

# Linux Pro (V6)

## Competency Assessment Objectives

### System Administration and Configuration

#### Use command-line utilities

- 1.1.1 Get help for Linux command-line utilities
- 1.1.2 View, search, and edit the contents of text files

#### Configure and use Linux shell environments

- 1.2.1 Manage environment variables
- 1.2.2 View available shells

#### Manage system startup and shutdown

- 1.3.1 Manage bootloader configurations
- 1.3.2 View and manage runlevels or boot targets for system services
- 1.3.3 Set the default system runlevel or boot target
- 1.3.4 Shutdown and restart the system

#### Manage system processes

- 1.4.1 Start, stop, and restart system services
- 1.4.2 Monitor and manage running processes
- 1.4.3 Manage kernel modules
- 1.4.4 Configure scheduled tasks

#### Use package management

- 1.5.1 Install, remove, and update packages with the RPM command
- 1.5.2 Install, remove, and update RPM packages with DNF
- 1.5.3 Install, upgrade, and update Ubuntu software packages with apt

# Storage and File System Management

## Manage storage devices

- 2.1.1 Create and manage disk partitions
- 2.1.2 Create and manage disk file systems
- 2.1.3 Mount and unmount devices in the file system
- 2.1.4 Create and manage swap partitions
- 2.1.5 Configure Logical Volume management

## Manage the file system

- 2.2.1 View information about directories and files in the file system
- 2.2.2 Use the Linux Filesystem Hierarchy Standard
- 2.2.3 Create, copy, move, and delete directories in the file system
- 2.2.4 Create, copy, move, and delete files in the file system
- 2.2.5 Create and manage hard and symbolic link files
- 2.2.6 View disk space usage statistics
- 2.2.7 Implement disk quotas
- 2.2.8 Create and manage archives and backups

# Networking

## Configure networking

- 3.1.1 Find the IP address or DNS of a host
- 3.1.2 Enable or disable network interfaces
- 3.1.3 Configure IP addresses
- 3.1.4 Troubleshoot an IP configuration

# Security and Access Control

## **Manage users and groups**

- 4.1.1 Create and manage groups
- 4.1.2 Create and manage user accounts
- 4.1.3 Manage user passwords
- 4.1.4 Manage user access
- 4.1.5 Switch users for access and elevated privilege

## **Manage user and group access**

- 4.2.1 Manage directory and file ownership for users and groups
- 4.2.2 Manage directory and file permissions for users and groups
- 4.2.3 Configure umask values
- 4.2.4 Use special permissions

## **Monitor and manage system access**

- 4.3.1 Monitor logging
- 4.3.2 Manage host firewall
- 4.3.3 Manage remote connections