Course Outline

Updating Support Skills for Windows Server 2016

Course Summary

Description

Get Hands on instruction and practice administering Active Directory, networks services, migration techniques, storage solutions, and high availability technologies in Windows Server 2012/2012 R2 and Server 2016. You will learn how to configure some of the key features in Active Directory such as Active Directory Domain Services (AD DS), Group Policy, Certificate Services, Federation Services, Network Services, Local and Enterprise Storage Solutions and Failover Clustering. As part of the learning experience, you will perform hands-on exercises in a virtual lab environment

Objectives

At the completion of this course, Students will:

- Understand available solutions for identity management and be able to address scenarios with appropriate solutions.
- Deploy and administer AD DS in Windows Server 2012.
- Implement and manage GPOs.
- Manage user settings with GPOs.
- Implement certification authority (CA) hierarchy with AD CS and how to manage CAs.

- Implement certificates.
- Monitor, Manage and Restore AD DS
- Implement and administer AD FS.
- Install, Upgrade and Migrate Services
- Implement Local Storage
- Implement Enterprise Storage
- Implement Failover Clustering

Audience

This course is designed for:

- AD DS administrators who are looking to further develop skills in the latest Access and Information Protection technologies with Windows Server 2012 and Windows Server 2012 R2.
- System or Infrastructure administrators with general AD DS experience and knowledge who are looking to build upon that core knowledge and cross-train into advanced Active Directory technologies in Windows Server 2012 and Windows Server 2012 R2
- Experience working in a Windows Server infrastructure enterprise environment.
- Experience working with and troubleshooting core networking

  infrastructure technologies such as name resolution, IP Addressing, Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP).
- Experience working hands on with Windows Client operating systems such as Windows Vista, Windows 7 or Windows 8.
- Knowledge equivalent to the MCSA credentials of Windows Server 2008 or Windows Server 2012.
- IT professionals with general IT knowledge, who are looking to gain knowledge about Windows Server, especially around storage and compute technologies in Windows Server 2016

Course Outline

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Course Summary (cont.)

Topics

- Installing and Configuring DCs
- Managing Objects in AD DS
- Implementing Group Policy
- Managing user settings with Group Policy
- Securing AD DS
- Deploying and managing Certificate Services
- Deploying and managing certificates

- Implementing and administering AD FS
- Monitoring, Managing, and Recovering ADDS
- Installing and configuring Windows Server 2016
- Overview of storage in Server 2016
- Implementing network services
- Implementing Failover clustering

Prerequisites

This course is intended for Information Technology (IT) professionals who have Active Directory Domain Services (AD DS) experience, IT professionals who are experienced Windows Server 2012 or Windows Server 2008 system administrators, and professionals who will be responsible for managing storage Windows Server 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server 2016.

Duration

Five Days

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I. **Installing and Configuring DCs**
This module describes the features of AD DS and how to install domain controllers (DCs). It also covers the considerations for deploying DCs.
A. Overview of AD DS
B. Overview of AD DS domain controllers
C. Deploying a domain controller
Lab : Deploying and administering AD DS
- Deploying AD DS
- Deploying domain controllers by performing domain controller cloning
- Administering AD DS

II. **Managing Objects in AD DS**
This module describes how to use various techniques to manage objects in AD DS. This includes creating and configuring user, group, and computer objects.
A. Managing user accounts
B. Managing groups in AD DS
C. Managing computer objects in AD DS
D. Using Windows PowerShell for AD DS administration
E. Implementing and managing OUs
Lab : Managing AD DS objects
- Creating and managing groups in AD DS
- Creating and configuring user accounts in AD DS
- Managing computer objects in AD DS
Lab : Administering AD DS
- Delegate administration for OUs
- Creating and modifying AD DS objects with Windows PowerShell

III. **Implementing Group Policy**
This module describes how to implement a GPO infrastructure. The module provides an overview of the

components and technologies that compose the Group Policy framework.
A. Introducing Group Policy
B. Implementing and administering GPOs
C. Group Policy scope and Group Policy processing
D. Troubleshooting the application of GPOs
Lab : Implementing a Group Policy infrastructure
- Creating and configuring GPOs
- Managing GPO scope
Lab : Troubleshooting Group Policy infrastructure
- Verify GPO application
- Troubleshooting GPOs

IV. **Managing user settings with Group Policy**
This module describes how to configure Group Policy settings and Group Policy preferences. This includes implementing administrative templates, configuring folder redirection and scripts, and configuring Group Policy preferences.
A. Implementing administrative templates
B. Configuring Folder Redirection, software installation, and scripts
C. Configuring Group Policy preferences
Lab : Managing user settings with GPOs
- Using administrative templates to manage user settings
- Implement settings by using Group Policy preferences
- Configuring Folder Redirection
- Planning Group Policy (optional)

V. **Securing AD DS**
This module describes how to configure domain controller security, account security, password security, and Group Managed Service Accounts (gMSA).
A. Securing domain controllers
B. Implementing account security
C. Implementing audit authentication

Course Outline

Course Outline (cont.)

D. Configuring managed service accounts
Lab : Securing AD DS
- Implementing security policies for accounts, passwords, and administrative groups
- Deploying and configuring an RODC
- Creating and associating a group MSA

VI. *Deploying and Managing Certificate Services*
This module describes how to implement an AD CS deployment. This includes deploying, administering, and troubleshooting CAs.
A. Deploying CAs
B. Administering CAs
C. Troubleshooting and maintaining CAs
Lab : Deploying and configuring a two-tier CA hierarchy
- Deploying an offline root CA
- Deploying an enterprise subordinate CA

VII. *Deploying and Managing Certificates*
This module describes how to deploy and manage certificates in an AD DS environment. This involves deploying and managing certificate templates, managing certificate revocation and recovery, using certificates in a business environment, and implementing smart cards.
A. Deploying and managing certificate templates
B. Managing certificate deployment, revocation, and recovery
C. Using certificates in a business environment
D. Implementing and managing smart cards
Lab : Deploying and using certificates
- Configuring certificate templates
- Enrolling and using certificates

- Configuring and implementing key recovery

VIII. *Implementing and Administering AD FS*
This module describes AD FS and how to configure AD FS in a single-organization scenario and in a partner-organization scenario.
A. Overview of AD FS
B. AD FS requirements and planning
C. Deploying and configuring AD FS
D. Overview of Web Application Proxy
Lab : Implementing AD FS
- Configuring AD FS prerequisites
- Installing and configuring AD FSConfiguring an internal application for AD
- Configuring AD FS for federated business partners

IX. *Monitoring, Managing, and Recovering AD DS*
This module describes how to monitor, manage, and maintain AD DS to help achieve high availability of AD DS.
A. Monitoring AD DS
B. Managing the Active Directory database
C. Active Directory backup and recovery options for AD DS and other identity and access   solutions
Lab : Recovering objects in AD DS
- Backing up and restoring AD DS
- Recovering objects in AD DS

X. *Installing and configuring Windows Server 2016*
This module explains how to install and perform post-installation configuration of Windows Server 2016 servers.
A. Introducing Windows Server 2016
B. Installing Windows Server 2016
C. Configuring Windows Server 2016
D. Preparing for upgrades and migrations
E. Migrating server roles and workloads
F. Windows Server activation models

Course Outline

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Course Outline (cont.)

Lab: Installing and configuring Server Core
- Completing post-installation tasks on Windows Server 2016 Core
- Performing remote management

XI. *Overview of storage in Windows Server 2016*
This module explains how to configure storage in Windows Server 2016.
A. Overview of storage in Windows Server 2016
B. Implementing Data Deduplication
C. Configuring iSCSI storage
D. Configuring the Storage Spaces feature in Windows Server 2016
Lab: Implementing and managing storage
- Implementing File Server Resource Manager (FSRM)
- Implementing Data Deduplication
- Configuring iSCSI storage

XII. *Implementing Network Services*
This module explains how to configure advanced features for Dynamic Host Configuration Protocol (DHCP) and configure IP Address Management (IPAM).
A. Overview of networking enhancements
B. Implementing IPAM
C. Managing IP address spaces with IPAM
Lab: Implementing network services
- Configuring DNS policies
- Configuring DHCP failover
- Configuring IPAM

XIII. *Implementing Failover Clustering*
This module explains how to implement failover clustering to provide high availability for network services and applications.
A. Overview of failover clustering
B. Implementing a failover cluster

- Installing Server Core

C. Configuring highly available applications and services on a failover cluster
D. Maintaining a failover cluster
E. Implementing a stretch cluster
Lab: Implementing failover clustering
- Configuring iSCSI storage
- Configuring a failover cluster
- Deploying and configuring a highly available file server
- Validating the deployment of a highly available file server
- Configuring CAU on the failover cluster