

# Exam 70-741



## Networking with Windows Server 2016

### Implement Domain Name System (DNS) (15-20%)

- Install and configure DNS servers
  - Determine DNS installation requirements; determine supported DNS deployment scenarios on Nano Server; install DNS; configure forwarders; configure Root Hints; configure delegation; implement DNS policies; Configure DNS Server settings using Windows PowerShell; configure Domain Name System Security Extensions (DNSSEC); configure DNS Socket Pool; configure cache locking; enable Response Rate Limiting; configure DNS-based Authentication of Named Entities (DANE); configure DNS logging; configure delegated administration; configure recursion settings; implement DNS performance tuning; configure global settings
- Create and configure DNS zones and records
  - Create primary zones; configure Active Directory primary zones; create and configure secondary zones; create and configure stub zones; configure a GlobalNames zone; analyze zone-level statistics; create and configure DNS Resource Records (RR), including A, AAAA, PTR, SOA, NS, SRV, CNAME, and MX records; configure zone scavenging; configure record options, including Time To Live (TTL) and weight; configure round robin; configure secure dynamic updates; configure unknown record support; use DNS audit events and analytical (query) events for auditing and troubleshooting; configure Zone Scopes; configure records in Zone Scopes; configure policies for zones

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### Implement DHCP and IPAM (25-30%)

- Install and configure DHCP
  - Install and configure DHCP servers; authorize a DHCP server; create and configure scopes; create and configure superscopes and multicast scopes; configure a DHCP reservation; configure DHCP options; configure DNS options from within DHCP; configure policies; configure client and server for PXE boot; configure DHCP Relay Agent; implement IPv6 addressing using DHCPv6; perform export and import of a DHCP server; perform DHCP server migration

- Manage and maintain DHCP
  - Configure a lease period; backup and restore the DHCP database; configure high availability using DHCP failover; configure DHCP name protection; troubleshoot DHCP
- Implement and Maintain IP Address Management (IPAM)
  - Provision IPAM manually or by using Group Policy; configure server discovery; create and manage IP blocks and ranges; monitor utilization of IP address space; migrate existing workloads to IPAM; configure IPAM database storage using SQL Server; determine scenarios for using IPAM with System Center Virtual Machine Manager for physical and virtual IP address space management; manage DHCP server properties using IPAM; configure DHCP scopes and options; configure DHCP policies and failover; manage DNS server properties using IPAM; manage DNS zones and records; manage DNS and DHCP servers in multiple Active Directory forests; delegate administration for DNS and DHCP using role-based access control (RBAC); audit the changes performed on the DNS and DHCP servers; audit the IPAM address usage trail; audit DHCP lease events and user logon events

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#### Implement Network Connectivity and Remote Access Solutions (20-25%)

- Implement network connectivity solutions
  - Implement Network Address Translation (NAT); configure routing
- Implement virtual private network (VPN) and DirectAccess solutions
  - Implement remote access and site-to-site (S2S) VPN solutions using remote access gateway; configure different VPN protocol options; configure authentication options; configure VPN reconnect; create and configure connection profiles; determine when to use remote access VPN and site-to-site VPN and configure appropriate protocols; install and configure DirectAccess; implement server requirements; implement client configuration; troubleshoot DirectAccess
- Implement Network Policy Server (NPS)
  - Configure a RADIUS server including RADIUS proxy; configure RADIUS clients; configure NPS templates; configure RADIUS accounting; configure certificates; configure Connection Request Policies; configure network policies for VPN and wireless and wired clients; import and export NPS policies

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### Implement Core and Distributed Network Solutions (15-20%)

- Implement IPv4 and IPv6 addressing
  - Configure IPv4 addresses and options; determine and configure appropriate IPv6 addresses; configure IPv4 or IPv6 subnetting; implement IPv6 stateless addressing; configure interoperability between IPv4 and IPv6 by using ISATAP, 6to4, and Teredo scenarios; configure Border Gateway Protocol (BGP); configure IPv4 and IPv6 routing
- Implement Distributed File System (DFS) and Branch Office solutions
  - Install and configure DFS namespaces; configure DFS replication targets; configure replication scheduling; configure Remote Differential Compression (RDC) settings; configure staging; configure fault tolerance; clone a Distributed File System Replication (DFSR) database; recover DFSR databases; optimize DFS Replication; install and configure BranchCache; implement distributed and hosted cache modes; implement BranchCache for web, file, and application servers; troubleshoot BranchCache
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### Implement an Advanced Network Infrastructure (15-20%)

- Implement high performance network solutions
  - Implement NIC Teaming or the Switch Embedded Teaming (SET) solution and identify when to use each; enable and configure Receive Side Scaling (RSS); enable and configure network Quality of Service (QoS) with Data Center Bridging (DCB); enable and configure SMB Direct on Remote Direct Memory Access (RDMA) enabled network adapters; configure SMB Multichannel; enable and configure virtual Receive Side Scaling (vRSS) on a Virtual Machine Queue (VMQ) capable network adapter; enable and configure Virtual Machine Multi-Queue (VMMQ); enable and configure Single-Root I/O Virtualization (SR-IOV) on a supported network adapter
- Determine scenarios and requirements for implementing Software Defined Networking (SDN)
  - Determine deployment scenarios and network requirements for deploying SDN; determine requirements and scenarios for implementing Hyper-V Network Virtualization (HNV) using Network Virtualization Generic Route Encapsulation (NVGRE) encapsulation or Virtual Extensible LAN (VXLAN) encapsulation; determine scenarios for implementation of Software Load Balancer (SLB) for North-South and East-West load balancing; determine implementation scenarios for various types of Windows Server Gateways, including L3, GRE, and S2S, and their use; determine requirements and scenarios for Datacenter firewall policies and network security groups