

MCITP Enterprise Administrator Track

Windows Server 2008 Enterprise Administrator

MCITP: Enterprise Administrator

Validates your ability to design Windows Server infrastructures; evaluate and recommend new technology solutions; serve as an escalation point for infrastructure issues; develop client and server best practices for other teams, such as engineering, development, and operations; keep policy current for authentication, identity, and access management; provide guidance in implementing security policies that affect the infrastructure on multiple levels; participate in application reviews on security; and ensure that the applications adhere to standard security guidelines and practices.

Exam 70-640: TS: Windows Server 2008 Active Directory

Configuration

Skills Being Measured This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam.

Configuring Domain Name System (DNS) for Active Directory (16 percent)

- **Configure zones.** Includes : Dynamic DNS (DDNS), Non-dynamic DNS (NDDNS), and Secure Dynamic DNS (SDDNS), Time to Live (TTL), GlobalNames, Primary, Secondary, Active Directory Integrated, Stub, SOA, zone scavenging, forward lookup, reverse lookup
- **Configure DNS server settings.** Includes : forwarding, root hints, configure zone delegation, round robin, disable recursion, debug logging, server scavenging
- **Configure zone transfers and replication.** Includes : configure replication scope (forestDNSzone, domainDNSzone), incremental zone transfers, DNS Notify, secure zone transfers, configure name servers, application directory partitions

Configuring the Active Directory infrastructure (25 percent)

- **Configure a forest or a domain.** Includes : remove a domain, perform an unattended installation, Active Directory Migration Tool (ADMT) v3 (pruning and grafting), raise forest and domain functional levels, interoperability with previous versions of Active Directory, alternate user principal name (UPN) suffix, forestprep, domainprep
- **Configure trusts.** Includes : forest trust, selective authentication versus forest-wide authentication, transitive trust, external trust, shortcut trust, SID filtering
- **Configure sites.** Includes : create Active Directory subnets, configure site links, configure site link costing, configure sites infrastructure
- **Configure Active Directory replication.** Includes : Distributed File System, one-way replication, bridgehead server, replication scheduling, configure replication protocols, force intersite replication
- **Configure the global catalog.** Includes : Universal Group Membership Caching (UGMC), partial attribute set, promote to global catalog

- **Configure operations masters.** Includes : seize and transfer, backup operations master, operations master placement, Schema Master, extending the schema, time service

Configuring additional Active Directory server roles (9 percent)

- **Configure Active Directory Lightweight Directory Service (AD LDS).** Includes : migration to AD LDS, configure data within AD LDS, configure an authentication server, server core, Windows Server 2008 Hyper-V
- **Configure Active Directory Rights Management Service (AD RMS).** Includes : certificate request and installation, self-enrollments, delegation, Active Directory Metadirectory Services (AD MDS), Windows Server virtualization
- **Configure the read-only domain controller (RODC).** Includes : unidirectional replication, Administrator role separation, read-only DNS, BitLocker, credential caching, password replication, syskey, Windows Server virtualization
- **Configure Active Directory Federation Services (AD FS).** Includes : install AD FS server role, exchange certificate with AD FS agents, configure trust policies, configure user and group claim mapping, Windows Server virtualization

Creating and maintaining Active Directory objects (24 percent)

- **Automate creation of Active Directory accounts.** Includes : bulk import, configure the UPN, create computer, user, and group accounts (scripts, import, migration), template accounts, contacts, distribution lists
- **Maintain Active Directory accounts.** Includes : configure group membership, account resets, delegation, AGDLP/AGGUDLP, deny domain local group, local versus domain, Protected Admin, disabling accounts versus deleting accounts, deprovisioning, contacts, creating organizational units (OUs), delegation of control
- **Create and apply Group Policy objects (GPOs).** Includes : enforce, OU hierarchy, block inheritance, and enabling user objects, Group Policy processing priority, WMI, Group Policy filtering, Group Policy loopback
- **Configure GPO templates.** Includes : user rights, ADMX Central Store, administrative templates, security templates, restricted groups, security options, starter GPOs, shell access policies
- **Configure GPO templates.** Includes : user rights, ADMX Central Store, administrative templates, security templates, restricted groups, security options, starter GPOs, shell access policies
- **Configure software deployment GPOs.** Includes : publishing to users, assigning software to users, assigning to computers, software removal
- **Configure account policies.** Includes : domain password policy, account lockout policy, fine-grain password policies
- **Configure audit policy by using GPOs.** Includes : audit logon events, audit account logon events, audit policy change, audit access privilege use, audit directory service access, audit object access

Maintaining the Active Directory environment (13 percent)

- **Configure backup and recovery.** Includes : using Windows Server Backup, backup files and system state data to media, backup and restore by using removable media, perform an authoritative or non-authoritative Active Directory restore, linked value

replication, Directory Services Recovery Mode (DSRM) (reset admin password), back up and restore GPOs

- **Perform offline maintenance.** Includes : offline defragmentation and compaction, Restartable Active Directory, Active Directory database storage allocation
- **Monitor Active Directory.** Includes : Network Monitor, Task Manager, Event Viewer, ReplMon, RepAdmin, Windows System Resource Manager, Reliability and Performance Monitor, Server Performance Advisor, RSOP

Configuring Active Directory Certificate Services (13 percent)

- **Install Active Directory Certificate Services.** Includes : standalone versus enterprise, CA hierarchies—root versus subordinate, certificate requests, certificate practice statement
- **Configure CA server settings.** Includes : key archival, certificate database backup and restore, assigning administration roles
- **Manage certificate templates.** Includes : certificate template types, securing template permissions, managing different certificate template versions, key recovery agent
- **Manage enrollments.** Includes : network device enrollment service (NDES), auto-enrollment, Web enrollment, smart card enrollment, creating enrollment agents
- **Manage certificate revocations.** Includes : configure Online Responders, Certificate Revocation List (CRL), CRL Distribution Point (CDP), Authority Information Access (AIA)

Exam 70-642: TS: Windows Server 2008 Network Infrastructure, Configuring

Skills Being Measured This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam.

Configuring IP Addressing and Services (24 percent)

- **Configure IPv4 and IPv6 addressing.** Includes: configure IP options, subnetting, supernetting, alternative configuration
- **Configure Dynamic Host Configuration Protocol (DHCP).** Includes: DHCP options, creating new options, PXE boot, default user profiles, DHCP relay agents, exclusions, authorize server in Active Directory, scopes, server core, Windows Server Hyper-V
- **Configure routing.** Includes: static routing, persistent routing, Routing Internet Protocol (RIP), Open Shortest Path First (OSPF)
- **Configure IPsec.** Includes: create IPsec policy, IPsec Authentication Header (AH), IPsec Encapsulating Security Payload (ESP)

Configuring Name Resolution (27 percent)

- **Configure a Domain Name System (DNS) server.** Includes: conditional forwarding, external forwarders, root hints, cache-only, server core, WINS and DNS integration, Windows Server virtualization
- **Configure DNS zones.** Includes: DNS Refresh no-refresh, intervals, DNS listserv address (NSLOOKUP), primary/secondary zones, Active Directory integration, Dynamic Domain Name System (DDNS), GlobalNames, SOA refresh
- **Configure DNS records.** Includes: record types, host, pointer, MX, SRV, NS, dynamic updates, Time to Live (TTL)
- **Configure DNS replication.** Includes: DNS secondary zones, DNS stub zones, DNS scavenging interval, replication scope
- **Configure name resolution for client computers. Includes:** DNS and WINS integration, configuring HOSTS file, LMHOSTS, node type, Link-Local Multicast Name Resolution (LLMNR), broadcasting, resolver cache, DNS Server list, Suffix Search order, manage client settings by using group policy

Configuring Network Access (22 percent)

- **Configure remote access.** Includes: dial-up, Remote Access Policy, Network Address Translation (NAT), Internet Connection Sharing (ICS), VPN, Routing and Remote Access Services (RRAS), inbound/outbound filters, configure Remote Authentication Dial-In User Service (RADIUS) server, configure RADIUS proxy, remote access protocols, Connection Manager
- **Configure Network Access Protection (NAP).** Includes: network layer protection, DHCP enforcement, VPN enforcement, configure NAP health policies, IPsec enforcement, 802.1x enforcement, flexible host isolation
- **Configure network authentication.** Includes: LAN authentication by using NTLMv2 and Kerberos, WLAN authentication by using 802.1x, RAS authentication by using MS-CHAP, MS-CHAP v2, and EAP
- **Configure wireless access.** Includes: Set Service Identifier (SSID), Wired Equivalent Privacy (WEP), Wi-Fi Protected Access (WPA), Wi-Fi Protected Access 2 (WPA2), ad hoc versus infrastructure mode, group policy for wireless
- **Configure firewall settings.** Includes: incoming and outgoing traffic filtering, Active Directory account integration, identify ports and protocols, Microsoft Windows Firewall versus Windows Firewall with Advanced Security, configure firewall by using group policy, isolation policy

Configuring File and Print Services (13 percent)

- **Configure a file server.** Includes: file share publishing, Offline Files, share permissions, NTFS permissions, encrypting file system (EFS)
- **Configure Distributed File System (DFS).** Includes: DFS namespace, DFS configuration and application, creating and configuring targets, DFS replication
- **Configure shadow copy services.** Includes: recover previous versions, set schedule, set storage locations
- **Configure backup and restore.** Includes: backup types, backup schedules, managing remotely, restoring data
- **Manage disk quotas.** Includes: quota by volume or quota by user, quota entries, quota templates
- **Configure and monitor print services.** Includes: printer share, publish printers to Active Directory, printer permissions, deploy printer connections, install printer drivers, export and import print queues and printer settings, add counters to Reliability and Performance Monitor to monitor print servers, print pooling, print priority

Monitoring and Managing a Network Infrastructure (14 percent)

- **Configure Windows Server Update Services (WSUS) server settings.** Includes: update type selection, client settings, Group Policy object (GPO), client targeting, software updates, test and approval, disconnected networks
- **Capture performance data. Includes:** Data Collector Sets, Performance Monitor, Reliability Monitor, monitoring System Stability Index
- **Monitor event logs.** Includes: custom views, application and services logs, subscriptions, DNS log
- **Gather network data.** Includes: Simple Network Management Protocol (SNMP), Baseline Security Analyzer, Network Monitor

Exam 70-643: TS: Windows Server 2008 Applications Infrastructure, Configuring

Skills Being Measured This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam.

Deploying Servers (24 percent)

- **Deploy images by using Windows Deployment Services. Includes:** Install from media (IFM), configure Windows Deployment Services, capture Windows Deployment Services images, deploy Windows Deployment Services images, server core.
- **Configure Microsoft Windows activation. Includes:** Install a KMS server, create a DNS SRV record, replicate volume license data.
- **Configure Windows Server Hyper-V and virtual machines. Includes:** Virtual networking, virtualization hardware requirements, Virtual Hard Disks, migrate from physical to virtual, VM additions, backup, optimization, server core
- **Configure high availability. Includes:** Failover clustering, Network Load Balancing, hardware redundancy
- **Configure storage. Includes:** RAID types, Virtual Disk Specification (VDS) API, Network Attached Storage, iSCSI and Fibre Channel storage area networks, mount points

Configuring Terminal Services (32 percent)

- **Configure Windows Server 2008 Terminal Services RemoteApp (TS RemoteApp).** Includes:
Configuring Terminal Services Web Access, configuring Terminal Services Remote Desktop Web Connection
- **Configure Terminal Services Gateway. Includes:** Certificate configuration, Terminal Services Gateway Manager (TS Gateway Manager), specifying resources that users can access through TS Gateway by using Terminal Services resource authorization policy (TS RAP) and Terminal Services connection authorization policy (TS CAP), Terminal Services group policy
- **Configure Terminal Services load balancing. Includes:** Terminal Services Session Broker redirection modes, DNS registration, setting through group policy
- **Configure and monitor Terminal Services resources. Includes:** Allocate resources by using Windows Server Resource Manager, configure application logging
- **Configure Terminal Services licensing. Includes:** Deploy licensing server, connectivity between terminal servers and Terminal Services licensing server, recovering Terminal Services licensing server, managing Terminal Services client access licenses (TS CALs)

- **Configure Terminal Services client connections. Includes:** Connecting local devices and resources to a session, Terminal Services profiles, Terminal Services home folders, Remote Desktop Connection (RDC), single sign-on, Remote Desktop Snap-In, MSTSC.exe
- **Configure Terminal Services server options. Includes:** Logoff, disconnect, reset, remote control, monitor, Remote Desktop Protocol (RDP) permissions, connection limits, session time limits, managing by using GPOs, viewing processes, session permissions, display data prioritization

Configuring a Web Services Infrastructure (30 percent)

- **Configure Web applications. Includes:** Directory-dependent, publishing, URL-specified configuration, Microsoft .NET components, for example, .NET and .aspx, configure application pools
- **Manage Web sites. Includes:** Migrate sites and Web applications, publish IIS Web sites, configure virtual directories
- **Configure a File Transfer Protocol (FTP) server. Includes:** Configure for extranet users, configure permissions
- **Configure Simple Mail Transfer Protocol (SMTP). Includes:** Setting up smart hosts, configuring size limitations, setting up security and authentication to the delivering server, creating proper service accounts, authentication, SMTP relay
- **Manage Internet Information Services (IIS). Includes:** Web site content backup and restore, IIS configuration backup, monitor IIS, configure logging, delegation of administrative rights
- **Configure SSL security Includes:** Configure certificates, requesting SSL certificate, renewing SSL certificate, exporting and importing certificates
- **Configure Web site authentication and permissions. Includes:** Configure site permissions and authentication, configure application permissions, client certificate mappings

Configuring Network Application Services (14 percent)

- **Configure Windows Media server. Includes:** On-demand replication, configure time-sensitive content, caching and proxy
- **Configure Digital Rights Management (DRM). Includes:** Encryption, sharing business rules, configuring license delivery, configuring policy templates
- **Configure Microsoft Windows SharePoint Services server options. Includes:**

Site permissions, backup, antivirus, configuring Windows SharePoint Services service accounts

- **Configure Windows SharePoint Services e-mail integration Includes:**
Configuring a document library to receive e-mail, configuring incoming versus outgoing e-mail

Exam 70-680: TS: Windows 7, Configuring

Skills Being Measured This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam.

Installing, Upgrading, and Migrating to Windows 7 (14 percent)

- **Perform a clean installation. Includes:** identifying hardware requirements; setting up as the sole operating system; setting up as dual boot; installation methods; boot from the source of installation, preparing the installation source: USB, CD, network share, WDS
- **Upgrade to Windows 7 from previous versions of Windows. Includes:** upgrading from Windows Vista; migrating from Windows XP; upgrading from one edition of Windows 7 to another edition of Windows 7
- **Migrate user profiles. Includes:** migrating from one machine to another; migrating from previous versions of Windows; side-by-side vs. wipe and load

Deploying Windows 7 (13 percent)

- **Capture a system image. Includes:** preparing system for capture; creating a WIM file; automated capture; manual capture
- **Prepare a system image for deployment. Includes:** Inserting an application into a system image; inserting a driver into a system image; inserting an update into a system image; configuring tasks to run after deployment
- **Deploy a system image. Includes:** automated deployment methods; manually deploying a customized image
- **Configure a VHD. Includes:** creating, deploying, booting, mounting, and updating VHDs; offline updates; offline servicing

Configuring Hardware and Applications (14 percent)

- **Configure devices. Includes:** updating, disabling, and uninstalling drivers; signed drivers; conflicts between drivers; configuring driver settings; resolving problem device driver
- **Configure application compatibility. Includes:** setting compatibility mode; implementing shims; compatibility issues with Internet Explorer
- **Configure application restrictions. Includes:** setting software restriction policies; setting application control policies; setting through group policy or local security policy

- **Configure Internet Explorer. Includes:** configuring compatibility view; configuring security settings; configuring providers; managing add-ons; controlling InPrivate mode; certificates for secure Web sites

Configuring Network Connectivity (14 percent)

- **Configure IPv4 network settings. Includes:** connecting to a network; configuring name resolution; setting up a connection for a network; network locations; resolving connectivity issues; APIPA
- **Configure IPv6 network settings. Includes:** configuring name resolution; connecting to a network; setting up a connection for a network; network locations; resolving connectivity issues; link local multicast name resolution
- **Configure networking settings. Includes:** adding a physically connected (wired) or wireless device; connecting to a wireless network; configuring security settings on the client; set preferred wireless networks; configuring network adapters; configuring location-aware printing
- **Configure Windows Firewall. Includes:** configuring rules for multiple profiles; allowing or denying an application; network-profile-specific rules; configuring notifications; configuring authenticated exceptions
- **Configure remote management. Includes:** remote management methods; configuring remote management tools; executing PowerShell commands

Configuring Access to Resources (13 percent)

- **Configure shared resources. Includes:** folder virtualization; shared folder permissions; printers and queues; configuring HomeGroup settings
- **Configure file and folder access. Includes:** encrypting files and folders by using EFS; configuring NTFS permissions; resolving effective permissions issues; copying files vs. moving files
- **Configure user account control (UAC). Includes:** configuring local security policy; configuring admin vs. standard UAC prompt behaviors; configuring Secure Desktop
- **Configure authentication and authorization. Includes:** resolving authentication issues; configuring rights; managing credentials; managing certificates; smart cards with PIV; elevating user privileges; multifactor authentication
- **Configure Branch Cache. Includes:** distributed cache mode vs. hosted mode; network infrastructure requirements; configuring settings; certificate management

Configuring Mobile Computing (10 percent)

- **Configure BitLocker and BitLocker To Go. Includes:** configuring BitLocker and BitLocker To Go policies; managing Trusted Platform Module (TPM) PINs; configuring startup key storage; data recovery agent support
- **Configure DirectAccess. Includes:** configuring client side; configuring authentication; network infrastructure requirements
- **Configure mobility options. Includes:** configuring offline file policies; transparent caching; creating and migrating power policy
- **Configure remote connections. Includes:** establishing VPN connections and authentication; enabling a VPN reconnect; advanced security auditing; NAP quarantine remediation; dial-up connections; remote desktop; published apps

Monitoring and Maintaining Systems that Run Windows 7 (11 percent)

- **Configure updates to Windows 7. Includes:** configuring update settings; determining source of updates; configuring Windows Update policies; reviewing update history; checking for new updates; rolling back updates
- **Manage disks. Includes:** managing disk volumes; managing file system fragmentation; RAID; removable device policies
- **Monitor systems. Includes:** configuring event logging; filtering event logs; event subscriptions; data collector sets; generating a system diagnostics report
- **Configure performance settings. Includes:** configuring page files; configuring hard drive cache; updated drivers; configuring networking performance; configuring power plans; configuring processor scheduling; configuring desktop environment; configuring services and programs to resolve performance issues; mobile computing performance issues; configuring power

Configuring Backup and Recovery Options (11 percent)

- **Configure backup. Includes:** creating a system recovery disk; backing up files, folders, or full system; scheduling backups
- **Configure system recovery options. Includes:** configuring system restore points; restoring system settings; last known good configuration; complete restore; driver rollback
- **Configure file recovery options. Includes:** configuring file restore points; restoring previous versions of files and folders; restoring damaged or deleted files by using shadow copies; restore user profiles

Exam 70-647: Pro: Windows Server 2008, Enterprise Administrator

Skills Being Measured This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam.

Planning network and application services (23 percent)

- **Plan for name resolution and IP addressing. Includes:** internal and external naming strategy, naming resolution support for legacy clients, naming resolution for directory services, IP addressing scheme, TCP/IP version coexistence
- **Design for network access. Includes:** network access policies, remote access strategy, perimeter networks, server and domain isolation
- **Plan for application delivery. Includes:** application virtualization, presentation virtualization, locally installed software, Web-based applications
- **Plan for Terminal Services. Includes:** Terminal Services licensing, Terminal Services infrastructure

Designing core identity and access management components (25 percent)

- **Design Active Directory forests and domains. Includes:** forest structure, forest and domain functional levels, intra-organizational authorization and authentication, schema modifications
- **Design the Active Directory physical topology. Includes:** placement of servers, site and replication topology, printer location policies
- **Design the Active Directory administrative model. Includes:** delegation, group strategy, compliance auditing, group administration, organizational structure
- **Design the enterprise-level group policy strategy. Includes:** group policy hierarchy and scope filtering, control device installation, authentication and authorization

Designing support identity and access management components (29 percent)

- **Plan for domain or forest migration, upgrade, and restructuring. Includes:** cross-forest authentication, backward compatibility, object migration, migration planning, implementation planning, environment preparation
- **Design the branch office deployment. Includes:** authentication strategy, server security
- **Design and implement public key infrastructure. Includes:** certificate services, PKI operations and maintenance, certificate life cycle management

- **Plan for interoperability. Includes:** inter-organizational authorization and authentication, application authentication interoperability, cross-platform interoperability

Designing for business continuity and data availability (23 percent)

- **Plan for business continuity. Includes:** service availability, directory service recovery
- **Design for software updates and compliance management. Includes:** patch management and patch management compliance, Microsoft Update and Windows Update, **security baselines, system health models**
- **Design the operating system virtualization strategy. Includes:** server consolidation, application compatibility, virtualization management, placement of servers
- **Design for data management and data access. Includes:** data security, data accessibility and redundancy, data collaboration