Line  
Automate SharePoint Operations with Windows PowerShell  
Lab : Automate SharePoint with Windows PowerShell  
Exercise 1: Add SharePoint Functionality to Windows PowerShell  
Exercise 2: Delegate the Ability to Use Windows PowerShell to Manage SharePoint  
Exercise 3: Report Web and Site Collection Properties  
Exercise 4: Create Site Collections Using Windows PowerShell  
Exercise 5: Create and Update Items  
Lab : Administer SharePoint with Sitsadm  
Exercise 1: Execute Sitsadm Commands

**Configuring Content Management**  
**The goal of this module is to enable students to manage content (lists, libraries, items and documents).**  
**Lessons**  
Optimize Content Storage and Access  
Manage Site Content Types and Site Columns  
Configure the Managed Metadata Service  
Lab : Configuring List Throttling and Remote BLOB Storage

Exercise 1: Configure List Throttling  
Exercise 2: Enable FILESTREAM and Provision the RBS Data Store  
Exercise 3: Install RBS on All SharePoint Web and Application Servers  
Exercise 4: Configure the Blob Size Threshold for RBS  
Lab : Configure Managed Metadata  
Exercise 1: Configure and Implement Managed Metadata

### Configuring Authentication

Classic SharePoint Authentication Providers  
Federated Authentication  
Lab : Configuring Custom Authentication  
Exercise 1: Create the ASP.NET Membership Database  
Exercise 2: Create a Web Applications that Uses Claim Based Authentication  
Lab : Configuring Secure Store  
Exercise 1: Create User Accounts for Access to External Data  
Exercise 2: Configure Secure Store Services  
Exercise 3: Configure Secure Store Unattended Accounts

### Securing Content

Administer SharePoint Users and Groups  
Implement SharePoint Roles and Role Assignments  
Secure and Audit SharePoint Content  
Lab : Configuring Security for SharePoint Content  
Exercise 1: Managing SharePoint Groups  
Exercise 2: Creating Custom Permission Levels  
Exercise 3: Managing List and Listitem Permission Inheritance  
Exercise 4: Create a Web Application Policy

### Managing SharePoint Customizations

Customize SharePoint  
Deploy and Manage Features and Solutions  
Configure Sandboxed Solutions  
Lab : Administering Features and Solutions  
Exercise 1: Administering Features  
Exercise 2: Administering Solutions  
Lab : Administering Sandboxed Solutions  
Exercise 1: Administering Sandboxed Solutions  
Exercise 2: Modifying Sandboxed Solutions Timer Jobs  
Exercise 3: Configuring Sandbox Points  
Lab : Administering the Developer Dashboard  
Configure the Developer Dashboard

### Configuring and Securing SharePoint Services and Applications

Secure the Enterprise SharePoint Service  
Secure and Isolate Web Applications  
Configure Service Applications  
Lab : Administer SharePoint Services  
Exercise 1: Administer SharePoint Services  
Exercise 2: Administer SharePoint Windows Services  
Lab : Configure Application Security  
Exercise 1: Configure Web Application and Application Pool Security  
Exercise 2: Configure SSL Security (Optional)  
Lab : Administer Service Applications  
Exercise 1: Explore Service Applications  
Exercise 2: Create a Service Application

### Implementing Productivity Service Applications

Implement Business Connectivity Services  
Implement Excel Services Application  
Implement PerformancePoint Services  
Implement InfoPath Services  
Implement Visio Services  
Implement Access Services  
Implement Office Web Apps  
Lab : Implement Office Web Apps  
Exercise 1: Install and Configure Office Web Apps  
Exercise 2: Configure and Test the Office Web Apps in a Document Library

### User Profiles and Social Networking

Configure User Profiles  
Implement SharePoint 2010 Social Networking Features  
Lab : Lab 10 A: Configuring User Profiles  
Exercise 1: Creating a Service Application  
Exercise 2: Configuring User Profiles  
Exercise 3: Connecting BDC to SharePoint Profiles  
Exercise 4: Administering ForeFront Identity Manager  
Lab : Configuring My Sites  
Exercise 1: Configuring My Sites  
Exercise 2: Creating a My Site  
Exercise 2: Updating a User Profile  
Exercise 3: Administering Colleagues  
Exercise 4: Configuring Personal and Shared Documents  
Exercise 5: Creating A My Site Personal Blog  
Exercise 6: Administering My Tags and Notes

### Administering and Configuring SharePoint Search

Configure Search  
Refine Search  
Lab : Configure Search  
Exercise 1: Create and Configure A Content Source  
Exercise 2: Configure Search Settings  
Exercise 3: Add and Configure A Search Scope  
Lab : Refine Search  
Exercise 1: Configure Relevance  
Exercise 2: Create Keywords and Best Bets  
Exercise 3: Configure a Thesaurus  
Exercise 4: Configure Noise Words

### Installing and Upgrading to SharePoint 2010

Install SharePoint Servers and Farms  
Upgrade to SharePoint 2010  
Monitor and Troubleshoot installation and upgrade  
Update SharePoint  
Lab : Implementing Advanced SharePoint 2010 Installations  
Exercise 1: Create a Multi-Server Farm  
Exercise 2: Configure SharePoint Server Roles  
Exercise 3: Install Language Packs  
Lab : Scripting a SharePoint 2010 Install  
Exercise 1: Creating a SharePoint 2010 Install Script  
Exercise 2: Configuring SharePoint 2010 via Scripts  
Exercise 3: Creating a SharePoint 2010 Service Applications Script  
Lab : Implementing SharePoint 2007 Upgrade Requirements

Exercise 1: Defragmenting Content Databases  
Exercise 2: Migrating Content Between Databases  
Exercise 3: Truncating and Backing Up Content Databases  
Exercise 4: Installing Cumulative Update (Oct 2009)  
Exercise 5: Analyzing the Upgrade  
Lab : Upgrading SharePoint 2007 to SharePoint 2010  
Exercise 1: Upgrading the SharePoint Binaries  
Exercise 2: Implement a Database Attach Upgrade  
Exercise 3: Implementing a Visual Upgrade

### Implementing Business Continuity

Lesson 1: Configure High Availability  
Lesson 2: Backup and Restore SharePoint  
Lab : Implement a Backup Strategy  
Exercise 1: Implement a Central Administration Backup Strategy  
Exercise 2: Implement a Windows PowerShell Backup Strategy  
Lab : Implement a Restore Strategy  
Exercise 1: Implement a Central Administration Restore Strategy  
Exercise 2: Perform a Partial Restore

### Monitoring and Optimizing SharePoint Performance

Monitor Performance  
SharePoint Health Analyzer  
Usage reports and web analytics  
Monitor and Optimize SharePoint Performance  
Lab : Configure Diagnostic Logging  
Exercise 1: Configure Diagnostic Logging  
Lab : Administer Logs with the ULS Viewer  
Troubleshoot Correlation Errors  
Lab : Configure Health Analyzer Rules  
Configure Health Analyzer Rules  
Lab : Build Reports Using the SharePoint Logging Database  
Exercise 1: Configure the Logging Database  
Exercise 2: Write Reports with the Logging Database

**Course Description:** You will use, create, and edit content in a team website. You will also create and perform basic management of a team site using SharePoint Foundation 2010.

**Who Should Attend:** This course is designed for individuals who will need to access information on a Microsoft SharePoint team site or for individuals who may need to create and manage a team website.

**Prerequisites:** To ensure your success, we recommend that you first take a course in the Microsoft Office 2010 curriculum and possess power-user familiarity with at least one of the applications. You should also have experience accessing information via a web browser.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Add and modify list items and work with list views.
- Add, edit, and share documents across libraries and wikis.
- Communicate and collaborate with team members.
- Work remotely with SharePoint content.
- Customize your SharePoint environment.
- Create a team site.
- Perform basic site administration.

### Course Outline:

#### Introducing Microsoft SharePoint Foundation 2010

Describe Microsoft SharePoint Foundation 2010  
Describe the Microsoft SharePoint Foundation Team Site

#### Working with Lists

Add List Items  
Modify List Items  
Change List Views

#### Working with Libraries

Add Documents to a Library  
Edit Library Documents  
Share Documents Across Libraries  
Create Wiki Pages  
Request Access to SharePoint Content

#### Communicating with Team Members

Participate in a Discussion Board  
Contribute to Blogs  
Collaborate via the People and Groups List

#### Working Remotely with SharePoint Content

Access SharePoint Content from Mobile Devices  
Work Offline with SharePoint Content in Microsoft Office 2010  
Work Offline with Shared Calendars

#### Customizing Your SharePoint Environment

Customize Personal and Regional Settings  
Personalizing the Page View with Web Parts  
Create an Alert  
Subscribe to an RSS Feed

#### Creating a Team Site

Create a Site  
Create a Workspace  
Create a List  
Create a Library  
Create a Discussion Board  
Create Views  
Create a Survey

#### Performing Basic Site Administration

Manage Users and Groups  
Manage Site Look and Feel

**Course Description:** You will manage site collections and site components as a site collection administrator and as a site administrator.

**Who Should Attend:** This course is designed for individual contributors or departmental staff in a variety of job roles, such as administrative assistants, functional or operations managers, with basic SharePoint skills, and who have the responsibility for managing SharePoint sites as an enabling technology within their workgroups, not necessarily IT tech professionals.

**Prerequisites:** Students should have taken Microsoft SharePoint Foundation 2010: Level 1. Some familiarity with basic Windows server concepts such as Windows 2003 and Windows 2003 concepts, PowerShell, basic concepts of coding and scripting, and Internet Information Server (IIS) is recommended, but not required.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Brand a site collection.
- Manage lists in a site collection.
- Manage document libraries.
- Manage form libraries.
- Manage content structures in a site collection.
- Manage a workflow.
- Manage indexing and searching options.
- Enable offline work with SharePoint sites using SharePoint Workspace 2010.
- Manage a SharePoint application using Central Administration.
- Manage user access.
- Manage security options in Microsoft SharePoint Foundation 2010.
- Manage site usage.
- Perform site maintenance.

### Course Outline:

#### Branding a Site Collection

Describe the SharePoint Site Hierarchy  
Create a Custom Look and Feel for a Site Collection  
Create a Custom Site Layout

#### Managing Lists

Perform Calculations on List Data  
Create Custom Lists  
Customize List Settings

#### Managing Libraries

Perform Advanced Operations on a Library  
Create a Library Template  
Describe Information Rights Management

#### Managing Form Libraries

Create a Form Library  
Customize a Form Template Using InfoPath

#### Managing Content Structures

Create a Content Type  
Apply Content Types

#### Managing Workflows

Add a Default Workflow  
Create a Custom Workflow

#### Working with Indexing and Searching

Index Content  
Enable Search Options

#### Working Offline Using SharePoint Workspace 2010

Synchronize a SharePoint Site on the Local Computer  
Perform Offline Operations on a SharePoint Site

#### Managing the SharePoint Applications Using Central Administration

Create a Site Collection  
Administer a Site Collection  
Administer a Web Application

#### Managing User Access

Manage Permissions  
Describe Authentication Modes

#### Managing Site Security

Set Web Part Security  
Set Antivirus Options  
Manage Blocked File Types

#### Managing Site Usage

Set Site Collection Quotas and Locks  
Monitor Site Usage

#### Managing Site Maintenance

Recover Lost Information  
Perform a Granular Backup  
Restore a Granular Backup  
Perform a Farm Backup  
Restore a Farm Backup

#### Appendix A: Accessibility Features

#### Appendix B: Microsoft OneNote Integration with SharePoint

#### Appendix C: Permission Categories

#### Appendix D: File Types That Cannot Be Added to a List or Library

#### Appendix E: Creating a Master Page