

# Complete IT Certification Bundle

(Includes 26 certification courses, practice tests, live labs, and exams)

## FULL SYLLABUS

### CISCO

#### Cisco CCENT 100-105 Interconnecting Cisco Networking Devices (ICND1 v3.0)

- Module 1 Networking Fundamentals
- Module 2 Basic Ethernet LAN Implementation
- Module 3 Designing Ethernet LANS
- Module 4 Understanding IPv4
- Module 5 Working With Cisco Routers
- Module 6 IPv4 Design And Troubleshooting
- Module 7 IPv4 Services
- Module 8 Implementing IPv6

#### Cisco CCNA 200-105 Interconnecting Cisco Networking Devices (ICND2 v3.0)

- Module 1 Configuring Ethernet LANs
- Module 2 Configuring IPv4 Routing Protocols
- Module 3 Wide Area Networks
- Module 4 IPv4 Services
- Module 5 IPv4 Routing And Troubleshooting
- Module 6 IPv6 Routing
- Module 7 Cloud Based Networking

#### Cisco CCNA 210-260 Implementing Cisco IOS Network Security

- Module 1: Network Review
- Module 2: Terminology And Fundamentals

- Module 3: PKI And Cryptography
- Module 4: AAA
- Module 5: Bring Your Own Device
- Module 6: Secure Access
- Module 7: VPNs
- Module 8: Secure Routing And Switching
- Module 9: Firewalls
- Module 10: Intrusion Protection System (IPS)
- Module 11: Content And Endpoint Security
- Cisco CCNP 300-101 Implementing Cisco IP Routing (ROUTE)

### **Cisco CCNP 300-115 Implementing Cisco IP Switched Networks (SWITCH)**

- Module 1: Plan And Design
- Module 2: EIGRP Enhanced Interior Gateway Routing Protocol
- Module 3: IPv6
- Module 4: OSPF
- Module 5: Border Gateway Protocol BGP
- Module 6: Configuration

### **Cisco CCNP 300-135 Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)**

- Module 1: Plan And Design
- Module 2: Switch Configuration
- Module 3: IP Configuration
- Module 4: STP And RTP
- Module 5: Routing
- Module 6: HSRP, VRRP, GLBP
- Module 7: Course Review

## **COMPTIA**

### **CompTIA A+ 220-1001**

#### Mobile Devices

- What are we covering?
- 1.1 Given a scenario, install and configure laptop hardware and components
- 1.2 Given a scenario, install components within the display of a laptop
- 1.3 Given a scenario, use appropriate laptop features
- 1.4 Compare and contrast characteristics of various types of other mobile devices
- 1.5 Given a scenario, connect and configure accessories and ports of other mobile devices

- 1.6 Given a scenario, configure basic mobile device network connectivity and application support
- 1.7 Given a scenario, use methods to perform mobile device synchronization

#### Networking

- 2.0 What are we covering?
- 2.1 Compare and contrast TCP and UDP ports, protocols and their purpose
- 2.2 Compare and contrast common networking hardware devices
- 2.3 Given a scenario, install and configure a basic wired/wireless SOHO network
- 2.4 Compare and contrast wireless networking protocols
- 2.5 Summarize the properties and purposes of services provided by networked hosts
- 2.6 Explain common network configuration concepts
- 2.7 Compare and contrast internet connection types, network types and their features
- 2.8 Given a scenario, use appropriate networking tools

#### Hardware

- 3.0 What are we covering?
- 3.1 Explain basic cable types, features and their purposes
- 3.2 Identify common connector types
- 3.3 Given a scenario, install RAM types
- 3.4 Given a scenario, select, install and configure storage devices
- 3.5 Given a scenario, install and configure motherboards, CPUs and add-on cards
- 3.6 Explain the purposes and uses of various peripheral types
- 3.7 Summarize power supply types and features
- 3.8 Given a scenario, select and configure appropriate components for a custom PC configuration to meet customer specifications/needs
- 3.9 Given a scenario, install and configure common devices
- 3.10 Given a scenario, configure SOHO multifunction devices/printers and settings
- 3.11 Given a scenario, install and maintain various print technologies

#### Virtualization and Cloud Computing

- 4.1 Compare and contrast cloud computing concepts
- 4.2 Given a scenario, set up and configure client-side virtualization

#### Hardware and Network Troubleshooting

- 5.0 What are we covering?
- 5.1 Given a scenario, use the best practice methodology to resolve problems
- 5.2 Given a scenario, troubleshoot problems related to motherboards, RAM, CPUs and power
- 5.3 Given a scenario, troubleshoot hard drives and RAID arrays
- 5.4 Given a scenario, troubleshoot video, projector and display issues
- 5.5 Given a scenario, troubleshoot common mobile device issues while adhering to the appropriate procedures
- 5.6 Given a scenario, troubleshoot printers
- 5.7 Given a scenario, troubleshoot common wires and wireless network problems

### CompTIA A+ 220-1102

#### Operating Systems

- Compare and contrast common operating system types and their purposes
- 1.2 Compare and contrast features of Microsoft Windows versions
- 1.3 Summarize general OS installation considerations and upgrade methods
- 1.4 Given a scenario, use appropriate Microsoft command line tools
- 1.5 Given a scenario, use Microsoft operating system features and tools
- 1.6 Given a scenario, use Microsoft Windows Control Panel utilities
- 1.7 Summarize application installation and configuration concepts
- 1.8 Given a scenario, configure Microsoft Windows networking on a client/desktop
- 1.9 Given a scenario, use features and tools of the Mac OS and Linux client/desktop operating systems

## Security

- 2.1 Summarize the importance of physical security measures
- 2.2 Explain logical security concepts
- 2.3 Compare and contrast wireless security protocols and authentication methods
- 2.4 Given a scenario, detect, remove, and prevent malware using appropriate tools and methods
- 2.5 Compare and contrast social engineering, threats, and vulnerabilities
- 2.6 Compare and contrast the differences of basic Microsoft Windows OS security settings
- 2.7 Given a scenario, implement security best practices to secure a workstation
- 2.8 Given a scenario, implement methods for securing mobile devices
- 2.9 Given a scenario, implement appropriate data destruction and disposal methods
- 2.10 Given a scenario, configure security on SOHO wireless and wired networks

## Software Troubleshooting

- 3.1 Given a scenario, troubleshoot Microsoft Windows OS problems
- 3.2 Given a scenario, troubleshoot and resolve PC security issues
- 3.3 Given a scenario, use best practice procedures for malware removal
- 3.4 Given a scenario, troubleshoot mobile OS and application issues
- 3.5 Given a scenario, troubleshoot mobile OS and application security issues

## Operational Procedures

- 4.1 Compare and contrast best practices associated with types of documentation
- 4.2 Given a scenario, implement basic change management best practices
- 4.3 Given a scenario, implement basic disaster prevention and recovery methods
- 4.4 Explain common safety procedures
- 4.5 Explain environmental impacts and appropriate controls
- 4.6 Explain the processes for addressing prohibited content/activity, and privacy, licensing, and policy concepts
- 4.7 Given a scenario, use proper communication techniques and professionalism
- 4.8 Identify the basics of scripting

## CompTIA Cyber Security Analyst (CySA+) CS0-001

### Module 1: Threat Management

- Introduction
- 1.2 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 1

- 1.3 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 2
- 1.4 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 3
- 1.5 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 4
- 1.6 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 5
- 1.7 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 6
- 1.8 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 7
- 1.9 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 8
- 1.10 Given a scenario, apply environmental reconnaissance techniques using appropriate tools and processes – Part 9
- 1.11 Given a scenario, analyze the results of a network reconnaissance – Part 1
- 1.12 Given a scenario, analyze the results of a network reconnaissance – Part 2
- 1.13 Given a scenario, analyze the results of a network reconnaissance – Part 3
- 1.14 Given a scenario, analyze the results of a network reconnaissance – Part 4
- 1.15 Given a scenario, analyze the results of a network reconnaissance – Part 5
- 1.16 Given a network-based threat, implement or recommend the appropriate response and countermeasure – Part 1
- 1.17 Given a network-based threat, implement or recommend the appropriate response and countermeasure – Part 2
- 1.18 Given a network-based threat, implement or recommend the appropriate response and countermeasure – Part 3
- 1.19 Given a network-based threat, implement or recommend the appropriate response and countermeasure – Part 4
- 1.20 Explain the purpose of practices used to secure a corporate environment – Part 1
- 1.21 Explain the purpose of practices used to secure a corporate environment – Part 2
- 1.22 Explain the purpose of practices used to secure a corporate environment – Part 3
- 1.23 Explain the purpose of practices used to secure a corporate environment – Part 4

## Module 2: Vulnerability Management

- 2.1 Given a scenario, implement an information security vulnerability management process – Part 1
- 2.2 Given a scenario, implement an information security vulnerability management process – Part 2
- 2.3 Given a scenario, implement an information security vulnerability management process – Part 3
- 2.4 Given a scenario, implement an information security vulnerability management process – Part 4
- 2.5 Given a scenario, implement an information security vulnerability management process – Part 5
- 2.6 Given a scenario, implement an information security vulnerability management process – Part 6
- 2.7 Given a scenario, implement an information security vulnerability management process – Part 7

- 2.8 Given a scenario, analyze the output resulting from a vulnerability scan – Part 1
- 2.9 Given a scenario, analyze the output resulting from a vulnerability scan – Part 2
- 2.10 Compare and contrast common vulnerabilities found in the following targets within an organization – Part 1
- 2.11 Compare and contrast common vulnerabilities found in the following targets within an organization – Part 2
- 2.12 Compare and contrast common vulnerabilities found in the following targets within an organization – Part 3

#### Module 3: Cyber Incident Response

- 3.1 Given a scenario, distinguish threat data or behavior to determine the impact of an incident – Part 1
- 3.2 Given a scenario, distinguish threat data or behavior to determine the impact of an incident – Part 2
- 3.3 Given a scenario, distinguish threat data or behavior to determine the impact of an incident – Part 3
- 3.4 Given a scenario, prepare a toolkit and use appropriate forensic tools during an investigation – Part 1
- 3.5 Given a scenario, prepare a toolkit and use appropriate forensic tools during an investigation – Part 2
- 3.6 Given a scenario, prepare a toolkit and use appropriate forensic tools during an investigation – Part 3
- 3.7 Given a scenario, prepare a toolkit and use appropriate forensic tools during an investigation – Part 4
- 3.8 Given a scenario, prepare a toolkit and use appropriate forensic tools during an investigation – Part 5
- 3.9 Explain the importance of communications during the incident response process
- 3.10 Given a scenario, analyze common symptoms to select the best course of action to support incident response – Part 1
- 3.11 Given a scenario, analyze common symptoms to select the best course of action to support incident response – Part 2
- 3.12 Given a scenario, analyze common symptoms to select the best course of action to support incident response – Part 3
- 3.13 Given a scenario, analyze common symptoms to select the best course of action to support incident response – Part 4
- 3.14 Summarize the incident recovery and post-incident response process – Part 1
- 3.15 Summarize the incident recovery and post-incident response process – Part 2
- 3.16 Summarize the incident recovery and post-incident response process – Part 3
- 3.17 Summarize the incident recovery and post-incident response process – Part 4

#### Module 4: Security Architecture and Tool Sets

- 4.1 Explain the relationship between frameworks, common policies, controls, and procedures – Part 1
- 4.2 Explain the relationship between frameworks, common policies, controls, and procedures – Part 2
- 4.3 Explain the relationship between frameworks, common policies, controls, and procedures – Part 3
- 4.4 Explain the relationship between frameworks, common policies, controls, and procedures – Part 4
- 4.5 Given a scenario, use data to recommend remediation of security issues related to identity and access management – Part 1
- 4.6 Given a scenario, use data to recommend remediation of security issues related to identity and access management – Part 2

- 4.7 Given a scenario, use data to recommend remediation of security issues related to identity and access management – Part 3
- 4.8 Given a scenario, use data to recommend remediation of security issues related to identity and access management – Part 4
- 4.9 Given a scenario, review security architecture and make recommendations to implement compensating controls – Part 1
- 4.10 Given a scenario, review security architecture and make recommendations to implement compensating controls – Part 2
- 4.11 Given a scenario, review security architecture and make recommendations to implement compensating controls – Part 3
- 4.12 Given a scenario, use applications security best practices while participating in the Software Development Life Cycle (SDLC) – Part 1
- 4.13 Given a scenario, use applications security best practices while participating in the Software Development Life Cycle (SDLC) – Part 2
- 4.14 Overview
- 4.15 Conclusion

## CompTIA Network+ N10-007

### Module 1: Networking Concepts

- Basic Networking
- OSI Model
- Protocols and Ports
- Switching
- Routing
- Advanced Switching and Routing Concepts
- IP Addressing
- Network Types and Topologies
- Wireless Technologies
- Cloud Concepts
- Network Services

### Module 2 – Infrastructure

- 2.1 Cabling Solutions
- 2.2 Network Device Placement and Installation
- 2.3 Advanced Network Devices
- 2.4 Virtualization and Network Storage Technologies
- 2.5 WAN Technologies

### Module 3 – Network Operations

- 3.1 Documentation
- 3.2 Business Continuity and Disaster Recovery
- 3.3 Scanning, Monitoring, and Patching
- 3.4 Remote Access Methods
- 3.5 Policies and Best Practices
- 3.5 Policies and Best Practices

### Module 4 – Network Security

- 4.1 Physical Security Devices

- 4.2 Authentication and Access Control
- 4.3 Basic Wireless Network Security
- 4.4 Common Network Attacks
- 4.5 Network Device Hardening
- 4.6 Common Mitigation Techniques

#### Module – Network Troubleshooting and Tools

- 5.1 Network Troubleshooting Methodology
- 5.2 Using the Appropriate Tool
- 5.3 Troubleshoot Wired Connectivity and Performance
- 5.4 Troubleshoot Wireless Connectivity and Performance
- 5.5 Troubleshoot Common Network Service Issues

### **CompTIA Security+ SY0-501**

#### Module 1: Networking Terminology

- 1.1 Course Introduction
- 1.2 Network Devices Part 1
- 1.3 Network Devices Part 2
- 1.4 Networking Cabling
- 1.5 Networking Addressing Part 1
- 1.6 Networking Addressing Part 2
- 1.7 Networking Addressing Part 3
- 1.8 Networking Addressing Part 4

#### Module 2: Locking Down Or Network

- 2.1 Firewalls Part 1
- 2.2 Firewalls Part 2
- 2.3 Intrusion Detection Systems
- 2.4 Network Design
- 2.5 Securing Devices

#### Module 3: Wireless

- 3.1 Wireless Basics Part 1
- 3.2 Wireless Basics Part 2
- 3.3 Securing Wireless Part 1
- 3.4 Securing Wireless Part 2
- 3.5 Configuring Wireless, Bluetooth And Infrared

#### Module 4: Intro To Security Terminology

- 4.1 Goals Of Information Security
- 4.2 Authentication And Authorization
- 4.3 Security Principles And Terminology Part 1
- 4.4 Security Principles And Terminology Part 2

#### Module 5: Policies And Standards

- 5.1 Introduction To Security Policies



- 5.2 Looking At Some Security Policies Part 1
- 5.3 Looking At Some Security Policies Part 2
- 5.4 Looking At Some Security Policies Part 3
- 5.5 Human Resource Policies Part 1
- 5.6 Human Resource Policies Part 2
- 5.7 User Education And Awareness Part 1
- 5.8 User Education And Awareness Part 2

#### Module 6: Physical Security

- 6.1 Business Location
- 6.2 Physical Access Controls
- 6.3 Implementing Environmental Controls

#### Module 7: Risk Analysis

- 7.1 Introduction Risk Analysis Part 1
- 7.2 Introduction Risk Analysis Part 2
- 7.3 Types Of Risk Analysis
- 7.4 Risk Mitigation Strategies

#### Module 8: Disaster Recovery, Business Continuity And BIA (Business Impact Analysis)

- 8.1 Business Continuity
- 8.2 Business Impact Analysis
- 8.3 Disaster Recovery
- 8.4 Backup And Restore

#### Module 9: Introduction To Computer Forensics

- 9.1 Working With Evidence
- 9.2 Collecting Digital Evidence Part 1
- 9.3 Collecting Digital Evidence Part 2
- 9.4 Looking At Incident Response

#### Module 10: Types Of Attacks

- 10.1 Social Engineering
- 10.2 Network Attacks Part 1
- 10.3 Network Attacks Part 2
- 10.4 Password And Application Attacks

#### Module 11: System Security Threats

- 11.1 Identifying Physical Threats
- 11.2 Malicious Software Part 1
- 11.3 Demo
- 11.4 Malicious Software Part 2
- 11.5 Threats Against Hardware

#### Module 12: Security Assessments

- 12.1 Types Of Assessments
- 12.2 Penetration Testing

#### Module 13: Monitoring And Auditing

- 13.1 Introduction To Monitoring And Monitoring Tools
- 13.2 Implementing Logging And Auditing

#### Module 14: Authentication

- 14.1 Authentication Models
- 14.2 Authentication Protocols
- 14.3 Implementing Authentication

#### Module 15: Access Control

- 15.1 Introducing Access Control
- 15.2 Access Control Models
- 15.3 Implementing Access Control Part 1
- 15.4 Implementing Access Control Part 2

#### Module 16: Mitigating Security Threats

- 16.1 Operating System Hardening
- 16.2 System Hardening Procedures
- 16.3 Application Security
- 16.4 Server Hardening Best Practices Part 1
- 16.5 Server Hardening Best Practices Part 2

#### Module 17: Implementing System Security

- 17.1 Implementing Personal Firewalls And HIDS
- 17.2 Protecting Against Malware
- 17.3 Device Security And Data Security Part 1
- 17.4 Device Security And Data Security Part 2
- 17.5 Understanding Virtualization And Cloud Computing

#### Module 18: Cryptography

- 18.1 Introduction To Cryptography
- 18.2 Symmetric And Asymmetric Encryption
- 18.3 Understanding Hashing And Encryption Uses

#### Module 19: Public Key Infrastructure

- 19.1 Intro To PKI
- 19.2 Managing And Implementing PKI
- 19.3 Course Conclusion

## MICROSOFT

### Microsoft 70-410 Installing and Configuring Windows Server 2012

#### Module 1

- Course Introduction
- Instructor Introduction
- Course Overview
- Prerequisites
- Certification Overview

## Module 2

- Best Course Practices
- Lab Setup
- Building Your Own Environment
- Presentation Types
- Chapter Review

## Module 3

- Windows Server 2012 Installation
- Available Editions
- Requirements
- Server Manager Overview
- Best Practice Analyzer
- Installing Server 2012
- Performing a Windows Server 2012 Installation
- Windows Server 2012 Standard Configurations
- Server Manager Roles
- Remote Management Configuration
- Installation Review
- Chapter Review

## Module 4

- Windows Server 2012 CORE
- Introduction to Windows Server 2012 CORE
- Minimum Server Interface
- Server Core Management
- CORE Roles
- Installation Options
- Installing and Configuring Server CORE
- Chapter Review

## Module 5

- Windows Server 2012 Server Manager
- Dashboard Overview
- Servers
- Roles and Features
- Server Manager Creation and Configuration
- Server Manager Toolbar
- Local Server Management
- Configuring Server Manager Toolbar
- Chapter Review

## Module 6

- Server Manager PowerShell
- Server Core Management Tools
- Windows PowerShell ISE Tool

## Module 7

- PowerShell 101 Basics
- What is PowerShell

- Remoting
- Commands Cmdlets
- Server Administration
- Remote Server Administration
- PowerShell ISE
- Scripting
- More PowerShell Features
- Chapter Review

#### Module 8

- Windows Server 2012 Network DHCP
- Networking
- Network Components
- TCP/IP
- DHCP
- DHCP Installation
- IP and DHCP Tools
- DHCP Configuration
- Chapter Review

#### Module 9

- Windows Server 2012 Network Configuration IPv4
- IPv4 Basics
- IPv4 Addressing
- IPv4 Subnetting
- Network Adapter Settings
- Network Settings Through the GUI
- Network Settings from a Command Line
- Chapter Review

#### Module 10

- Windows Server 2012 Network Configuration IPv6
- IPv6 Basics
- IPv6 Addressing
- IPv6 Simplification and Equivalents
- IPv6 Network Configuration
- Transition Technologies
- Configuring ISATAP
- Chapter Review

#### Module 11

- Windows Server 2012 Network DNS
- DNS Basics
- Zone Records and Types
- Records
- Name Resolution
- DNS Installation and Configuration
- DNS Query
- DNS Tools
- Working with DNS Tools
- Chapter Review

## Module 12

- Windows Server 2012 Hyper-V
- Basic Overview of Virtualization
- What is Server Virtualization?
- Desktop Virtualization
- Presentation Virtualization
- Application Virtualization
- USV Virtualization
- Cloud Computing
- System Requirements
- Installing the Hyper-V Role
- Installing Hyper-V
- Configuring Hyper-V
- Managing Virtual Networks
- Configuration Settings In Hyper-V
- Chapter Review

## Module 13

- Windows Server 2012 Active Directory Domain Services
- Active Directory Accounts
- Active Directory Administration
- Creating Active Directory User Account
- Active Directory Templates
- Creating a Template
- Command Line Tools
- PowerShell Scripting
- Adding Users and Groups In PowerShell
- Chapter Review

## Module 14

- Windows Server 2012 AD Objects and Groups
- Groups
- Group Scope
- Default Groups
- Creating Groups
- AD DS Permissions
- AD DS Delegation
- Chapter Review

## Module 15

- Windows Server 2012 Local Storage
- Storage Basics
- Drive Types
- Volumes
- File System
- Creating Mounts and Links
- Chapter Review

## Module 16

- Windows Server 2012 Storage Spaces
- Storage Spaces
- High Available Virtual Disk
- Advanced Configuration
- Advanced Storage Space Management
- Working with Storage Space
- Chapter Review

#### Module 17

- Windows Server 2012 Files Folders Shadow Copy
- NTFS Permissions
- File/Folder Permissions
- File/Folder Rights
- Effective Permissions
- File/Folder Creation and Configuration
- Shadow Copies
- Creating and Restoring Shadow Copies
- Chapter Review

#### Module 18

- Windows Server 2012 Group Policy Object Basics
- Defining GPO
- GPO History
- Practical Application
- GPO Settings
- GPO Types
- GPO Overview
- Chapter Review

#### Module 19

- Windows Server 2012 GPO Central Store
- Storage of GPO
- Central Store
- Administrative Templates
- Multiple Local GPO
- Policy vs. Preference
- Managed vs. Unmanaged
- Creating a Central Store
- Chapter Review

#### Module 20

- Windows Server 2012 GPO Starter
- Building GPOs
- Available Settings
- Export/Import
- Delegation
- Creating GPOs and Using a Starter GPO
- Chapter Review

#### Module 21

- Windows Server 2012 GPO Secure
- Security 101
- Types
- Security Template
- Rights
- Monitor
- Implementing Server Security
- Auditing File System Access
- Chapter Review

#### Module 22

- Windows Server 2012 GPO Application and Firewall
- Application Restrictions
- Software Restriction Policy
- AppLocker
- Creating AppLocker Rules
- Windows Firewall
- Windows Firewall Advanced Security
- Chapter Review

#### Module 23

- Windows Server 2012 Printing
- Network Printing
- Enhanced Point and Print
- V3 and V4 Drivers
- Printer Security
- Printer Pooling
- Branch Office Direct
- Installing and Configuring Printer Services
- Chapter Review

#### Module 24

- Certification Preparation Review
- Microsoft Website Exam Overview
- Instant Expert
- Microsoft Official Curriculum
- Study Recommendation and Exam Preparation
- Chapter Review

#### Module 25

- Program Review

### **Microsoft 70-411 Administering Windows Server 2012**

#### Module 1

- Course Introduction
- Instructor Introduction
- Course Overview

- Microsoft Exam Information
- Prerequisites
- Certification Overview

#### Module 2

- Windows Server 2012 Course Components
- Making the Best of the Course
- Lab Setup
- Building Your Own Environment
- Presentation Types
- Chapter Review

#### Module 3

- Windows Server 2012 Active Directory Domain Services
- Domain Controller
- Virtual Domain Controller
- Deploying and Configuring
- Read Only Domain Controller (RODC)
- Installing RODC
- Chapter Review

#### Module 4

- Windows Server 2012 AD DS and DB Management
- Active Directory
- DS Administrative Center
- DS with PowerShell
- AD DS Database
- DC States
- Using Ntdsutil
- Recycle Bin
- Using Active Directory Recycle Bin
- Chapter Review

#### Module 5

- Windows Server 2012 AD DS Account Creation
- User Accounts
- CSVDE Account Creation
- Command Line LDIFDE
- Command Line PowerShell
- Chapter Review

#### Module 6

- Windows Server 2012 AD DS Account Management
- User Account Settings and Policies
- Password Policy
- Lockout Settings
- Password Policy and Account Lockout Settings
- Managing Service Accounts
- Managing Service Accounts Demonstration
- Chapter Review



## Module 7

- Windows Server 2012 Group Policy Object Creation
- Defining GPO
- Practical GPO Application
- GPO Types
- GPO Domain
- Implementing Group Policy
- Chapter Review

## Module 8

- Windows Server 2012 GPO Management
- .adm Files
- Central Store
- Folder Redirection
- Scripts
- Using Scripts and Folder Redirection
- Chapter Review

## Module 9

- Windows Server 2012 GPO Software
- Basic Software Deployment
- Microsoft Installer
- Deployment Methods
- Upgrades
- Managing Software with GPO
- Chapter Review

## Module 10

- Windows Server 2012 GPO Processing
- Basic Process
- Process Order
- Inheritance and/or Precedence
- Windows Management Instrumentation (WMI) Filters
- Slow Link No Link
- GPO Processing
- Chapter Review

## Module 11

- Windows Server 2012 Data Fields
- Files
- File Server Resource Manager (FSRM)
- File Tasks
- FSRM Configuration
- Chapter Review

## Module 12

- Windows Server 2012 Distributed File System
- File Sharing with DFS
- DFS Namespace
- DFS Replication

- Installing DFS
- Chapter Review

#### Module 13

- Windows Server 2012 Security and Encryption
- Encrypting File System Basics
- EFS Process
- EFS Recovery
- Advanced Auditing
- EFS and Auditing Demonstration
- Chapter Review

#### Module 14

- Windows Server 2012 Domain Name System
- DNS Overview
- Installing and Managing DNS
- Resource Records
- Zone Types
- Zone Transfers
- Creating Zones and Zone Transfers
- DNS Management and Troubleshooting
- Monitoring and Troubleshooting

#### Module 15

- Windows Server 2012 Access and Authentication
- Network Access
- Authentication vs. Authorization
- Network Policy and Access Roles
- Creating a Network Access Role
- Network Policy
- Policy Processing and Configuration
- Network Policy Configuration
- Chapter Review

#### Module 16

- Windows Server 2012 VPN and Direct Access
- Virtual Private Network
- Tunnel Protocols
- Authentication Methods
- Connection Manager Administration KIT
- Configuring a VPN Server
- Configuring a VPN Client
- Direct Access VS VPN
- DA Components
- Configuring Direct Access
- Chapter Review

#### Module 17

- Windows Server 2012 Network Policy Server
- NPS Overview
- Radius Server
- Radius Proxy
- Network Access Protection
- Connection Request
- Authentication
- Monitoring
- Installing, Configuring and Troubleshooting NPS
- Chapter Review

#### Module 18

- Windows Server 2012 Network Access Protection
- NAP Overview
- Usage
- NAP Components
- NAP Policing
- System Health
- Remediation
- NAP Monitoring
- Implementing NAP
- Chapter Review

#### Module 19

- Windows Server 2012 Windows Server Update Services
- WSUS Overview
- WSUS Process
- Deployment Components
- WSUS Management
- WSUS Installation and Configuration
- Chapter Review

#### Module 20

- Windows Server 2012 Windows Deployment Services
- WDS Overview
- WDS Components
- WDS Installation
- WDS Deployment
- WDS Administration
- Installing and Configuring WDS
- Chapter Review

#### Module 21

- Windows Server 2012 Monitoring
- Performance Monitor
- Task Manager
- Resource Monitor
- Event Viewer
- Monitoring Tools
- Chapter Review

#### Module 22

- Program Review
- Certification Overview
- Study Recommendations
- Exam Preparation
- Course Closing

## **Microsoft 70-412 Configuring Advanced Windows Server 2012 Services**

### Module 1

- Course Introduction
- Instructor Introduction
- Course Overview
- What You Should Know
- Certification Overview
- Microsoft Learning Quote and Certification Audience

### Module 2

- Windows Server 2012 Course Specifics
- Lab Setup
- Lab Layout
- Demonstration and Presentation Types

### Module 3

- Windows Server 2012 ADDS
- Domain Tree
- Domain Forest
- Single Domain
- Multiple Domains
- Functional Level
- Upgrade Migrate
- Installing a Domain Controller
- Chapter Review

### Module 4

- Windows Server 2012 ADDS Domains and Forests
- Trust Relationships
- External Trust
- Forest Trust
- Realm Trust
- Shortcut Trust
- Authentication
- SID Filtering
- Name Suffix Routing
- Creating a Child Domain and Building a Trust
- Chapter Review

### Module 5

- Windows Server 2012 ADDS Sites

- Active Directory Sites
- Implementing ADD
- SRV Records
- Locating Local DC
- ISTG
- Active Directory Site Setup
- Chapter Review

#### Module 6

- Windows Server 2012 ADDS Replication
- AD Partitions
- Types of Replication
- Conflicts
- Sysvol
- Site Topology and Site Links
- Group Membership Caching
- Tools
- Site Replication
- Chapter Review

#### Module 7

- Windows Server 2012 Networking DNS
- DNS and Administration
- Management
- Queries
- GlobalName Zone
- DNS Security
- DNS Advanced Configuration
- Chapter Review

#### Module 8

- Networking DHCP
- DHCP Basics
- Address Request
- Play Nice With DNS
- Scopes
- DHCP IPv6
- Name Protection
- DHCP Failover
- DHCP Advanced Configuration
- Chapter Review

#### Module 9

- IPAM Basics
- Reason to Use IPAM
- Components
- Requirements
- Security
- Management and Monitoring
- IPAM Installation and Configuration
- Chapter Review

## Module 10

- Data: Advanced File
- File and Storage Basics
- File Server Resource Manager
- File Classification
- New Options
- File Classification Configuration
- Enabling Data Deduplication
- Chapter Review

## Module 11

- Windows Server 2012: Dynamic Access Control
- DAC Basics
- New VS Old
- Central Access Policy
- Implementing DAC
- Deploying DAC
- Implementation of Dynamic Access Control
- Chapter Review

## Module 12

- Windows Server 2012 Data: Storage
- Storage Basics
- iSCSI Parts
- iSCSI Security
- BranchCache
- Configuring SCSI and iSCSI Storage
- Configuring BranchCache
- Chapter Review

## Module 13

- Business Continuity: Backups
- Backup Basics
- Server Backup
- Online Backup
- Recovery
- Data Protection Manager
- Implementing a Windows Server Backup
- Chapter Review

## Module 14

- Operating System Deployment
- Task Sequence Creation and Deployment
- Implementing an In-place Upgrade

## Module 15

- High Availability Network Load Balancing
- Network Load Balancing Basics
- NLB Functionality
- NLB New Features

- NLB Deployment
- Additional NLB Configuration
- Planning for NLB
- Securing NLB
- NLB Cluster Setup
- Configuring NLB Cluster
- Host Availability
- Chapter Review

#### Module 16

- High Availability Failover Clustering
- High Availability Basics
- HA New Features
- HA Components
- Features CSV
- Quorum (Modes)
- Failover Clustering
- Cluster Deployment Requirements
- Failover Cluster Setup and Configuration
- HA File Server Setup and Configuration
- Cluster Aware Updating

#### Module 17

- HA Hypervisor and VM
- HA Basics with Hyper-V
- Failover Clustering with Hyper-V
- New Features
- Migration
- SCCM
- Best Practices
- HV Replica
- Virtual Machine Cluster Setup
- Failover Cluster Configuration for Hyper-V
- Chapter Review

#### Module 18

- Access and Identity: Certificates
- Public Key Infrastructure Basics
- Components PKI Solution
- AD CS New Features
- Certificate Templates
- Enrolment Types
- Certificate Revocation List
- Key Recovery
- Building A Root CA
- Deploying and Configuring an Enterprise Subordinate CA
- Managing Certificate Templates
- Certificate Revocation
- Chapter Review

#### Module 19

- Active Directory Federation Services
- AD FS Services
- Web Security Components
- AD FS New Features
- SSO
- Deployment
- Claims
- AD FS Setup and Configuration
- Installing AD FS Role
- Installing AD FS for a Single Organization
- Configuring AD Claims Provider Trust
- Chapter Review

#### Module 20

- Active Directory Rights Management
- AD RMS Basics
- RMS Usage
- AD RMS Components
- Certificates / Licenses
- AD RMS Process
- AD RMS Deployment
- Rights Policy Templates
- Creating a Super User Group and Service Group
- Installing and Configuring AD RMS
- Build and Deploy a Policy Template
- Implementing RMS Trust Policies
- Anonymous Access Setup
- Creating A Rights Protected Document

#### Module 21

- Course Review
- Certification Overview
- Exam Preparation

### **Microsoft 70-461 Querying Microsoft SQL Server 2012**

#### Module 1

- Introduction to SQL Server 2012
- SQL Instances
- Editions and Licensing
- SQL Server Objects
- System Databases
- SQL Server Data Tools
- Object Explorer
- Object Scripting
- Template Explorer
- Query Tabs
- Projects and Solutions
- Customizing SSDT



- Debugging T-SQL
- SQLCMD
- Exam Scenarios
- Module Review

#### Module 2

- T-SQL Overview
- T-SQL Elements
- Batch Separators
- Line Terminator
- Variables
- Control Flow
- Expressions
- Functions
- Predicates and Operators
- SELECT
- Column Aliasing
- SELECT Execution
- Exam Scenarios
- Module Review

#### Module 3

- SELECT Statements
- Basic SELECT Statement
- Specifying Columns
- Derived Columns
- Aliasing Columns
- Calculated Columns
- Ordering Results
- Returning Distinct Results
- Exam Scenarios
- Module Review

#### Module 4

- Filtering
- WHERE Syntax
- BETWEEN
- WHERE Syntax IN
- Filtering NULL Values
- LIKE
- Data Type Comparison
- Filtering Data with WHERE
- TOP
- OFFSET-FETCH
- Module Review

#### Module 5

- Join and Set Operators
- Using Joins
- Categories of Joins
- INNER JOIN

- OUTER JOIN
- JOIN Demo
- Set Operators
- Set Operators Demo
- Exam Scenarios
- Module Review

#### Module 6

- Subqueries and Table Expressions
- Subqueries
- Self Contained Subquery
- Correlated Subquery
- Subquery Demo
- EXISTS
- Common Table Expressions
- Temporary Tables
- Table Variables
- Table Demo
- Exam Scenarios
- Module Review

#### Module 7

- System Functions
- Scalar Functions
- ROWSET
- System Function Demo
- Aggregate Functions
- DISTINCT
- Aggregation Demo
- GROUP BY
- HAVING
- Conversion Functions
- Exam Scenarios
- Module Review

#### Module 8

- T-SQL Programming
- Logical Functions
- IIF, CHOOSE and CASE
- Logical Function Demo
- Using Views
- Stored Procedures
- Functions
- Triggers
- Views Demo
- TRY CATCH
- Exam Scenarios
- Module Review

#### Module 9

- Transactions

- Introduction to Transactions
- INSERT and UPDATE
- DELETE and TRUNCATE
- Transactions Demo
- Managing Transactions
- XACT\_ABORT
- Managing Transactions Demo
- Exam Scenarios
- Module Review

#### Module 10

- Query Performance
- Indexing
- Index Strategies
- Indexes Demo
- Execution Plans
- Statistics IO
- Execution Plans Demo
- Exam Scenarios
- Module Review and Program Review

### **Microsoft 70-462 Administering Microsoft SQL Server 2012 Databases**

#### Module 1

- Introduction to SQL Server 2012
- SQL Server
- SQL Server Tools
- Management Studio Demo
- Data Tools
- Exam Scenarios
- Module Review

#### Module 2

- Installing SQL Server
- SQL Architecture
- Hardware Requirements
- Software Requirements
- Installation Process
- Troubleshooting Installation
- Upgrading and Unattended Installations
- Configuration Demo
- Exam Scenarios
- Module Review

#### Module 3

- Backup and Restore a Database
- Database Architecture
- Database Backup

- Restoration Process
- Restoring System Database
- Backup and Recovery Dem0
- Exam Scenarios
- Module Review

#### Module 4

- Tracing Access to SQL Server
- Auditing Option
- Introduction to SQL Audit
- Audit Objects and Implementation
- Extended Events
- Tracing Activity Demo
- Exam Scenarios
- Module Review

#### Module 5

- Importing and Exporting Data
- Introduction to Data Transfer
- ETL Tools
- Improving Data Transfer
- Copying Database Methods
- Transferring Data Demo
- Exam Scenarios
- Module Review

#### Module 6

- SQL Server Security
- Security and Authentication
- Server and Database Roles
- Permissions
- Securing SQL Server Demo
- Exam Scenarios
- Module Review

#### Module 7

- Automating SQL Server
- SQL Server Agent
- Database Mail
- Operators, Alerts and Jobs
- Database Configuration Demo
- Exam Scenarios
- Module Review

#### Module 8

- Monitoring SQL Server
- Dynamic Management Views and Functions
- Profiler Trace
- Database Tuning Advisor
- Activity and Performance Monitor
- Data Collection

- Monitoring Demo
- Exam Scenarios
- Module Review

#### Module 9

- Maintaining SQL Server
- Checking Database Integrity
- Indexing
- Ongoing Maintenance
- Managing and Maintaining Demo
- Exam Scenarios
- Module Review

#### Module 10

- Troubleshooting SQL Server
- Service Issues
- Connectivity Issues
- Locking Issues
- Troubleshooting Demo
- Exam Scenarios
- Module Review
- Program Review

### **Microsoft 70-463 Implementing a Data Warehouse with Microsoft SQL Server 2012**

#### Module 1

- Introduction to Data Warehousing
- OLTP vs. OLAP
- Data Warehouse
- Data Warehouse Architecture
- Creating a Data Warehouse
- Presenting OLAP Data
- OLTP and OLAP Comparison Demonstration
- Exam Scenarios
- Module Review

#### Module 2

- Designing a Data Warehouse
- Data Modelling
- Data Warehouse Schemas
- Time Dimensions
- Data Modelling Considerations
- Implementing a Data Model
- Logical Model
- Physical Model
- Dimensions and Facts
- Exam Scenarios
- Module Review

### Module 3

- ETL with SSIS
- Introduction to SSIS
- Upgrading SSIS Packages
- SSIS Tools
- Data Flow Tasks
- Data Sources
- Transformations
- Utilizing SQL Server Data Tools
- Data Flow Task
- Exam Scenarios
- Module Review

### Module 4

- SSIS Control Flow
- Control Flow Tasks
- Integration Services Variables
- Expressions
- Precedence
- Containers and Annotation
- Transactions
- Checkpoints
- Control Flow Tasks and Precedence
- Exam Scenarios
- Module Review

### Module 5

- Troubleshooting Packages
- Overview of Troubleshooting
- Debugging
- Breakpoints
- Error Handling
- SSIS Log Providers
- Custom Logging
- Troubleshooting and Logging
- Exam Scenarios
- Module Review

### Module 6

- Advanced Packages
- Maintaining a Data Warehouse
- Change Data Capture
- Slowly Changing Dimensions
- Script Components
- Incremental Updates
- Exam Scenarios
- Module Review

### Module 7

- Data Quality Services
- Introduction to Data Quality Services

- Data Quality Services Components
- Working with Data Quality Services
- Exam Scenarios
- Module Review

#### Module 8

- Master Data Services
- Introduction to Master Data Services
- MDS vs. DQS
- How MDS Works
- Exam Scenarios
- Module Review

#### Module 9

- Deployment and Security
- Deployment Options
- Package Deployment
- Securing Packages
- Deploying SSIS Packages and Projects
- Exam Scenarios
- Module Review
- Program Review

### **Microsoft 70-464 Developing Microsoft SQL Server 2012 Databases**

#### Module 1

- Introduction to SQL Server 2012
- SQL Instances
- SQL Editions
- SQL Server Tools
- SQL Server Management Studio
- SQL Data Tools
- SQL Command
- Utilizing SQL Server Tools
- Exam Scenarios
- Module Review

#### Module 2

- Introduction to Data Types and Tables
- Collations
- Unicode Characters
- Null Values
- Converting Data Types
- Introduction to Tables
- Normalization
- Temporary Tables
- Working with Tables
- Schemas

- Primary and Foreign Keys
- UNIQUE Constraint/Index
- In Depth Look
- Exam Scenarios
- Module Review

#### Module 3

- SQL Server Indexing
- Introduction to Indexing
- Clustered Indexes
- Non Clustered Indexes
- Maintaining Indexes
- Index Fragmentation
- Index Tuning
- Creating and Altering Indexes
- Exam Scenarios
- Module Review

#### Module 4

- Query Performance
- Execution Plans
- Reading Execution Plans
- Execution Plan Operators
- Plan Reuse
- Query Performance
- Exam Scenarios
- Module Review

#### Module 5

- Common Language Runtime (CLR) Integration
- Assemblies
- Permissions
- CLR Objects
- Integrating the CLR within SQL Server
- Exam Scenarios
- Module Review

#### Module 6

- Transact-SQL (T-SQL) Error Handling
- Error Severity
- TRY CATCH Error Handling
- TRY PARSE and TRY CONVERT
- @@ ERROR
- Alerts
- Error Handling in T-SQL
- Exam Scenarios
- Module Review

#### Module 7

- Views and Functions
- Types of Views



- Working with Views
- Introduction to Functions
- Working with Functions
- Working with Views and Functions
- Exam Scenarios
- Module Review

#### Module 8

- Stored Procedures and Triggers
- Working with Stored Procedures
- Introduction to Triggers
- Working with Triggers
- Stored Procedures and Triggers Demo
- Exam Scenarios
- Module Review

#### Module 9

- Working with XML
- XML Concepts
- Schemas and Schema Collections
- FOR XML Clause
- FLOWR Queries
- Working with XML in SQL Server
- Exam Scenarios
- Module Review

#### Module 10

- Transactions
- Implicit Transactions
- Explicit Transactions
- Locking
- Working with Transactions and Locking within SQL
- Exam Scenarios
- Module Review

### **Microsoft 70-466 Implementing Data Models and Reports with Microsoft SQL Server**

#### Module 1

- Course Introduction
- Course Modules
- SQL Server 2012 Business Intelligence
- Introduction to Business Intelligence
- Data Warehouse
- Extract, Transform and Load (ETL)
- SQL Server Integration Services
- SQL Server 2012 BI Tools
- Developer Tools
- Exam Scenarios

## Module 2

- SQL Server Reporting Services
- Introduction to SSRS
- Creation and Delivery
- SSRS Reports
- Report Grouping
- Expressions
- Drilldown Report
- Parameters
- Visual Components
- Creating SQL Server
- Exam Scenarios
- Module Review

## Module 3

- SSRS Management
- Deploying Reports
- Report Security
- Executing Reports
- Report Caching
- Report Snapshot
- Subscriptions
- Data Alerts
- Managing Reporting Services
- Exam Scenarios
- Module Review

## Module 4

- Multidimensional Cubes
- Introduction to Cubes
- Cube Components
- Creating and Configuring Analysis Services Cube
- Exam Scenarios
- Module Review

## Module 5

- Advanced Cube Concepts
- Measures
- Formatting Measures
- Measure Groups
- Measure Group Storage
- Aggregations
- Dimensions
- Dimension Storage
- Hierarchies
- Grouping and Sorting
- Working with Measures
- Exam Scenarios
- Module Review

## Module 6

- Customizing Cubes and Security
- Actions
- Perspectives
- Key Performance Indicators
- Translations
- SSAS Security
- Cell Permissions
- Dimension Permissions
- Customizing Cubes and Cube Security
- Exam Scenarios
- Module Review

#### Module 7

- Multi-Dimensional Expressions (MDX)
- Introduction to MDX
- Why Use MDX?
- MDX Syntax
- MDX Queries and Filters
- Sets
- Applying MDX
- Working with MDX
- Exam Scenarios
- Module Review

#### Module 8

- Tabular Data Models
- Introduction to TDM
- PowerPivot
- Linked and Non-Linked Tables
- PowerPivot
- Server Based Tabular Data Models
- Creating a Tabular Data Model
- Workspace Database
- Tabular Data Model
- Working with Tabular Data Modelling
- Exam Scenarios
- Module Review

#### Module 9

- Data Analysis Expressions (DAX)
- Introduction to DAX
- Working with DAX
- DAX Functions
- DAX Queries
- Calculated Columns
- Measures
- Multiple Relationships
- Working with DAX within PowerPivot
- Exam Scenarios
- Module Review

#### Module 10

- Data Mining
- Introduction to Data Mining
- Data Mining Algorithms
- Data Mining Components
- Validating Mining Models
- Presenting Mining Data
- Creating a Mining Structure
- Exam Scenarios
- Module Review
- Course Review

## **Microsoft 70-467 Designing Business Intelligence Solutions with Microsoft SQL Server**

### Module 1

- Course Introduction
- Course Modules
- Introduction to Data Warehousing
- On-Line Transaction Processing (OLTP) vs. OLAP
- Data Warehousing
- Data Warehouse Architecture
- Creating a Data Warehouse
- Presenting On-Line Analytical Processing (OLAP) Data
- OLTP vs. OLAP Demonstration
- Exam Scenarios
- Module Review

### Module 2

- Designing a Data Warehouse
- Data Modelling
- Data Warehouse Schemas
- Time Dimensions
- Data Modelling Considerations
- Implementing a Data Model
- Logical Model
- Physical Model
- Working with Dimensions and Fact Tables
- Exam Scenarios
- Module Review

### Module 3

- Extraction, Transformation, and Load (ETL) with SSIS
- Introduction to SQL Server Integration Services (SSIS)
- Upgrading SSIS Packages
- SSIS Tools
- Introduction to Data Flow Tasks
- Data Sources
- Transformations
- Destinations

- Control Flow
- Variables
- Expressions
- Precedence
- Containers
- Control Flow Containers
- Transactions
- Package Execution with Checkpoints
- Working with SSIS Packages
- Exam Scenarios
- Module Review

#### Module 4

- Deploying and Securing Packages
- Deploying Options
- Deploying Packages
- Deploying Projects
- Securing Packages
- Deploying and Securing Packages
- Exam Scenarios
- Module Review

#### Module 5

- SQL Server Reporting Services (SSRS)
- Introduction to Reporting Services
- SSRS Reports Creation and Delivery
- SSRS Reports
- Grouping
- Expressions
- Drilldown
- Parameters
- Drill-through
- Visual Components
- Creating Reports Within Reporting Services
- Exam Scenarios
- Module Review

#### Module 6

- SSRS Reports
- Report Security
- Report Execution
- Report Caching
- Report Snapshot
- Subscriptions
- Data Alerts
- Deploying Reports and Report Security
- Exam Scenarios
- Module Review

#### Module 7

- Multidimensional Cubes

- Introduction to Cubes
- Components of a Multidimensional Cubes
- Measures
- Measure Format and Aggregation Functions
- Measure Groups
- Aggregations
- Dimensions
- Dimension Storage
- Dimensions Hierarchies
- Grouping and Sorting
- Actions
- Perspectives
- Key Performance Indicators
- Translations
- SSAS Security
- Cell Permissions
- Dimension Permissions
- Creating and Configuring a Cube
- Exam Scenarios
- Module Review

#### Module 8

- Tabular Data Models
- Introduction to Tabular Data ModelsPowerPivot
- Working with PowerPivot
- Linked and Non-Linked Tables
- PowerPivot Features
- Server Based Tabular Data Models
- Creating a Tabular Data Model
- Tabular Models with SSDT
- Workspace Database
- Tabular Data Model
- Tabular Data Model Security
- Creating a Tabular Data Model Using PowerPivot
- Exam Scenarios
- Module Review

#### Module 9

- MDX/DAX
- Introduction to Multidimensional Expressions (MDX)
- Why Use MDX?
- MDX Syntax
- Sets
- Where is MDX Used?
- Introduction to Data Analysis Expressions (DAX)
- Working with DAX
- DAX Functions
- DAX Queries
- Calculated Columns
- DAX Measures
- Multiple Relationships

- Exam Scenarios
- Module Review

#### Module 10

- Data Mining
- Introduction to Data Mining
- Data Mining Algorithms
- Data Mining Components
- Validating and Presenting Data Mining Models
- Creating a Data Mining Model
- Exam Scenarios
- Module Review and Course Review

### **Microsoft 70-740 Installation Storage and Compute with Windows Server 2016**

#### Course 01 – Installing Windows Servers in Host and Computer Environments – 3 hrs

- Topic A: Determining Windows Server 2016 Installation
- Demo – Using Windows PowerShell
- Topic B: Installing Windows Server 2016 Core and Nano Editions
- Demo – Performing Nano Server Installation
- Demo – Configuring Nano Server
- Demo – Installing Windows Server 2016
- Demo – Configure the Local Installation
- Topic C: Managing Windows Installations with Windows PowerShell
- Topic D: Create, Manage, and Maintain Windows Images to Deploy

#### Course 02 – Implementing Local and Enterprise Storage Solutions – 3hrs 24 mins

- Topic A: Managing Disks and Volumes in Windows Server 2016
- Demo – Working with File Systems
- Demo – Managing Volumes
- Topic B: Implementing and Managing Storage Spaces
- Demo – Configuring Storage Spaces
- Topic C: Configuring Data Deduplication
- Demo – Installing and Configuring Data Deduplication
- Topic D: Understanding Various Types of Storage
- Topic E: Fibre Channel, iSCSI, and Fibre Channel over Ethernet
- Topic F: Understanding iSNS, DCB, and MPIO
- Topic G: Configuring File and Folder Sharing in Windows Server 2016
- Demo – Configuring SMB Shares

#### Course 03 – Implementing Hyper-V Virtualization – 1 hr 38 mins

- Topic A: Installing Hyper-V Virtualization
- Demo – Installing the Hyper-V Role
- Topic B: Configuring Storage and Networking on Hyper-V Hosts
- Demo – Managing Storage in Hyper-V
- Demo – Creating a Virtual Switch
- Topic C: Configuring and Managing Virtual Machines
- Demo – Creating Virtual Machines

#### Course 04 – Implementing Windows Containers – 36 mins

- Topic A: Understanding Windows Server and Hyper-V Containers
- Topic B: Deploying Windows Server and Hyper-V Containers
- Demo – Installing the Containers Feature
- Topic C: Using Docker to Install, Configure, and Manage Containers

#### Course 05 – Implementing High Availability – 3hrs 28 mins

- Topic A: Overview of High Availability and Disaster Recovery
- Demo – Installing and Configuring Windows Server Backup
- Topic B: Implementing Network Load Balancing
- Demo – Deploying NLB
- Topic C: Planning and Configuring Failover Clustering
- Demo – Verifying NIC Capabilities
- Demo – Creating a Failover Cluster
- Demo – Configuring the Quorum
- Topic D: Maintaining a Failover Cluster
- Topic E: Troubleshooting Failover Clustering
- Topic F: Integrating Failover Clustering and Hyper-V
- Topic G: Configuring Site Availability

#### Course 06 – Maintaining and Monitoring Server Environments – 1hr 27 mins

- Topic A: Windows Server Update Services
- Demo – Installing and Configuring WSUS
- Topic B: Windows PowerShell Desired State Configuration (DSC)
- Topic C: Windows Server 2016 Monitoring Tools
- Demo – Using Task Manager
- Demo – Using Performance Monitor
- Demo – Using Event Viewer

### **Microsoft 70-741 Networking with Windows Server 2016**

#### Course 01 – Plan and Implement IPv4 and IPv6 Networks – 2hrs 59 mins

- Topic A – Plan and Implement IP Addressing Schemes for IPv4 Networks
- Demo 01 – Understanding Binary Addressing
- Demo 02 – Subnetting a Network
- Demo 03 – Examining VLSM
- Topic B – Configuring IPv4 Hosts
- Demo 01 – Configuring IPv4
- Topic C – Managing and Troubleshooting IPv4 Connectivity
- Demo 01 – Troubleshooting IPv4
- Topic D – Implementing IPv6 for Network Hosts
- Topic E – Implementing IPv6 Transitioning and Coexistence

#### Course 02 – Installing and Configuring DHCP – 1 hr 38 mins

- Topic A – Overview of the DHCP Server Role
- Topic B – Deploying DHCP
- Demo 01 – Installing DHCP
- Demo 02 – Creating and Configuring Scopes



- Topic C – Managing and Troubleshooting DHCP
- Demo 01 – Configuring Security and Auditing
- Demo 02 – Configuring DHCP Failover

#### Course 03 – Installing and Configuring DNS – 2hrs 50 mins

- Topic A – Implementing DNS Servers
- Demo 01 – Installing DNS
- Topic B – Creating and Configuring DNS Zones
- Demo 01 – Creating and Configuring DNS Zones
- Demo 02 – Configuring Cache and Forwarding
- Demo 03 – Domain Delegation
- Topic C – Understanding Active Directory Integration
- Demo 01 – Examining SRV Records
- Demo 02 – Configuring Active Directory Integrated Zones
- Topic D – Configuring Advanced DNS Settings
- Demo 01 – Configuring the GlobalNames Zone
- Demo 02 – Configuring DNS Policies
- Topic E – Troubleshooting DNS Name Resolution
- Demo 01 – Managing and Troubleshooting DNS

#### Course 04 – Implementing and Managing IP Address Management – 1 hr 19 mins

- Topic A – Overview of IPAM
- Topic B – IPAM Deployment
- Demo 01 – Installing and Provisioning the IPAM Role
- Demo 02 – Administering IPAM
- Demo 03 – Managing DNS and DHCP Servers using IPAM
- Topic C – Managing IP Address Spaces by using IPAM
- Demo 01 – Managing IP Addressing with IPAM

#### Course 05 – Implementing Remote Access – 1 hr 55 mins

- Topic A – Remote Access Overview
- Demo 01 – Installing the Remote Access Role
- Topic B – Implementing the Web Application Proxy
- Topic C – Planning and Implementing VPNs
- Demo 01 – Configuring a VPN Server
- Topic D – Overview of DirectAccess
- Topic E – Implementing DirectAccess

#### Course 06 – Installing and Configuring Branch Office Networking – 1 hr 43 mins

- Topic A – Configuring Networking for Branch Offices
- Demo 01 – Installing an RODC
- Topic B – Implementing Distributed File Systems
- Demo 01 – Creating a DFS Namespace
- Demo 02 – Configuring Replication
- Topic C – Implementing BranchCache
- Demo 01 – Configuring and Enabling BranchCache

#### Course 07 – Implementing Advanced Networking Features – 53 mins

- Topic A – Implementing Networking Features for High Performance
- Demo 01 – Implementing NIC Teaming
- Topic B – Implementing Hyper-V Advanced Networking Features

- Topic C – Introduction to Software-Defined Networking
- Topic D – Overview of Network Virtualization

## **Microsoft 70-742 Identify with Windows Server 2016**

### Course 01 – Installing and Configuring Domain Controllers – 2 hrs 30 mins

- Topic A – Overview of Active Directory Domain Services
- Topic B – Overview of Domain Controllers
- Demo 01 – Working with FSMO Roles
- Demo 02 – Viewing SRV Records
- Topic C – Deploying Domain Controllers
- Demo 01 – Installing a Domain Controller
- Demo 02 – Promoting a Server Core DC
- Demo 03 – Cloning Domain Controllers

### Course 02 – Managing Active Directory Objects – 3hrs 37 mins

- Topic A – Overview of AD DS Object Management
- Demo 01 – Overview of AD DS Management Tools
- Topic B – Managing User Accounts
- Demo 01 – Creating AD DS Users
- Demo 02 – Managing Users
- Topic C – Managing Groups
- Demo 01 – Creating and Configuring Groups
- Demo 02 – Configuring Default Groups
- Demo 03 – Group Nesting
- Topic D – Managing Computer Accounts
- Demo 01 – Working with Computer Accounts
- Topic E – Managing Organizational Units
- Demo 01 – Creating an OU Hierarchy
- Demo 02 – Viewing Object Permissions in Active Directory
- Demo 03 – Delegating Administrative Control

### Course 03 – Securing Active Directory Domain Services – 2hr 3 mins

- Topic A – Securing Domain Controllers
- Demo 01 – Installing an RODC
- Topic B – Implementing Account Security
- Demo 01 – Configuring Account Policies in Group Policy
- Demo 02 – Configuring Fine-Grained Password Policies
- Topic C – Auditing AD DS
- Demo 01 – Configuring Auditing
- Topic D – Configuring Managed Service Accounts
- Demo 01 – Configuring Group MSAs

### Course 04 – Working with Complex AD DS Infrastructures – 1 hr 54 mins

- Topic A – Overview of Advanced AD DS Deployments
- Topic B – Deploying a Distributed AD DS Environment
- Demo 01 – Deploying a Child Domain
- Demo 02 – Configuring a Forest Trust

- Topic C – Overview of AD DS Replication
- Topic D – Configuring AD DS Sites
- Demo 01 – Creating Sites
- Demo 02 – Creating Site Links

#### Course 05 – Implementing Group Policy – 3hrs 10 mins

- Topic A – Overview of Group Policy
- Demo 01 – Examining Policy Settings
- Topic B – Creating and Configuring GPOs
- Demo 01 – Creating and Configuring Policies
- Demo 02 – Managing GPOs
- Topic C – Monitoring and Troubleshooting Group Policy
- Demo 01 – Troubleshooting Group Policy Application
- Topic D – Security Management Using Group Policy
- Demo 01 – Managing Security Options
- Demo 02 – Controlling Applications Using Group Policy
- Demo 03 – Configuring Firewalls using Group Policy
- Topic E – Managing User Environments
- Demo 01 – Configuring Folder Redirection

#### Course 06 – Understanding Microsoft Azure AD and Directory Synchronization – 50 mins

- Topic A – Planning Directory Synchronization
- Topic B – Implementing Azure AD Connect
- Topic C – Managing Identities with Directory Synchronization

#### Course 07 – Monitoring and Recovering AD DS – 56 mins

- Topic A – Monitoring AD DS
- Demo 01 – Using Event Viewer
- Topic B – Database Management
- Topic C – Backup and Recovery in AD DS
- Demo 01 – Enabling the AD Recycle Bin

#### Course 08 – Implementing Active Directory Certificate Services – 1hr 30 mins

- Topic A – Overview of Public Key Infrastructure and AD CS
- Topic B – Deploying Certificate Authority Hierarchy
- Demo 01 – Installing a Root CA
- Topic C – Administering Certificate Authorities
- Topic D – Deploying and Managing Certificates
- Demo 01 – Modifying and Enabling a Certificate Template
- Demo 02 – Configuring Autoenrollment
- Topic E – Managing Revocation and Distribution
- Topic F – Configuring Certificate Recovery

#### Course 09 – Implementing Active Directory Federation Services (AD FS) – 1 hr 1 min

- Topic A – Overview of AD FS
- Topic B – Planning and Deploying AD FS
- Demo 01 – Installing AD FS
- Topic C – Overview of Web Application Proxy

#### Course 10 – Implementing Active Directory Rights Management Services – 37 mins

- Topic A – Overview of AD RMS

- Topic B – Deploying AD RMS
- Demo 01 – Installing AD RMS Cluster
- Topic C – Protecting Content with AD RMS
- Demo 01 – Configuring Rights Management Templates

## Microsoft 70-764 Administering a SQL Database Infrastructure

### Module 1: Encryption

- Introduction
- 1.2 Exam Objectives and Lab Setup
- 1.3 Restoring AdventureWorks 2016 Database Lab Part 1
- 1.4 Restoring AdventureWorks 2016 Database Lab Part 2
- 1.5 Restoring AdventureWorks 2016 Database Lab Part 3
- 1.6 Configuring Encryption
- 1.7 Cell-Level Encryption Part 1
- 1.8 Cell-Level Encryption Part 2
- 1.9 Cell-Level Encryption Lab Part 1
- 1.10 Cell-Level Encryption Lab Part 2
- 1.11 Transparent Data Encryption
- 1.12 Transparent Data Encryption Lab
- 1.13 Always Encrypted
- 1.14 Always Encrypted Lab
- 1.15 Backup Encryption
- 1.16 Backup Encryption Lab
- 1.17 Connection Encryption
- 1.18 Encryption Troubleshooting

### Module 2: Configure Data Access and Permissions

- 2.1 Create and Maintain Users
- 2.2 Create and Maintain Users Lab Part 1
- 2.3 Create and Maintain Users Lab Part 2
- 2.4 Configure and Maintain Custom Roles
- 2.5 Configure and Maintain Custom Roles Lab
- 2.6 Manage Database Object Permissions Part 1
- 2.7 Manage Database Object Permissions Part 2
- 2.8 Manage Database Object Permissions Lab Part 1
- 2.9 Manage Database Object Permissions Lab Part 2
- 2.10 Configuring User Options for Azure SQL Database
- 2.11 Configuring Row-Level Security
- 2.12 Configuring Dynamic Data Masking
- 2.13 Configuring Dynamic Data Masking Lab

### Module 3: Configure Auditing

- 3.1 Manage a SQL Server Audit
- 3.2 Manage a SQL Server Audit Lab
- 3.3 Query the SQL Server Audit Log
- 3.4 Manage an Azure SQL Server Audit

### Module 4: Develop a Backup Strategy

- 4.1 Backup Types Part 1
- 4.2 Backup Types Part 2
- 4.3 Manage, Backup, and Restore Databases Lab Part 1
- 4.4 Manage, Backup, and Restore Databases Lab Part 2
- 4.5 Backup Very Large Databases Part 1
- 4.6 Backup Very Large Databases Part 2
- 4.7 Backup Very Large Databases Part 3
- 4.8 Backup Very Large Databases Part 4
- 4.9 Managing Very Large Databases Lab Part 1
- 4.10 Managing Very Large Databases Lab Part 2
- 4.11 Managing Very Large Databases Lab Part 3
- 4.12 Configuring Alerting for Failed Backups
- 4.13 Configuring Alerting for Failed Backups Lab Part 1
- 4.14 Configuring Alerting for Failed Backups Lab Part 2
- 4.15 Back up Databases to Azure
- 4.16 Manage Transaction Log Backups
- 4.17 Configuring Database Recovery Models
- 4.18 Set Database Recovery Model Lab
- 4.19 Configuring Backup Automation
- 4.20 Configuring Backup Automation Lab

#### Module 5: Restore Databases

- 5.1 Perform Piecemeal Restores
- 5.2 Restore Databases Lab Part 1
- 5.3 Restore Databases Lab Part 2
- 5.4 Restore Databases Lab Part 3
- 5.5 Perform Page Recovery
- 5.6 Perform Point-in-Time Recovery
- 5.7 Perform Point-in-Time Recovery Lab
- 5.8 Restore File Groups
- 5.9 Develop a Plan to Automate and Test Restores

#### Module 6: Manage Database Integrity

- 6.1 Implement Database Consistency Checks
- 6.2 Implement Database Consistency Checks Lab
- 6.3 Identify Database Corruption
- 6.4 Recover From Database Corruption

### **Oracle Database 12c – SQL Fundamentals 1Z0-061**

#### Module 1 Introduction To Oracle 12c SQL Fundamentals

- Introduction To Course
- 1.2 Intro To Oracle 12c SQL Fundamentals
- 1.3 Structure Of SQL
- 1.4 Basic Select Statements
- 1.5 Basic Select Statements Demo

## Module 2 Retrieving Data

- 2.1 Modifying Reported Output
- 2.2 The Where Clause
- 2.3 The Order By Clause
- 2.4 Left And Right Outer Joins
- 2.5 The Where Clause Demo
- 2.6 Multi-Table Selection Demo

## Module 3 SQL Functions

- 3.1 Single Row Functions
- 3.2 Aggregate Functions
- 3.3 Single-Row Functions Demo
- 3.4 Multi-Row Functions Demo
- 3.5 Group By
- 3.6 Grouping Demo
- 3.7 Conversion Functions
- 3.8 Conversion Functions Demo
- 3.9 Date-time Functions
- 3.10 Date-time Functions Demo

## Module 4 Subqueries

- 4.1 Single-Row Subqueries
- 4.2 Single-Row Subqueries Demo
- 4.3 Multi-Row Subqueries
- 4.4 Multi-Row Subqueries Demo
- 4.5 Other Subquery Types
- 4.6 Other Subquery Types Demo

## Module 5 Data Manipulation Language

- 5.1 Adding Data
- 5.2 Changing Data
- 5.3 Deleting Data
- 5.4 DML Demo

## Module 6 Data Control Language

- 6.1 Security
- 6.2 Object Privileges
- 6.3 DCL Demo

## Module 7 Data Definition Language

- 7.1 Creating Objects In The Database
- 7.2 Creating Objects In The Database Demo
- 7.3 Sequences
- 7.4 Sequenced Demo
- 7.5 Indexes
- 7.6 Views

## Module 8 Combining Queries

- 8.1 Combining Queries

## Module 9 Oracle 12C SQL Fundamentals Review

- 9.1 Oracle 12c SQL Fundamentals Review-Part 1
- 9.2 Oracle 12c SQL Fundamentals Review-Part 2
- 9.3 Oracle 12c SQL Fundamentals Review-Part 3
- 9.4 Conclusion

## **Oracle Database 12c – Installation and Administration 1Z0-062**

### Module 1 Database Concepts And Tools

- Instructor And Course Introduction
- 1.2 Database Concepts And Tools- Part 1
- 1.3 Database Concepts And Tools- Part 2

### Module 2 Memory Structure

- 2.1 Memory Structure- Part 1
- 2.2 Memory Structure -Part 2

### Module 3 Tables

- 3.1 Tables -Part 1
- 3.2 Tables -Part 2

### Module 4 Indexes

- 4.1 Indexes -Part 1
- 4.2 Indexes- Part 2

### Module 5 Constraints And Triggers

- 5.1 Constraints And Triggers -Part 1
- 5.2 Constraints And Triggers -Part 2

### Module 6 Users

- 6.1 Users
- 6.2 Profiles
- 6.3 Privileges
- 6.4 Roles

### Module 7 Internal Structures

- 7.1 Storage Structures- Part 1
- 7.2 Storage Structures -Part 2
- 7.3 Internal Memory Structures -Part 1
- 7.4 Internal Memory Structures -Part 2
- 7.5 Background Processes -Part 1
- 7.6 Background Processes -Part 2

### Module 8 Starting Up and Shutting Down Database

- 8.1 Starting And Stopping Data Base -Part 1
- 8.2 Starting And Stopping Data Base- Part 2

### Module 9 Critical Storage Files

- 9.1 Critical Storage Files- Part 1

- 9.2 Critical Storage Files- Part 2

#### Module 10 Data Manipulation Language

- 10.1 DML Atomicity- Part 1
- 10.2 DML Atomicity- Part 2
- 10.3 DML Insert
- 10.4 DML Update -Part 1
- 10.5 DML Update -Part 2
- 10.6 DML Delete And Review Of DML Statements -Part 1
- 10.7 DML Delete And Review Of DML Statements -Part 2

#### Module 11 Data Concurrency

- 11.1 Data Concurrency -Part 1
- 11.2 Data Concurrency- Part 2

#### Module 12 Back-Up And Recovery

- 12.1 Back-Up- Part 1
- 12.2 Back-Up -Part 2
- 12.3 Back-Up -Part 3
- 12.4 RMAN Catalog
- 12.5 RMAN BackUps -Part 1
- 12.6 RMAN BackUps- Part 2
- 12.7 Disaster Preparedness
- 12.8 Recovery
- 12.9 Flashback Recovery

#### Module 13 Installation

- 13.1 Installation -Part 1
- 13.2 Installation- Part 2

#### Module 14 Course Review

- 14.1 Course Review- Part 1
- 14.2 Course Review- Part 2
- 14.3 Course Review- Part 3
- 14.4 Course Review- Part 4
- 14.5 Course Review -Part 5
- 14.6 Course Outro