



BAKER COLLEGE
STUDENT LEARNING OUTCOMES

MNP 2220 Server Administration II

6 Semester Hours

Student Learning Outcomes & Enabling Objectives

1. Configure and manage Network Load Balancing, Failover Clustering and Virtual Machine Movement.
 - a. Install, configure and manage NLB nodes; NLB prerequisites; affinity; port rules; cluster operation mode and upgrade an NLB cluster.
 - b. Install, configure and manage quorum; cluster networking; restore of single node or cluster configuration; cluster storage; implementation of Cluster-Aware Updating; upgrade a cluster; optimize clustered shared volumes; clusters without network names and storage spaces.
 - c. Configure role-specific settings including continuously available shares; configure virtual machine (VM) monitoring; configure failover and preferences settings; and configure guest clustering.
 - d. Perform Live Migration; perform quick migration; perform storage migration; import, export, and copy VMs; configure virtual machine network health protection and configure drain on shutdown.

2. Configure and manage Advanced File Solutions, implementing Dynamic Access Control, Storage settings and Backup settings.
 - a. Configure role-specific settings including continuously available shares; configure virtual machine (VM) monitoring; configure failover and preferences settings; and configure guest clustering.
 - b. Configure user and device claim types; implement policy changes and staging; perform access-denied remediation; configure file classification; create and configure Central Access rules and policies and create and configure resource properties and lists.
 - c. Configure iSCSI target and initiator; configure Internet Storage Name server (iSNS); implement thin provisioning and trim; manage server free space using Features on Demand and configure tiered storage.
 - d. Configure Windows Server backups; configure Microsoft Azure backups; configure role-specific backups and manage VSS settings using VSSAdmin.

3. Configure, manage and implement recovering servers, Site-Level Fault Tolerance, Dynamic Host Configuration Protocol (DHCP) and Advanced DNS Solutions.
 - a. Restore from backups, perform a Bare Metal Restore (BMR); recover servers using Windows Recovery Environment (WinRE) and safe mode; and configure the Boot Configuration Data (BCD) store.
 - b. Configure Hyper-V replica including Hyper-V Replica Broker and VMs; configure multi-site clustering including network settings, quorum, and failover settings; configure Hyper-V Replica extended replication; configure Global Update Manager; recover a multi-site failover cluster.
 - c. Create and configure superscopes and multicast scopes; implement DHCPv6; configure high availability for DHCP including DHCP failover and split scopes; configure DHCP Name Protection and configure DNS registration.
 - d. Configure security for DNS including Domain Name System Security Extensions (DNSSEC), DNS Socket Pool, and cache locking; configure DNS logging; configure delegated administration; configure recursion; configure netmask ordering; and configure a GlobalNames zone; analyze zone level statistics.
4. Configure and implement IPAM (IP Address Management), Domain and Forest settings and Trusts.
 - a. 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 to IPAM; delegate IPAM administration; manage IPAM collections, and configure IPAM database storage.
 - b. Implement multi-domain and multi-forest Active Directory environments including interoperability with previous versions of Active Directory; upgrade existing domains and forests including environment preparation and functional levels and configure multiple user principal name (UPN) suffixes.
 - c. Configure external, forest, shortcut, and realm trusts; configure trust authentication; configure SID Filtering; and configure name suffix routing.
5. Configure and manage Sites, Active Directory and SYSVOL Replication and Active Directory Federation Services.
 - a. Configure sites and subnets; create and configure site links; manage site coverage; manage registration of SRV records; and move domain controllers between sites.
 - b. Configure replication to Read-Only Domain Controllers (RODCs); configure Password Replication Policy (PRP) for RODCs; monitor and manage replication and upgrade SYSVOL replication to Distributed File System Replication (DFSR).
 - c. Install AD FS; implement claims-based authentication including Relying Party Trusts; configure authentication policies; configure Workplace Join and configure multi-factor authentication.

6. Install, configure and manage Active Directory Certificate Services, Certificates and Active Directory Rights Management Services.
 - a. a. Install an Enterprise Certificate Authority (CA); configure certificate revocation lists (CRL) distribution points; install and configure Online Responder; implement administrative role separation; and configure CA backup and recovery.
 - b. b. Manage certificate templates; implement and manage certificate deployment, validation, and revocation; manage certificate renewal; manage certificate enrollment and renewal to computers and users using Group Policies; and configure and manage key archival and recovery.
 - c. c. Install a licensing or certificate AD RMS server; manage AD RMS Service Connection Point (SCP); manage RMS templates; configure exclusion policies; and backup and restore AD RMS.
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These SLOs are/are not approved for experiential credit.

Effective: Fall 2017