

PRAGATHI TECHNOLOGIES

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Course 20413C:

Designing and Implementing a Server Infrastructure

Course Outline

Module 1: Planning Server Upgrade and Migration

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

Lessons

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

Lab : Planning a Server Upgrade and Migration

- Planning a Strategy for Server Upgrade and Migration
- Evaluating Candidates for Server Virtualization

After completing this module, students will be able to:

- Describe the factors to consider when performing a server upgrade and migration.
- Create a plan for a server upgrade and migration.
- Plan for server virtualization.

Module 2: Planning and Implementing a Server Deployment Strategy

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

Lessons

- Selecting an Appropriate Server Deployment 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 R2 Image

- Deploying Windows Server 2012 R2

After completing this module, students will be able to:

- Select an appropriate server deployment strategy.
- Implement an automated deployment strategy.

Module 3: Planning and Deploying Servers Using Virtual Machine Manager

This module explains how to plan and deploy a Virtual Machine Manager (VMM) infrastructure for deploying servers.

Lessons

- System Center 2012 R2 Virtual Machine Manager Overview
- Implementing a Virtual Machine Manager Library and Profiles
- Planning and Deploying Virtual Machine Manager Services

Lab : Planning and Deploying Virtual Machines by Using Virtual Machine Manager

- Planning Microsoft System Center 2012 R2 Virtual Machine Manager Components
- Planning Virtual Machine and Service Templates
- Implementing Virtual Machine Manager Components

After completing this module, students will be able to:

- Describe the core VMM architecture and components.
- Implement VMM libraries and profiles.
- Plan and deploy VMM services.

Module 4: 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 DHCP Servers
- Planning DHCP Scopes
- Designing an IPAM Provisioning Strategy
- Managing Servers and Address Spaces by Using IPAM

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

- Planning DHCP to Support Your Proposal
- Planning an IPAM Deployment
- Implementing DHCP and IPAM

After completing this module, students will be able to: ● Design a DHCP server implementation.

- Plan DHCP scope configuration and options.
- Design an IPAM provisioning strategy.
- Manage servers and address spaces by using IPAM.

Module 5: Designing and Implementing Name Resolution

This module explains how to design a name resolution strategy.

Lessons

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

Lab : Designing and Implementing Name Resolution

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

After completing this module, students will be able to:

- Design a Domain Name System (DNS) server-implementation strategy.
- Design a DNS namespace.
- Design and implement a DNS zone strategy.
- Design and configure DNS zone replication and delegation.
- Optimize the DNS server configuration.

- Design DNS for high availability and security.

Module 6: Designing and Implementing an Active Directory Domain Services Forest and Domain Infrastructure

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

Lessons

- Designing an Active Directory Forest
- Designing and Implementing Active Directory Forest Trusts
- Designing Active Directory Integration with Windows Azure Active Directory
- Designing and Implementing Active Directory Domains
- Designing DNS Namespaces in Active Directory Environments
- Designing Active Directory Domain Trusts

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

- Designing an Active Directory Forest Infrastructure
- Implementing Active Directory Forest Trusts

Lab : Designing and Implementing an Active Directory Domain Infrastructure

- Designing an Active Directory Domain Infrastructure
- Implementing an Active Directory Domain Infrastructure

After completing this module, students will be able to:

- Design an Active Directory forest.
- Design and implement Active Directory forest trusts.
- Design Active Directory integration with Windows Azure Active Directory.
- Design and implement Active Directory domains.
- Design DNS namespaces in an Active Directory environment.
- Design and implement Active Directory domain trusts.

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

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

Lessons

- Planning the Active Directory Administrative Tasks Delegation Model

- Designing an OU Structure
- Designing and Implementing an AD DS Group Strategy

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

- Designing an Organizational Unit Infrastructure
- Implementing the OU Design
- Designing and Implementing an Active Directory Permissions Model

After completing this module, students will be able to:

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

Module 8: Designing and Implementing a Group Policy Object Strategy

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

Lessons

- Collecting 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 9: Designing and Implementing an AD DS Physical Topology

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

Lessons

- Designing and Implementing Active Directory Sites
- Designing Active Directory 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 and Active Directory Replication
- Implementing Active Directory Sites and Domain Controllers

After completing this module, students will be able to:

- Design and implement Active Directory sites.
- Design and configure Active Directory replication.
- Design domain controller placement.
- Plan for virtualization of the domain controller role.
- Design domain controller deployments for high availability.

Module 10: Planning and Implementing Storage and File Services

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

Lessons

- Planning and Implementing iSCSI SANs
- Planning and Implementing Storage Spaces
- Optimizing File Services for Branch Offices

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 and implement an Internet Small Computer System Interface (iSCSI) SAN.
- Plan and implement storage spaces.
- Optimize file services for branch offices.

Module 11: Designing and Implementing Network Protection

This module explains how to design and implement network protection.

Lessons

- Overview of Network Security Design
- 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 IPsec Enforcement

After completing this module, students will be able to: ●

Describe the design process for network security.

- Design and implement a Windows Firewall strategy.
- Design and implement Network Access Protection (NAP).

Module 12: Designing and Implementing Remote Access Services

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

Lessons

- Planning and Implementing DirectAccess
- Planning and Implementing VPN
- Planning and Implementing Web Application Proxy
- Planning a Complex Remote Access Infrastructure

Lab : Designing and Implementing Network Access Services

- Designing a Remote Access Strategy
- Planning and Implementing a DirectAccess Solution
- Planning and Implementing a VPN Solution
- Implementing Web Application Proxy

After completing this module, students will be able to:

- Plan and implement DirectAccess.

- Plan and implement a virtual private network (VPN).
 - Plan and implement a Web Application Proxy.
 - Plan a complex remote access infrastructure.
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