

5 Days

20413: Designing and Implementing a Server Infrastructure

This 5-day Microsoft 20413C Designing and Implementing a Server Infrastructure training course is Part 1 in the series of 2 courses to qualify MCSE: Server Infrastructure that delivers essential knowledge to design, install and manage a Windows Server 2012 R2 infrastructure in an existing enterprise environment.

The course provides advanced skills to deliver enterprise solutions that support manual and automated server installations in a physical and virtual environment. Professionals also develop skills to deliver networking solutions such as DHCP, IPAM, VPN, and Direct Access.

NOTE: Labs are based on Windows Server 2012 R2 and System Center 2012 R2.

Course Details

Course Outline

Module 1: Planning Server Upgrade and Migration

This module describes how to plan a server upgrade and migration strategy.

Lessons

- Creating a Server Upgrade and Migration Plan
- Considerations for Upgrades and Migrations
- Planning for Virtualization

Module 2: Planning and Implementing a Server Deployment Strategy

This module describes how to design an automated server installation strategy and plan and implement a server deployment infrastructure.

Lessons

- Implementing an Automated Deployment Strategy
- Selecting an Appropriate Server Deployment Strategy

Module 3: Planning and Deploying Servers Using Virtual Machine Manager

This module describes how to plan and deploy a Virtual Machine Manager infrastructure for deploying servers.

Lessons

- [System Center 2012 R2 Virtual Machine Manager Overview](#)
- [Planning and Deploying Virtual Machine Manager Services](#)
- [Implementing a Virtual Machine Manager Library and Profiles](#)

Module 4: Designing and Maintaining an IP Configuration and Address Management Solution

This module describes how to design and maintain IP address management (IPAM) and a Dynamic Host Configuration Protocol (DHCP) solution.

Lessons

- [How to Design an IPAM Provisioning Strategy](#)
- [Managing Servers and Address Spaces by Using IPAM](#)
- [Designing DHCP Servers](#)
- [Planning DHCP Scopes](#)

Module 5: Designing and Implementing Name Resolution

This module describes how to design a name resolution strategy.

Lessons

- [Designing a DNS Server Implementation Strategy](#)
- [Designing DNS Zones](#)
- [Designing DNS Zone Replication and Delegation](#)
- [Designing the DNS Namespace](#)
- [Designing DNS for High Availability and Security](#)
- [Optimizing DNS Servers](#)

Module 6: Design and Implement an Active Directory Domain Services Forest and Domain Infrastructure

This module describes how to design and implement an AD DS forest and domain infrastructure.

Lessons

- [Designing and Implementing Active Directory Forest Trusts](#)
- [Designing and Implementing Active Directory Domains](#)
- [Designing an Active Directory Forest](#)
- [Designing Active Directory Integration with Windows Azure Active Directory](#)
- [Designing Active Directory Domain Trusts](#)
- [Designing DNS Namespaces in Active Directory Environments](#)

Module 7: Designing and Implementing an AD DS Organizational Unit Infrastructure

This module describes how to design and implement an OU infrastructure and an AD DS permissions model.

Lessons

- [Designing an OU Structure](#)
- [Designing and Implementing an AD DS Group Strategy](#)
- [Planning the Active Directory Administrative Tasks Delegation Model](#)

Module 8: Designing and Implementing a Group Policy Object Strategy

This module describes how to design and implement a Group Policy Object (GPO) strategy.

Lessons

- Collecting the Information Required for a GPO Design
- Designing GPO Processing
- Designing and Implementing GPOs
- Planning Group Policy Management

Module 9: Designing and Implementing an AD DS Physical Topology

This module describes how to design an AD DS sites topology and a domain controller placement strategy.

Lessons

- Design Active Directory Replication
- Design and Implement Active Directory Sites
- Design the Placement of Domain Controllers
- Design Highly Available Domain Controllers
- Virtualization Considerations for Domain Controllers

Module 10: Planning and Implementing Storage and File Services

This module describes how to plan and implement storage and file services.

Lessons

- Plan and Implement iSCSI SANs
- Plan and Implement Storage Spaces
- Optimizing File Services for Branch Offices

Module 11: Designing and Implementing Network Protection

This module describes designing and implementation of network protection.

Lessons

- Network Security Design Overview
- Design and Implement a NAP Infrastructure
- Design and Implement a Windows Firewall Strategy

Module 12: Designing and Implementing Remote Access Services

This module describes how to design and implement remote access services.

Lessons

- Planning and Implementing DirectAccess
- Planning and Implementing Web Application Proxy

- Planning and Implementing VPN
- Planning a Complex Remote Access Infrastructure

Who Should Attend

This course is intended for IT professionals who operate on a physical and a logical Windows Server 2012 enterprise Active Directory Domain Services (AD DS) infrastructure.

Pre Requisite

The candidates should good knowledge of Windows client and server operating system and basic AD DS and networking experience in an enterprise/small business (SMB) environment.

In addition to their professional experience, candidates who attend this training should already carry the following technical knowledge:

- Good know-how of Transmission Control Protocol/Internet Protocol (TCP/IP) fundamentals and networking concepts.
- Good know-how of both Windows Server 2012 R2 and Active Directory® Domain Services (AD DS).
- Basic understanding of both scripts and batch files.
- Knowledge equivalent to Windows 2012 R2 MCSA.
- Foundational knowledge of security concepts, such as authentication and authorization.

Exams

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