

Managing Win2K3 Network Infrastructure

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Meet the expert: Rafiq Wayani has extensive experience including more than 20 years in IT as Systems Architect, Software Engineer, DBA, and Project Manager. Wayani has instructed in a variety of technical areas, has designed and implemented network and information systems, and is certified across a wide range of platforms and systems including Microsoft Solutions Developer, Systems Engineer, Application Developer, Database Administrator, Trainer; Novell Netware Administrator and Engineer; Master Certified Netware Engineer; and A Certified.

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Course description: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure course will give you the knowledge and skills necessary to prepare to pass Microsoft exam 70-291. This course is intended for individuals pursuing the MCSA or MCSE on Windows Server 2003 certification.

Course outline:

IP Definition - Part 1

- Introduction
- OSI Model - Overview
- Layers of the OSI Model
- OSI Model - Network Devices
- Mapping TCP/IP to OSI Model
- Request for Comment (RFC)
- TCP/IP Addressing Overview
- Binary/Hexadecimal Numbers
- Binary Numbers Example
- Hexadecimal Numbers
- Convert Binary and Hex
- Summary

IP Definition - Part 2

- Introduction
- Addressing Description
- IP Addressing Explained
- Octets and CIDR
- Subnetting Explained
- Class C Network Addresses
- Class C Subnetting Example
- TCP/IP Address Classes
- Summary

IP Communications - Part 1

- Introduction
- Within One Network
- ARP Demo
- Between Networks
- Routers
- Static and Dynamic Routing
- ROUTE Utility
- Summary

IP Communications - Part 2

- Introduction

- Public and Private
- Reserved Private IP Addresses
- VLSM
- Subnet Mask Demo
- CIDR / Supernetting
- Network Before CIDR Demo
- Network After CIDR Demo
- Summary

IP Communications - Part 3

- Introduction
- IPv6
- Clients
- Assign a Dynamic IP Address
- Using IPConfig
- Alternate Configuration
- Configure Advanced Settings
- Assign a Static IP Address
- APIPA
- DHCP Process
- DHCP Server
- Create/Config DHCP Server
- Create a Scope
- Configure Client
- Create a Reservation
- Handle Multiple DHCP Servers
- Summary

Routing

- Introduction
- Routing
- Types of Routers
- Components of Routing
- Interfaces

- Protocols
- Implement Routing
- Calculate Hosts/Ranges
- Create New DHCP Scope
- Test the New Scope
- Create a Second Subnet
- Create Another DHCP Scope
- Enable LAN Routing
- Enable RRAS
- Connect to Another Subnet
- Switches
- Benefits of Switches
- Virtual LANs
- Virtual LANs - Benefits
- Virtual LANs - Membership
- Increasing Bandwidth
- Summary

DHCP - Part 1

- Introduction
- DHCP Overview
- Config IP Address Manually
- Config IP Address Dynamically
- Central Admin of IP Addresses
- Lease Generation Process
- Lease Renewal Process
- Create DHCP Role on Server
- Configure DHCP on Client
- Configure DHCP Scope
- Create a DHCP Server Scope
- Authorize the DHCP Server
- Client Obtains IP Address

- Create a DHCP Reservation
- Summary

DHCP - Part 2

- Introduction
- Class-Level Options
- Config Vendor/User Classes
- Relay Agent
- Ways to Implement DHCP
- Fault Tolerance
- Relay Agent Process
- Install/Setup a Relay Agent
- Configure a Relay Agent
- Manage/Monitor
- Reasons to Monitor
- DHCP Database
- Database Files
- Backup / Restore
- Maintenance Guidelines
- Location of Database Files
- Backup/Restore Demo
- Select Backup Location
- Summary

DHCP - Part 3

- Introduction
- Reconciliation
- Reconcile the Scope
- DHCP Registry Keys
- Rename dhcp.mdb
- Backup Registry Configuration
- Cautions with Registry Keys
- Create a Performance Baseline
- Reasons to Monitor

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- How to Monitor
- View DHCP Server Statistics
- View DHCP Server Log File
- Auditing
- Auditing Data Collection
- Performance
- Performance Counter Demo
- Create an Alert
- Examine the Event Viewer
- Monitoring Guidelines
- Summary
- Encryption Protocols
- Encryption Requirements
- Wireless
- Two Modes for Wireless
- Wireless Components
- Wireless Standards
- 802.1x Authentication
- Win XP Client Config Types
- Determine Auth. Methods
- Dial-In Permissions
- Permissions
- Remote Access Policy
- Specify RA Policies
- Configure RA Logging
- Dial-In Perm./Properties
- Raise Domain/Forest Levels

Name Resolution - Part 1

- Introduction
- Name Resolution
- Characteristics
- Host Names
- Host Name Characteristics
- Resolve IP Address with Hosts File
- NetBIOS Names
- NetBIOS Characteristics
- WINS Server
- WINS Server Console
- LMHosts File
- Name Resolution Precedence
- NetBIOS Utility
- NetBIOS Local Broadcasts
- Summary

Name Resolution - Part 2

- Introduction
- Client Resolver Cache
- ipconfig /displaydns
- ipconfig /flushdns
- Resolver Cache Issues
- Summary

Network Access - Part 1

- Introduction
- Components
- Server
- Requirements
- Types of Clients
- Security
- Setup Remote Access
- Manage Users Permissions
- Config Routing/Remote Access
- Connect through VPN
- Connect as a Client
- Failed Connect Attempt
- Summary

Network Access - Part 2

- Introduction
- VPN Connection
- Connection Process
- Components