



Mac OS X Server Essentials v10.3 Exam Skills Assessment Guide

The Mac OS X Server Essentials v10.3 Exam (Prometric exam no. 9L0-505) is a computer-based test offered at Authorized Prometric Testing Centers.

The exam is one of two required exams in the Apple Certified Technical Coordinator (ACTC) 10.3 track. You must pass this exam and the Mac OS X Help Desk Essentials v10.3 Exam to become an ACTC 10.3.

The exam lasts two hours and consists of 79 multiple-choice questions that are based on the knowledge-area objectives listed in this guide.

The score required to pass is 62 percent (49 items out of 79). Eight demographic questions are presented but are not scored.

To prepare for the exam, read through the objectives in this guide to determine which areas you need to review. You will not have access to any resources or references during the exam. Please note that the exam is based on Mac OS X Server version 10.3.5.

The number of test questions drawn from each knowledge area is indicated for each topic below. Please note that although this guide divides the objectives into 11 knowledge areas, questions are presented randomly during the exam. Also note that UNIX commands and processes are shown in monotype in the exam.

Installation & Setup

This topic has 4 items, drawn randomly from the following objectives:

- Identify features and functions of Mac OS X Server management tools, such as Server Admin, Server Assistant, and Workgroup Manager.
- Given the CPU, RAM, and available drive space, identify which Macintosh computers are qualified to run Mac OS X Server.
- Identify how to:
 - Use Mac OS X Server Installer to install Mac OS X Server locally and remotely.
 - Troubleshoot installation difficulties using available tools such as the Installer log.
 - Use Server Assistant to configure multiple network interfaces, network directory access, and Password Service options.
 - Use Server Admin to view logs and server load.

Network Services

- This topic has 6 items, drawn randomly from the following objectives:
- Identify how to:
 - Configure one or more valid DHCP subranges, including lease and renewal times, and the DNS and LDAP information that the subrange(s) will provide.
 - Use system logs in Mac OS X Server to identify a DHCP lease/renewal issue.
 - Use Server Admin to identify the current DHCP clients of a Mac OS X Server.
 - Use Server Admin to start, stop, and monitor usage of DNS services on Mac OS X Server.
 - Use Network Utility to troubleshoot DNS record issues.

Authentication & Authorization

This topic has 4 items, drawn randomly from the following objectives:

- Define and differentiate between authorization and authentication in Mac OS X Server.
- Identify and define the user account fields that are used by the system to implement permissions.
- Identify how to:
 - Use Workgroup Manager to create local user accounts and groups, and to assign users to groups.
 - Use Workgroup Manager to configure permissions for share points and items.

File Services

This topic has 11 items, drawn randomly from the following objectives:

- Identify how to use Server Admin to:
 - Enable and disable Apple File Service, Windows File Services, FTP services, and NFS services.
 - Monitor the usage of file services on Mac OS X Server.
 - Enable various browsing methods for file services.
 - Configure the number of connections that can be made to Apple File Service and Windows File Services.
 - Enable and disable guest account access to Apple File Service and Windows File Services.
 - Enable and disable anonymous connections to FTP.
 - Enable automatic file conversion for FTP services and describe how an FTP client can request the FTP server to perform file conversions before sending the file.
 - Manually add services to and create scopes on the SLP Directory Agent.
- Identify how to use Workgroup Manager to:
 - Configure a given folder on Mac OS X Server to be shared uniquely or simultaneously over AFP, SMB, and NFS.
 - Reset passwords.
 - Limit access to volumes that are shared via NFS on Mac OS X Server, and describe why sharing files over NFS is not secure.
 - Configure permissions for share points and items.

- Configure the permissions that the server applies to new files and folders on share points.
- Identify how to:
 - Use Open Directory Assistant to enable NT and LANManager passwords on Mac OS X Server.
 - Use Set SLP Scope to configure a workstation's default scope.
- List common user errors that cause problems when connecting to file services.
- Describe why passive FTP connections are used.

Print Services

This topic has 6 items, drawn randomly from the following objectives:

- Identify how to use Server Admin to:
 - Configure Mac OS X Server to print to a PostScript printer.
 - Share print queues and printer classes over AppleTalk, LPR, and SMB.
 - Enable print quotas on print queues, and to monitor print jobs for a print queue.
- Describe how to use Workgroup Manager to configure print quotas on user accounts.
- Describe how to verify that print services on Mac OS X Server can be browsed over Rendezvous.

Web Services

This topic has 12 items, drawn randomly from the following objectives:

- Describe how to use Server Admin to:
 - Enable and disable web service.
 - Monitor usage of web service.
 - Configure realms.
 - Configure a website to use CGIs for custom request processing.
 - Configure Mac OS X Server as proxy server for HTTP and FTP.
 - Configure a website to use performance caching.
 - Add a MIME type to the web server.
 - Configure the web server for SSL.
 - Enable and disable Apache modules.
- Identify how to:
 - Enforce authorization for access to website content via a web browser, and via WebDAV, using both Server Admin and the Finder.
 - Configure two websites on a single Mac OS X Server host using virtual hosting by IP or by name.
- Describe how the Apache process uses the www user and www group.
- Describe the purpose of the QuickTime Streaming Server, WebObjects, and Jboss on Mac OS X Server.

Mail Services

This topic has 6 items, drawn randomly from the following objectives:

- Identify how to use Server Admin to:
 - Configure Mail services to provide mailbox access to clients via POP and IMAP, with and without secure authentication.
 - Configure Mail services as a private, local SMTP server; or a secure, public Internet SMTP server.
 - Restrict open mail relays on Mac OS X Server and allow mail relay only from specific hosts.
 - Configure Mail services to forward mail to another email address, or otherwise define how to handle undeliverable mail.
 - Configure Mail services to use a real-time blacklist server.
 - Configure mail storage quotas for mail clients.
 - Monitor usage of Mail services on Mac OS X Server.
 - Configure and manage a mailing list.
 - Enable WebMail.
- Describe how to:
 - Use an archival utility to locate, backup, and restore mail database files.
 - Use Network Utility to query for MX records, and to verify that the mail exchange entries on a configured DNS server are correct.
 - Analyze an MX record to identify which computer is the primary mail server for a given name.
 - Use Mail client to relay mail through Apple Mail Server.
 - Use Server Settings to bcc all mail to a local account for archiving.
 - Analyze Mail server log files and recognize instances of rejected and undeliverable mail and faulty DNS configuration.
 - Configure Apple Mail Server to actively notify users of new incoming mail.
 - Troubleshoot authentication issues that occur when users attempt to retrieve or send mail via Mac OS X Mail services.
- Identify secure authentication methods for Mail services on Mac OS X Server.

Protecting Your Network

This topic has 2 items, drawn randomly from the following objectives:

- Describe how to use Server Admin to:
 - Configure NAT.
 - Enable, configure, and read firewall logs.
 - Filter IP traffic based on originating address or destination IP port.
- Describe:
 - How firewall rules apply to specific packets.
 - The function of NAT.
 - The relationship between IP ports and services on an IP host.
 - The purpose and use of VPN, and how to interpret a VPN server log.
 - How to adjust firewall rules based on firewall log analysis.

Open Directory

This topic has 13 items, drawn randomly from the following objectives:

- Identify how to use Workgroup Manager to:
 - Configure AFP and NFS volumes for dynamic automounts.
 - Create and modify network user accounts (includes configuring passwords, imposing disk and print quotas, importing user accounts from supported file types, exporting user accounts, and creating home folders on local server volumes).
 - Set password policies, including minimum password length, and how often a password needs to change, for a user account using a password server for authentication.
 - Configure user accounts to allow Windows domain logins.
 - Configure user accounts to use home folders on the network.
 - Share a locally mounted NFS volume on Mac OS X Server with other computers over AFP.
- Describe:
 - The configuration options for Open Directory Server.
 - The Windows server roles of Mac OS X Server, and how to use Server Admin to configure Mac OS X Server as a Windows Domain Member, as a standalone Windows server, and as a Windows Primary Domain Controller.
 - The advantages and disadvantages of static and dynamic automounts.
- Describe how to:
 - Use log entries to interpret automount issues, and use tools such as `mount`, `showmount`, and `nfsstat` to troubleshoot Mac OS X issues relating to automount.
 - Make network applications available on a network AFP or NFS volume mounted in `/Network/Applications`, and configure Mac OS X workstations to automatically mount the network volume in `/Network/Library`.
 - Use Directory Access to configure a client to bind to a shared network directory.
 - Use Server Admin to configure Apple's LDAP server.
 - Troubleshoot authentication problems that occur when a user attempts to connect to a Mac OS X file server.

Client Management

This topic has 10 items, drawn randomly from the following objectives:

- Describe the resources that are made available through the Network search path.
- Describe how to use Workgroup Manager to:
 - Export user and group accounts.
 - Manage guest computers and mobile computers.
 - Disable a user account by changing the user's password or password policy, or by deleting the user's account.
 - Configure preferences for user accounts, workgroup accounts, and computer lists (including System, Application, Classic, Dock, Energy Saver, Finder, Internet, Login, Media Access, Mobile Accounts, Printing, and Universal Access preferences).
 - Control user access to removable media.
 - Assign users a custom home directory and a network home directory.

- Create a Group Folder in a subfolder of an existing share point or in a new share point.
- Configure Dock and Login preferences for a workgroup so that the group folder is visible in the Dock, and so that users can see the group volume on the Desktop.
- Impose disk quotas on user accounts.
- Automount shared workgroup volumes on a client.
- Describe how to:
 - Use Macintosh Manager to configure normal users, workgroups, workgroup administrators, Macintosh Manager administrators, and computer lists.
 - Create and configure workgroup accounts and computer accounts on a shared Directory Service domain.
 - Check a workstation out and back in to a network managed by Workgroup Manager.

NetBoot & Network Install

This topic has 5 items, drawn randomly from the following objectives:

- Describe the NetBoot startup sequence.
- Describe how to:
 - Use Network Image Utility to create NetBoot boot and install images, and store them on Mac OS X Server.
 - Use Server Settings to configure NetBoot to provide services from Mac OS X.
 - Use Server Admin to control access to NetBoot service by filtering NetBoot client connections.
 - Monitor NetBoot computers, and NetBoot activity on Mac OS X Server.
 - Configure an automated system to deploy Mac OS X and selected applications to multiple client computers using Network Install and Mac OS X Server.
 - Start a workstation from a NetBoot boot or install image over the network.

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