

OBJECTIVES/COMPETENCIES

Course Objectives	Competencies
Linux Command Line	<p>Use the Linux Command Line to perform common system administration tasks</p> <p>Determine the status of running processes</p> <p>Schedule tasks to run one time or repeat at later dates and times.</p> <p>Report on system configuration and tune performance</p> <p>Interpret and set access control lists (ACL's) to handle complex user and file permissions</p>
Server Installation and Configuration	<p>Install and Configure Centos/Red Hat Advanced Linux/Fedora Servers</p> <p>Install and Configure Ubuntu (Debian) Server</p> <p>Configure basic security settings for all systems</p> <p>Create system administration and common user accounts</p> <p>Configure network interfaces</p>
Disk Systems	<p>Characterize common file systems; ext3, ext4, NTFS, FAT,HFS</p> <p>Characterize common network file systems such as NFS, iSCSI, and CIFS</p> <p>Mounting and unmounting file systems</p> <p>Configure, mount and unmount encrypted file systems</p>

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Backup	<ul style="list-style-type: none">Enumerate the requirements for system and application backupsEnumerate common backup strategies; full, Incremental, differential, and snapshotsAssess the backup priorities, set the schedule, and evaluate the performancePerform on system backups, encrypted backups, and move off siteExplain the use of tape and other archival media to satisfy regulatory or audit requirements
Security	<ul style="list-style-type: none">Patch and update the serverInstall and configure logwatchSet minimum password requirementsConfigure encryption keys and certificatesConfigure the server firewallAssess the server's basic security
Web Server	<ul style="list-style-type: none">Install and configure the Apache web serverInstall and configure the Nginx web serverOpen and close http and https network portsSet security permissions on web filesInstall and configure phpExplain and configure virtual hosts

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Database	<ul style="list-style-type: none">Use common SQL statementsInstall and configure MySQL/MariaDBInstall and configure PostgreSQLBackup and restore server databasesConfigure automatic database backups
Web-Based Applications	<ul style="list-style-type: none">Enumerate the advantages of web-based & mobile applications, thin clients, and cloud hostingInstall and configure a common CMS such as Wordpress, Joomla, or DrupalImplement a site security plan with respect to file permissions, user permissions, automated backups, and updates
SELinux	<ul style="list-style-type: none">Characterize core SELinux principlesEnable/disable SELinux enforcementSELinux file labeling and contexts
Containers	<ul style="list-style-type: none">Enumerate the advantages of running Docker containersEnumerate core DevOps principlesInstall and configure dockerInstall and configure common Docker imagesConnect Docker images to private and public network ports

