# Administering the Web Server (IIS) Role of Windows Server Training

Duration: **5 Day**

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This course provides delegates with the fundamental knowledge and skills to configure and manage Internet Information Services.

This course is intended to help provide pre-requisite skills supporting a broad range of Internet web applications, security, and knowledge to help support other products that use IIS such as Exchange and SharePoint. In keeping with that goal, this course will not focus on any particular web application or development practice.

**Target Audience**

This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration. No prior experience with any version of Internet Information Services is assumed.

## Prerequisites

- Experience with Windows networking technologies and implementation.
- Experience with Windows Server administration, maintenance, and troubleshooting.
- Experience with Windows Client administration, maintenance, and troubleshooting.

## Training Outline

**Module 1: Overview and Installing Internet Information Services**

In this module delegates will learn about the network infrastructure planning and common concerns with implementing a web server. Delegates will perform an installation of IIS and verify the working web server by testing the default created website.

**Lessons**

- Understanding a Web Server infrastructure
- Installing Internet Information Services

**Lab : Installing Internet Information Services**

- Perform a default installation of Internet Information Services
- Verify and test the installation of a default installation of Internet Information Services
- Describe the network infrastructure requirements for IIS.
- Explain the communication process between a web server and a browser.
- Perform a default installation of Internet Information Services.
- Verify and configure the Windows Firewall for use with IIS.
- Test a website by using a browser.

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## Module 2: Configuring The Default Website

In this module delegates will learn to plan and implement network requirements for a public website. Students will configure DNS records to support access to internal and public websites and create virtual directories and application folders for additional website content.

**Lessons**

- Examining the Default Website using IIS Manager
- Examining the Default IIS File Structure
- Configuring DNS records for a website
- Creating virtual directories and Applications

**Lab : Configuring the Default website for public access**

- Configure DNS records for both the internal and public website access
- Verify and test the internal and public website access using the DNS FQDN

**Lab : Creating Virtual Directories and Applications**

- Create additional content location in the current website
- Describe the default IIS folder structure to support a website.
- Create a web page for site testing and verification.
- Install additional required Role services to support a web application.
- Plan the network and DNS records for internal and public website access.
- Configure DNS records for an internal and public website.
- Create normal folders, virtual directories and applications in a website for additional content.
- Verify the new working website and content.

## Module 3: Configuring and Managing Application Pools

In this module delegates will learn the benefits to the application pool architecture. Delegates will create and configure application pools to support additional applications and configure application pool recycle settings. Delegates will perform recycle events and examine the event logs for recycle events.

**Lessons**

- Defining the Application Pool Architecture
- Creating and Managing Application Pools
- Configuring Application Pool Recycling

**Lab : Configuring and Managing Application Pools**

- Create and configure additional application pools

**Lab : Configuring Application Pool Recycling**

- Configure application pool recycle settings
- Perform recycling of an application pool and examine event logs for recycle events
- Describe the benefits of the application pool architecture.
- Configure application pools to support applications.
- Configure application pool recycle settings.
- Perform and examine application pool recycling.
- Examine event logs for recycle events.

## Module 4: Creating additional websites

In this module delegates will learn how to examine and create new websites using unique bindings to avoid naming conflicts. Delegates will examine existing sites to determine and resolve binding conflicts then create new websites by using unique bindings.

**Lessons**

- Understanding multiple websites on a single server
- Examining and configuring the website bindings
- Creating New Websites

**Lab : Examining the existing websites and bindings for conflicts**

- Examine several websites and determine if binding conflicts exist

**Lab : Creating new websites**

- Create new websites with unique bindings
- Describe the purpose to website common settings and bindings
- Examine existing websites for binding conflicts
- Create new websites by using unique port bindings
- Create new websites by using unique virtual IP addresses
- Create new websites by using hostname bindings.

## Module 5: Configuring Website and Web application support

In this module delegates will learn to support additional application requriements including common configuration settings, platform support from the built-in web server, and include additional application support by using the Web Platform Installer.

**Lessons**

- Configuring Common features

- Adding support for web applications

**Lab : Configuring Common Features**

- Configure and test common configuration settings

**Lab : Adding support for web applications**

- Install and configure additional application support
- Identify the IIS configuration files.
- Configure common website and application settings.
- Install and configure built-in application platform support.
- Install and configure additional application support using the Web Platform Installer.

## Module 6: Securing Websites and applications

In this module delegates will learn to secure internal and public websites for users and groups by using the built-in Windows and Basic authentication. Delegates will configure file system permissions for specific users and groups and secure a website using URL Authorization Rules.

**Lessons**

- Defining Access Control for Web Servers, Sites and Applications
- Configuring Authentication and permissions
- Enabling URL Authorization Rules

**Lab : Configuring Authentication and permissions**

- Install and configure the authentication mechanisms required to support both internal and public websites
- Configure file system permissions and application pool permissions

**Lab : Enabling URL Authorization Rules**

- Secure a website for users and groups using URL Authorization Rules
- Describe the authentication mechanisms to secure internal and public websites.
- Describe the process of assigning file system permissions for users and groups.
- Install and configure Windows and Basic authentication.
- Configure the file system permissions for a website.
- Configure website security using URL Authorization Rules.

## Module 7: Securing Data Transmissions with SSL

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In this module delegates will protect customer data using websites configured for SSL. Delegates will install and configure PKI certificates on a web server, create secured bindings, and verify that a website data transmissions are secured.

**Lessons**

- Understanding Certificates and SSL
- Creating certificates for a web server
- Adding a certificate to a website

**Lab : Creating and installing a self-signed certificate**

- Create a self-signed certificate to secure a website

**Lab : Adding a certificate to a website**

- Create a HTTPS binding to secure a website
- Describe the PKI infrastructure for securing IIS with certificates
- Explain the process of obtaining and installing certificates for internal and public websites.
- Install and configure a certificate to secure a website.

## Module 8: Using the Central Certificate Store

In this module delegates will install and configure the IIS 8.5 Central Certificate Store to enable centralized and improved certificate management, Delegates will configure a website to use a secured binding with the Central Certificate Store.

**Lessons**

- Understanding the Central Certificate Store
- Installing and configuring the Central Certificate Store

**Lab : Installing and Configuring the Central Certificate Store**

- Configure the environment to store certificates for CCS
- Describe the architecture of the Central Certificate Store
- Plan for certificate storage
- Install and configure CCS
- Secure a website using a certificate in CCS

## Module 9: Configuring Remote Administration

In this module delegates will configure secured remote management of web servers and websites, create and configure permissions for site level administrators and developers, and verify web server and

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website management.

**Lessons**

- Installing and Configuring the Management Service
- Connecting to remote web servers and websites
- Delegating Management Access

**Lab : Installing and Configuring the Management Service**

- Install and configure the management service

**Lab : Connecting to remote web servers and websites**

- Connect and manage a remote web server and website

**Lab : Delegating Management Access**

- Configure permissions for a site level administrator or developer
- Identify the need for remote management capabilities to manage a web server or website.
- Install and configure the Management service for remote management.
- Create and configure permissions for site level administrators and developers to manage a web server or website

**Module 10: Implementing FTP**

In this module students will learn configure a secured FTP site for users to store and retrieve files. Student will configure authentication, authorization and the FTP storage location. Students will retrieve and files using the native Windows FTP command.

**Lessons**

- Implementing FTP
- Configuring an FTP site
- Configuring an FTP site

**Lab : Configuring and using an FTP site**

- Install and configure a secured FTP site
- Describe the FTP architecture and requirements for IIS
- Configure FTP authentication, authorization and storage locations
- Configure a secured FTP for users to store files

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**Module 11: Monitoring IIS**

In this module delegates will learn to monitor IIS log files and performance counters using Log Parser and PerfMon. Delegates will identify common issues related to performance and attacks recorded in the log files.

**Lessons**

- Monitoring IIS logs with Log Parser

**Lab : Monitoring IIS logs with Log Parser**

- Analyze a set of IIS log files for possible issues using Log Parser
- Describe common problems and attacks that are recorded in the log files.
- Search the ISI log file for issues using Log Parser.
- Identify common performance counters to create a baseline for IIS performance.
- Analyze performance data for performance related problems using PerfMon.

**Module 12: Backing up and Restoring IIS**

In this module delegates will learn to backup and recover form a website or web server failure. Delegates will learn the importance of using high available techniques to avoid the recovery process.

**Lessons**

- Understanding the IIS environment for Backup and restore
- Performing a backup and restore of a website

**Lab : Performing a backup and restore of a website**

- Perform a backup and restore of a website
- Describe the critical components to backup on a web server and website
- Perform a website backup, including content and configuration files
- Perform a website restore using a recovery process

**Module 13: Building Load-Balanced Web Farms**

In this module delegates will learn to increase reliability and performance of website by creating a web farm. Delegates will improve the management and update capabilities of the websites by using shared content in both a network share and DFS-R. Delegates will improve web server and website management by using Shared Configurations.

**Lessons**

- Understanding load-balancing Mechanisms
- Building a Load-Balanced Web Farm using ARR

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- Sharing content to a Web Farm using a network share
- Sharing content to a Web Farm using DFS-R
- Sharing IIS Configurations in a Web Farm

**Lab : Building a Load-Balanced Web Farm using ARR**

- Create a web farm by installing and configuring ARR

**Lab : Sharing content to a Web Farm using a network share**

- Sharing content to a Web Farm using a network share

**Lab : Sharing content to a Web Farm using DFS-R**

- Install and Configure DFS-R for content replication

**Lab : Sharing IIS Configurations in a Web Farm**

- Configure IIS to use Shared Configurations
- Perform a staggered install of a new component for website application support
- Describe the increase to reliability and performance using load balancing mechanisms
- Install and configure a highly available web farm using ARR
- Improve management of web content using DFS-R
- Improve the management of the web server and websites using Shared Configurations