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Microsoft

*Technology
Associate*

20413: Designing and Implementing a Server Infrastructure

Duration: 5 Days

Course Outline

Module 1: Planning a Server Upgrade and Migration

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

Lessons

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

Lab : Planning a Server Upgrade and Migration

- Plan a server upgrade and migration strategy

After completing this module, students will be able to:

- Describe server upgrade and migration considerations.
- Explain how to create a server upgrade and migration plan.
- Explain how to plan for server virtualization.

Module 2: Planning and Implementing a Server Deployment Infrastructure

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

Lessons

- Selecting an Appropriate Server Imaging Strategy
- Selecting a Deployment Automation Strategy
- Implementing an Automated Deployment Strategy

Lab : Planning and Implementing a Server Deployment Infrastructure

- Planning an Automated Server Installation and Deployment Strategy
- Preparing the Windows Server 2012 Image
- Deploying Windows Server 2012

After completing this module, students will be able to:

- Select an appropriate server imaging strategy.
- Select a deployment automation strategy.

- Implement an automated deployment strategy.

Module 3: Designing and Maintaining an IP Configuration and Address Management Solution

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

Lessons

- Designing and Implementing DHCP
- Planning and Implementing DHCP Scopes
- Planning and Implementing an IPAM Provisioning Strategy

Lab : Designing and Maintaining an IP Configuration and IP Address Management Solution

- Designing an IP Addressing Scheme for Contoso (Optional)
- Planning DHCP to Support Your Propose Scheme
- Planning an IPAM Deployment
- Implementing DHCP and IPAM

After completing this module, students will be able to:

- Design and implement DHCP.
- Plan and implement DHCP scope configuration and options.
- Design and implement an IPAM provisioning strategy.

Module 4: Designing and Implementing Name Resolution

This module explains how to design a name resolution solution strategy.

Lessons

- Designing a Domain Name System (DNS) Server Implementation Strategy
- Designing the DNS Namespace
- Designing and Implementing DNS Zones
- Designing and Configuring DNS Zone Replication and Delegation
- Optimizing DNS Servers
- Designing DNS for High Availability and Security

Lab : Designing and Implementing Name Resolution

- Designing a DNS Name Resolution Strategy
- Planning a DNS Server Placement Strategy
- Planning DNS Zones and DNS Zone Replication
- Implementing DNS

After completing this module, students will be able to:

- Design a DNS server implementation strategy.
- Design a DNS namespace.
- Design and implement a DNS zone strategy.

- Design and configure DNS zone replication.
- Optimize the DNS server configuration.
- Design DNS for high availability and security.

Module 5: Designing and Implementing an Active Directory Domain Services Forest and Domain Infrastructure

This module explains how to design and implement an Active Directory Domain Services (AD DS) forest and domain infrastructure.

Lessons

- Designing an AD DS Forest
- Designing and Implementing AD DS Forest Trusts
- Designing and Implementing AD DS Domains
- Designing DNS Namespaces in AD DS Environments
- Designing AD DS Domain Trusts

Lab : Designing and Implementing an Active Directory Domain Services Forest Infrastructure

- Designing an AD DS Forest Infrastructure
- Implementing AD DS Forest Trusts

Lab : Designing and Implementing an AD DS Domain Infrastructure

- Designing an AD DS Domain Infrastructure
- Implementing an AD DS Domain Infrastructure

After completing this module, students will be able to:

- Design an AD DS forest.
- Design and implement AD DS forest trusts.
- Design AD DS domains.
- Design DNS namespaces in an AD DS environment.
- Design and implement AD DS domain trusts.

Module 6: Designing and Implementing an Active Directory Organizational Unit Infrastructure

This module explains how to design and implement an organizational unit (OU) infrastructure and AD DS permissions model.

Lessons

- Planning the Active Directory Administrative Tasks Delegation Model
- Designing the OU Structure
- Designing and Implementing an Active Directory Group Strategy

Lab : Designing and Implementing an Active Directory OU Infrastructure and Delegation Model

- Designing an OU Infrastructure
- Implementing the OU design

- Designing and Implementing an Active Directory Permissions Model

After completing this module, students will be able to:

- Plan an AD DS administrative tasks delegation model.
- Design an OU structure.
- Design and implement an AD DS group strategy.

Module 7: Designing and Implementing a Group Policy Object Strategy

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

Lessons

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

Lab : Designing and Implementing a Group Policy Object Strategy

- Designing a GPO Strategy
- Implementing the GPO Design

After completing this module, students will be able to:

- Collect and analyze the information required to facilitate a GPO design.
- Create a GPO design and implement it.
- Create a GPO processing design.
- Plan GPO management.

Module 8: Designing and Implementing an Active Directory Domain Services Topology

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

Lessons

- Designing and Implementing AD DS Sites
- Designing AD DS Replication
- Designing the Placement of Domain Controllers
- Virtualization Considerations for Domain Controllers
- Designing Highly Available Domain Controllers

Lab : Designing and Implementing an Active Directory Domain Services Physical Topology

- Designing Active Directory sites and replication
- Planning the placement of domain controllers
- Implementing Active Directory sites and domain controllers

After completing this module, students will be able to:

- Design AD DS sites.
- Design AD DS replication.
- Design domain controller placement.
- Design domain controller deployments on virtual machines.
- Design a highly available domain controller deployment.

Module 9: Planning and Implementing Storage

This module explains how to plan and implement storage.

Lessons

- Storage Considerations
- Planning and Implementing iSCSI SANs
- Storage Spaces in Windows Server 2012

Lab : Planning and Implementing Storage

- Planning a Storage Solution
- Implementing iSCSI Storage
- Configuring a Redundant Storage Space

After completing this module, students will be able to:

- Plan for efficient storage.
- Plan and implement an Internet Small Computer System Interface (iSCSI) storage area network (SAN).
- Plan and implement storage spaces.

Module 10: Planning and Implementing File Services

This module explains how to plan and implement file services.

Lessons

- Planning and Implementing DFS
- Planning and Implementing BranchCache
- Planning and Implementing Dynamic Access Control

Lab : Designing and Implementing File Services

- Planning Data Access
- Planning and Implementing Dynamic Access Control

After completing this module, students will be able to:

- Plan and implement Distributed File System (DFS).
- Plan and implement Windows BranchCache.
- Plan and implement Dynamic Access Control.

Module 11: Designing and Implementing Network Access Services

This module explains how to design and implement network access services.

Lessons

- Designing and Implementing Remote Access Services
- Designing RADIUS Authentication by Using NPS
- Designing a Perimeter Network
- Planning and Implementing DirectAccess

Lab : Designing and Implementing Network Access Services

- Planning and implementing a VPN solution
- Planning and implementing a DirectAccess solution

After completing this module, students will be able to:

- Design and implement remote access services.
- Design a Remote Authentication Dial-In User Service (RADIUS) solution.
- Design a perimeter network.
- Plan and implement the Windows 8 DirectAccess feature.

Module 12: Designing and Implementing Network Protection

This module explains how to design and implement network protection.

Lessons

- Overview of Network Security Design
- Identifying and Mitigating Common Network Security Threats
- Designing and Implementing a Windows Firewall Strategy
- Designing and Implementing a NAP Infrastructure

Lab : Designing and Implementing Network Protection

- Designing a Windows Firewall solution
- Implementing a Windows Firewall solution
- Designing a NAP solution
- Implementing NAP with VPN Enforcement

After completing this module, students will be able to:

- Describe the network security design process.
- Describe how to identify and mitigate common network security threats.
- Design and implement a Windows Firewall implementation.
- Design and implement Network Access Protection (NAP).