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Deploying Windows Server 2012 r2

Course 10974A 3 Days Instructor-led, Hands-on

Introduction

Get hands-on instruction and practice deploying Windows Server 2012 and Windows Server 2012 R2 in this three-day Microsoft Official Course. In this course you will learn how to plan for and deploy your Windows Server infrastructure in both physical and virtual environments. You will learn about different deployment methodologies and techniques, and work with lite-touch and zero-touch deployment options, as well as general imaging usage and configuration. You will also learn how to use Windows Deployment Services and how to work with solution accelerators, such as the Windows Assessment and Deployment Toolkit (Windows ADK), the Microsoft Assessment and Planning Toolkit (MAP), and the Microsoft Deployment Toolkit (MDT). These tools will help you increase your efficiency and reduce management overhead.

The course will also cover essential components within your server infrastructure, such as upgrading and migrating Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS) and various Active Directory services, such as Active Directory Domain Services (AD DS), Active Directory Certificate Services (AD CS) and Active Directory Federation Services (AD FS). It will also cover options and considerations around virtualizing those infrastructure workloads and options available for extending some of those workloads into Windows Azure.

The detailed hands on labs, and in-depth content and learning will provide you with the knowledge and skills to enable you to deploy your Windows Server infrastructure and its constituent components with minimal overhead and cost for one-off or large scale deployments.

This course is intended for experienced IT Professionals who might have the following experience and background:

- IT professionals with real-world experience working in an enterprise environment where they are involved in physical and virtual server deployments and are looking to gain knowledge and training to streamline those tasks.
- IT professionals with real-world experience working in a Windows Server 2008 environment and are preparing for a Windows Server 2012 deployment.
- IT professionals working in small to medium enterprises who manage server deployments.
- IT professionals who have skills in other areas, such as general system administration, and are looking for knowledge and skills for career development in Windows Server deployments.

At Course Completion

After completing this course, students will be able to:

- Prepare to deploy Windows Server 2012.
- Describe the various methods of deploying Windows Server 2012.
- Deploy Windows Server 2012 by using Windows Deployment Services.
- Deploy Windows Server 2012 by using MDT.
- Plan to virtualize workloads in a Windows Server 2012 environment.
- Migrate core networking services to Windows Server 2012.
- Migrate file services and Web and application servers to Windows Server 2012.
- Upgrade and migrate AD DS to Windows Server 2012.
- Migrate AD FS, AD RMS, AD CS to Windows Server 2012 and implement Windows Azure Active Directory.

Prerequisites

Before attending this course, students must have:

- Knowledge and real-world experience working day to day with computers running the Windows Server and Windows operating systems in an enterprise environment.
- Knowledge and experience with Active Directory services, such as AD DS, AD CS, and AD FS.
- Experience working with Windows Server 2012 or Windows Server 2012 R2.Settings management
- Six months of hands-on experience with System Center 2012 Configuration Manager or newer

Course Materials

The student kit includes a comprehensive workbook and other required materials for this class.

Course Outline

Module 1: Preparing to Deploy Windows Server 2012

Although you can use a number of tools and technologies to help you deploy the Windows Server 2012 operating system, it is important to understand how to plan for and perform individual server installations by using local media. This module explains how to plan for and perform individual server installations by using local media. It also describes how to configure, secure, and manage the server following installation by using remote management tools where appropriate. The module also explains how to activate your servers and manage volume activations.

Lessons

- Planning a Windows Server 2012 Implementation
- Installing Windows Server 2012
- Configuring and Managing Servers Remotely
- Securing a Windows Server 2012 Deployment
- Implementing a Volume Licensing Strategy

Lab : Planning to Implement Windows Server 2012

- Using the Microsoft Assessment and Planning Toolkit

Lab : Configuring and Managing Server Core

- Installing Server Core (optional)
- Configuring and Managing Server Core

After completing this module, students will be able to:

- Plan Windows Server 2012 deployment.
- Install Windows Server 2012 from local media.
- Configure and manage servers remotely.
- Secure Windows Server 2012 deployments.
- Implement a suitable volume licensing strategy.

Module 2: Deploying Windows Server 2012

Organizations have different Windows Server installation and deployment needs. Often, the choice that is made about which deployment technology to use depends on the number of servers to be deployed. This module describes the key deployment scenarios and provides guidance about suitable Microsoft deployment technologies to facilitate them. The module then describes how to use the Windows Assessment and Deployment Kit (Windows ADK) to assist with some of these deployment scenarios, the different types of images you use in some of these scenarios, and how to perform unattended installations of Windows Server 2012.

Lessons

- Selecting a Suitable Deployment Method
- Overview of Image Files in the Deployment Process
- The Windows Assessment and Deployment Toolkit
- Working with Unattended Answer Files

Lab : Deploying Windows Server with Answer Files

- Creating an Answer File
- Using the Answer File to Launch Deployment

After completing this module, students will be able to:

- Select an appropriate deployment strategy.
- Describe how to use image files in the deployment process.
- Use the Windows ADK to perform server deployment.
- Work with unattended answer files.

Module 3: Using Windows Deployment Services

Larger organizations need deployment technologies that can reduce or eliminate user-interaction during the deployment process. You can use Windows Deployment Services to help support both lite-touch and zero-touch, high-volume deployments. This module explores the functionality of Windows Deployment Services and explains how to use Windows Deployment Services tools to perform lite-touch deployments.

Lessons

- Overview of Windows Deployment Services
- Implementing Deployment with Windows Deployment Services
- Administering Windows Deployment Services

Lab : Using Windows Deployment Services

- Installing and Configuring Windows Deployment Services
- Creating Operating System Images with Windows Deployment Services
- Configuring Custom Computer Naming
- Deploying Images with Windows Deployment Services

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After completing this module, students will be able to:

- Describe how to use Windows Deployment Services to deploy Windows Server 2012.
- Perform Windows Server deployments with Windows Deployment Services.
- Administer Windows Deployment Services.

Module 4: Implementing Microsoft Deployment Toolkit

Microsoft Deployment Toolkit (MDT) 2013 forms a unifying framework for Microsoft Windows Deployment Services, the Windows Assessment and Deployment Kit (Windows ADK), and Microsoft System Center Configuration Manager 2012 (Configuration Manager 2012) with documentation on best practices to help you deploy the Windows Server 2012 operating system more easily. In addition, MDT 2013 includes some tools that accelerate image creation and deployment. MDT 2013, together with the supporting documentation and tools, helps lower the effort required for server deployment. This module explains how to configure MDT and how to perform lite-touch and zero-touch deployments by using MDT.

Lessons

- Overview of MDT 2013
- Configuring Microsoft Deployment Toolkit
- Performing Lite-Touch Deployments
- Maintaining Images with MDT
- Performing Zero-Touch Deployments

Lab : Implementing Microsoft Deployment Toolkit

- Installing and Configuring MDT
- Creating and Customizing a Task Sequence
- Configuring the Deployment Share
- Performing a Lite-Touch Deployment

After completing this module, students will be able to:

- Describe how to use Microsoft Deployment Toolkit (MDT) 2013 to deploy Windows Server 2012.
- Configure MDT 2013 to support your deployment strategy.
- Perform lite-touch deployments by using MDT 2013.
- Maintain images by using MDT 2013.
- Explain how to perform zero-touch deployments by using MDT 2013.

Module 5: Planning to Virtualize Workloads

Most organizations are looking for ways to decrease the cost and complexity of providing an information technology (IT) infrastructure. Virtualization has become a key component in developing an efficient and cost effective IT strategy. This module introduces some of the critical planning components that you must consider when you are implementing virtualization.

Lessons

- Overview of Microsoft Virtualization
- Evaluating the Current Environment for Virtualization
- Planning for Virtualization

Lab : Planning to Virtualize Workloads

- Planning a Server Consolidation and Virtualization Strategy
- Evaluating Virtualization Candidates

After completing this module, students will be able to:

- Describe the virtualization options available in Windows Server 2012.

- Evaluate your current infrastructure for virtualization candidates.
- Plan for implementing virtualization.

Module 6: Upgrading and Migrating Networking Services

Servers that run network services are responsible for facilitating communication between computers on your network, and ensuring that the configuration of network infrastructure components supports a reliable network environment. The two most common network infrastructure roles on Windows Servers are the Dynamic Host Configuration Protocol (DHCP) server role and the Domain Name System (DNS) server role. Upgrading and migrating these roles is a critical first step in the migration process to ensure that the rest of your migration project can use the network infrastructure.

In Windows Server 2012 R2, you can manage the DHCP and DNS server roles after or during migration with the new IP Address Management (IPAM) feature. IPAM enables you to centralize the management and monitoring of DHCP and DNS servers on your network.

This module will explain the tools and processes that you can use to migrate DHCP and DNS server roles, and will show you how you can use IPAM to manage and monitor your DHCP and DNS servers.

Lessons

- Migrating the DHCP Server Role
- Migrating the DNS Server Role
- Implementing IPAM

Lab : Upgrading and Migrating Network Services

- Migrating the DHCP Server Role
- Migrating the DNS Server Role

Lab : Implementing IPAM

- Deploying and Configuring IPAM

After completing this module, students will be able to:

- Migrate the DHCP server role to Windows Server 2012 R2.
- Migrate the DNS server role to Windows Server 2012 R2.
- Manage IP address spaces with IPAM.

Module 7: Upgrading and Migrating Server Roles

File servers and web servers are present in almost all corporate networks. You should consider the impact of these servers on your network, and how migrating to Windows Server 2012 can improve the functionality of file servers and web servers on your network. This module explains the migration considerations and the processes for migrating file servers and web servers.

Lessons

- Upgrading and Migrating File Servers
- Migrating Web and Application Servers

Lab : Migrating File Services

- Preparing to Migrate to the File and Storage Services Role
- Migrating to the File and Storage Services Role

Lab : Preparing and Migrating a Web Server

- Preparing to Migrate a Web Server
- Migrating a Web Server

After completing this module, students will be able to:

- Upgrade and migrate file servers to Windows Server 2012.
- Upgrade and migrate web and application servers to Windows Server 2012.

Module 8: Upgrading and Migrating AD DS

This module explains how to prepare for migrating AD DS in Windows Server 2012. It also explains the tools that you can use to perform the migration. It then explains how to upgrade and restructure domain controllers.

Lessons

- Windows Server 2012 AD DS Upgrade and Migration Overview
- Upgrading Domain Controllers to Windows Server 2012
- Restructuring a Domain

Lab : Upgrading AD DS to Windows Server 2012

- Preparing the Forest for Upgrade
- Deploying a Windows Server 2012 Domain Controller
- Removing Legacy Domain Controllers

After completing this module, students will be able to:

- Explain the process for upgrading and migrating AD DS to Windows Server 2012.
- Upgrade domain controllers to Windows Server 2012.
- Restructure a domain.

Module 9: Migrating Additional Active Directory-Related Roles and Services

Access and Information Protection (AIP) management simplifies the user experience for online users while streamlining the administrative effort of IT departments. AIP management solutions are a set of technologies and products designed to help organizations manage user identities and associated access privileges by establishing a single authoritative source for user authentication. Windows Server provides a number of server roles for AIP management:

Active Directory Certificate Services (AD CS)

Active Directory Federation Services (AD FS)

Active Directory Rights Management Services (AD RMS)

These roles have been improved in Windows Server 2012. Consequently, it is important that you know how to migrate these AIP roles from older versions of Windows Server. This module describes these AIP improvements and explains how to migrate these server roles.

Besides the included roles, Microsoft also provides cloud-based services to support AIP management, such as Windows Azure Active Directory (Windows Azure AD). Windows Azure AD is an online directory service that you can use for cloud-based applications. This module explores Windows Azure AD.

Lessons

- Migrating AD CS
- Migrating AD FS
- Migrating AD RMS
- Overview of Windows Azure AD
- Implementing Windows Azure AD

Lab : Migrating AD CS

- Preparing to Migrate AD CS
- Migrating AD CS

Lab : Implementing Windows Azure AD

- Implementing Windows Azure AD for Office 365
- Implementing Windows Azure AD for a Cloud-Based Application

After completing this module, students will be able to:

- Migrate AD CS.
- Describe how to migrate AD FS.
- Describe how to upgrade AD RMS.
- Describe Windows Azure AD.
- Implement Windows Azure AD.