

## SYLLABUS

### Module I

- Windows 10 and Hyper-V Service
- Windows 10 and Hyper-V Basic Network
- Creating a Windows 10 Hyperv Virtual Machine
- How to Install Windows server 2022 on Hyperv?
- Hyperv Virtual Server Image Operations
- NAT on Hyper-V
- Basic Network in Virtual Servers
- What is Active Directory?
- Active Directory Fundamentals
- Active Directory Service Installations
- Active Directory Management Tools
- Active Directory Domain Acquisition Process
- SAM User Database
- Authorization in Active Directory Database
- What is AD Schema?
- Active Directory Group Types
- Local Admin Privileges
- AD Security Policies
- Active Directory Objects Properties
- Using the MMC Console
- Introduction to Group Policy System
- Group Policy OU Planning
- Group Policy Entities
- Implementing Group Policy Objects
- NTLM-Kerberos Authentication
- Group Policy User Configuration
- Windows 10 Setup for Group Policy
- Group Policy Allow-Deny Logon Locally
- Group Policy Restricted Group
- Group Policy Local Admin Disable-Rename

- Group Policy Join Workstation Domain
- Group Policy Logon Message
- Group Policy User Restrictions
- Group Policy Folder Redirection
- Group Policy Folder Redirection Applications
- Group Policy Firewall Configuration
- Group Policy Backup
- What are Disk and File Systems?
- Basic Disk Configurations
- Format Options on Disc
- Formatting Types on Disc
- Dynamic Discs
- Disk Part Implementation and Mutipath I / O
- What is Dual Boatig?
- Dual Booting Applications
- Windows 10 and RSAT
- Security Permissions and File Server
- Sharing and Security Permissions
- Security permissions in detail
- Private Shares
- Volume Shadow Copy
- Disc Quota
- Compression and EFS Systems

## **Module II**

- What is DNS?
- Root DNS Servers
- Forwarde Lookup Zone and Registration Types
- Revers Lookup Zone
- DNS Forwarder
- DNS Advantage Settings
- DNS Secondary Zone Applications
- DNS Active Directory Integrated Zone
- Secure - None Secure Dynamic Updates
- DNS SRV Records
- Website Registrations and Conditional Forwarder
- NSlookup and SRV Records
- Introduction to Network Architecture
- What is TCP / IP?
- IP Addressing

- Subnetting
- Private and Public IP Addresses
- What is the MAC Address?
- Example Network Topology
- Preparation for Network Lab Study
- Routing Concept and Application
- TCP / IP and Firewall Architectures Application
- What is NAT? What is PAT?
- What is a VPN? What are the Types of VPN?
- VPN Protocols-Authatication Types
- VPN RRAS Configuration
- VPN Client configurations
- VPN and RADIUS
- What is DHCP?
- DHCP Service Setup
- DHCP Server Reservation and Relay Agent
- DHCP Realy Agent Application
- DHCP Split Scope and Failover
- DHCP Super Scope-Multicast Scope
- DHCP Filter-Policy
- DHCP Server Backup

### **Module III**

- What is Wins Server? How to use?
- What is DFS and DFSR?
- DFS and DFSR Applications
- How to Configure DFSR
- What is ISCSI?
- ISCSI Windows Server Configuration
- STARWIND Virtual Storage
- STARWIND Configuration
- What is IPAM?
- IPAM Service Setup
- IPAM Management Configuration
- What is the OSI Reference Model?
- What is IIS?
- Project Assignment Explanations
- Getting Started With IIS Configuration
- Publishing IIS Websites
- Accessing IIS Website with Multiple FQDNs

- IIS "https" "SSL" Introduction
- What is CA?
- Certificate Acquisition and WildCart Certificate
- CA Setup
- Completing IIS Certificate Procedures
- "http" - "https" Redirect
- IIS Rederiction Transactions
- DNS Round Roubin and NLB
- DNS Round Roubin Configuration
- NLB Configuration for IIS
- What is the IIS Application Pool?
- IIS Authentication Systems
- IIS Authentication Practices
- IIS General Settings
- IIS and FTP

#### **Module IV**

- What is Print Server? How to use?
- CA Introduction
- Cetificate Template
- EFS After CA Setup
- What is ipsec?
- ipsec Applications
- Monitoring ipsec Traffic
- Introduction to Hyper-V Service
- Hyper-V Management Tools
- Hyper-V Network Architecture
- Hyper-V Network Applications
- Hyper-V Vlan Trunking Configuration
- Hyper-V NIC Teaming
- Hyper-V Network Nic Teaming Trunking Applications
- Hyper-V Disk Types
- Hyper-V HBA SAN Structures
- Hyper-V Server Settings
- Hyper-V Virtual Server Settings
- Hyper-V IMPORT-EXPORT
- Configuring Hyper-V Server
- Windows Server Core Hyper-V
- Virtual Servers on Windows Server Core Hyper-V
- Hyper-V Server Live Migration-Replication Preparation

- Windows Server 2022 Hyper-V Core Applications
- Windows Server 2022 Core Hyper-V Virtual Server Applications
- Windows Server 2022 Core Hyper-V Live Migration
- Windows Server 2022 Core Hyper-V Replication

### **Module V**

- Active Directory Generic Design
- Theoretically DC, RODC, Replication in Active Directory
- Replication Between Active Directory DCs
- Introduction to FSMO Roles
- Transfer FSMO Roles
- FSMO Roles Seize Operation
- Global Catalog
- Introduction to Domain-Forest Functional Level Concept
- Domain-Forest Functional Level Upgrade (Windows 2008 Server-Windows 2016)
- Domain-Forest Functional Level Upgrade (Windows 2016 Server-Windows 2022)
- Introduction to RODC System
- RODC Pre-Create Process
- RODC Pre-Create Installation
- Active Directory Forest Login
- Multiple Domains and Child Domain Applications on the Same Forest
- Group Authorizations Implemented Defeatly in Forest Buildings
- Authorization in Forest Structure
- Introduction to Trust Systems
- Replication Between DCs in Forest Structure
- Trust Between Forests Theoretical
- Establishing Trust Between Forests
- Authorization in Trust Architecture
- Transtive Trust Application Studies

### **Module VI**

- Removing a DC (Demote)
- Force Lifting of a DC
- Meta Data Cleanup Applications
- Disaster in Multiple DC Environment
- Disaster in Single Dc Environments

- Sample Live Scenario
- Disaster Recovery Applications in a Single DC Environment
- Active Directory Backup-Restore Applications
- Bare Metal Recovery Applications
- Introduction to Windows 2022 Core DC Processes
- Windows 2022 Core Additional DC Installations
- Windows 2022 Core New Forest Installations
- Physical Structure of Active Directory
- Logical Structure of Active Directory
- DC Installation Operations Using IFM Media
- Active Directory Fine Grained Password operations
- Introduction to Windows Deployment Server Processes
- Windows Deployment Server Setup
- DHCP Registrations for Windows Deployment Server
- Operating System Installations with Windows Deployment Server
- What is Windows Deployment Server Capture Image? How To Get It?
- Windows Deployment Server Capture Image Operating System Setup

## **Module VII**

- Introduction to Terminal Server (RDS) Systems
- RDP Enabling and Compatibility Mode
- Terminal Server (RDS) User Settings
- Installation of Terminal Server (RDS) Services
- Terminal Server (RDS) Shadow and Powers
- RDS Session Broker and Gateway Service
- Terminal Server (RDS) Web App
- Terminal Server (RDS) Group Policy Settings
- Terminal Server (RDS) License Services
- RMS Login
- RMS Setup
- RMS Client Configuration
- Project Design and Planning
- Virtual Servers and AD Structure for the Project
- Project Network Architecture (site to site VPN)
- IIS, NAT, NLB, DNS Architectures and Configurations for the project

**Qeyd: Təlimə daxildir:**

- Exam voucher
  - Digital book
  - Student pass
  - Online lab
  - Practice test
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