Oracle Linux Fundamentals Exam
Study Guide

Manish Kapur
WWA&C Partner Enablement
Objective & Audience

Objective
Help you prepare to take Oracle Linux Fundamentals (1Z0-409) Exam by providing pointers to resources that you can use in your preparation.

Targeted Audience

- Implementation Consultants
- Strong foundation and expertise in implementing Oracle Linux.
- Candidates must also have high level of proficiency with Oracle Linux including system administration, networking and security.
Exam Objectives

The exam objectives are defined by learner or practitioner level of knowledge:

- **Learner-level**: questions require the candidate to recall information to determine the correct answer.
  
  Example: Define the term network.

- **Practitioner-level**: questions require the candidate to derive the correct answer from the application of their knowledge, which can only be attained by extensive experience with the product.
  
  Example: The client requests xyz functionality, would you recommend a, b or c?
Training Options

For each exam topic there have been identified alternative training options that are available at Oracle. The training options are divided into three categories:

• **Boot Camps**
  The Boot Camps are designed as a "jump start" training to enhance your skills by providing role-based training on industry-leading Oracle solutions and services. The boot camps are built as concise, intensive, and real-time training to give partners a competitive advantage as they prepare to build powerful solutions for their own customer base. Partners can choose to attend these boot camps in class or in a live virtual class format to maximize the effectiveness and the time allocated to training.

• **Instructor-Led Training (delivered by Oracle University)**
  Partners can take any publicly-scheduled Oracle University courses at steep discounts. Benefit from hands on experience to gain real working skill and work toward Oracle certifications.

• **Online Training**
  Oracle Partners are entitled free access to the Oracle Knowledge Center (OUKC), a vast library of recorded product courses. New courses are regularly added to the library, providing partners with the latest information and training to master new products or to increase proficiency on the new releases.

  **OPN Competency Center** is an intelligent training tool that allows partners to manage their Oracle training with role-focused guided learning paths and measure their achievement toward Specialization:
Topic 1: Oracle Linux Fundamentals

Objectives

• What is Linux?
• Identify the origins of UNIX and how Linux is related to UNIX
• Describe the major goals of the Free Software Foundation and the GNU project
• List several standards that apply to Linux
• Describe the basic mechanisms that make UNIX so powerful

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials

• Online Training
  – Oracle Linux - Definitions, Market Environment and Product Overview
Topic 2: Multi User Concepts

Objectives

• Describe the differences between the administrative (root) user and normal user accounts and explain when each should be used
• Log into the system
• Switch between accounts using the 'su' command
• Use basic commands to gather information about the system
• Use system help facilities to learn about commands and their options

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 3: The Linux File System

Objectives

• List the standard system directories and explain what type of files are contained in each
• Navigate the file system
• Explain standard POSIX file permissions including special permissions such as the SUID, SGID and Sticky bits on both files and directories
• Change permissions of files
• Explain how file ownership (user: group) relates to file permissions
• Change ownership of files
• Describe how the User Private Group (UPG) scheme works and the problem it solves

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 4: Manipulating Files

Objectives

• Be able to create, delete, copy, move and rename files and directories
• Describe the various types of files that can be stored on UNIX and Linux file systems
• Explain hard links and symbolic links, their pros & cons and when & where they can or cannot be used
• Identify the type of content of any file
• View the contents of both text-based and binary files
• Search the file system for files and directories with specific properties

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 5: Text Processing

Objectives

• Search inside of files for specified information
• Perform file editing, sorting, cutting & merging text files from the command line

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 6: Shell Basics

Objectives

• Understand the varied roles the command shell plays in everyday UNIX/Linux usage
• Pipe several commands together to perform more complex and useful processing
• Use file redirection on the command line
• Create and use shell and environment variables to configure and control the operation of the system, the command shell and programs
• Use and escape special characters when they are used on the command line

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 7: Regular Expressions

Objectives

• Construct regular expressions for matching text patterns

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 8: Archiving and Compression

Objectives

• Use tar & cpio to create archives and extract files from them
• Compress and decompress files using the UNIX compress, GNU gzip, bzip2 and zip formats

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 9: Text Editing

Objectives

• Use simple text editors like pico and nano
• Perform basic and intermediate text editing functions efficiently with vi & Vim
• Perform basic and intermediate text editing functions with GNU Emacs

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 10: Command Shells

Objectives

• List the history and relationships of the various popular shell implementations available on UNIX and Linux systems
• Identify and switch between the various shell implementations
• Customize the command prompt on Bourne and BASH shells
• Use command line history, command completion, aliases and command line editing
• Customize command shell operation system wide and for individual users

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 11: Introduction to Shell Scripting

Objectives

• Process arguments passed into a shell script
• Get input from the user of a shell script
• Generate formatted output from a shell script
• Perform tasks conditionally using if, case and while loops in a shell script
• Perform repeated actions over a set of values with for loops on the command line and within shell scripts
• Do math in a shell script

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 12: Process Management and Job Control

Objectives

- Describe the differences between process and threads
- Find and control running programs with ps, top, kill, and nice
- Use the jobs, fg and bg commands to view and access several tasks at once on a single shell
- Use the screen command to run several programs and disconnect from running programs on remote systems

Training Options

- Instructor-Led Training
  - Oracle Linux System Administration
  - UNIX and Linux Essentials
Topic 13: Messaging

Objectives

- Send local messages with the write and wall commands
- Use talk and ytalk to chat with other users
- Send and read email with the mail and pine commands

Training Options

- Instructor-Led Training
  - Oracle Linux System Administration
  - UNIX and Linux Essentials
Topic 14: The Secure Shell

Objectives

• Configure the ssh client and ss hd server programs securely
• Establish secure, remote connections to other systems
• Use SSH’s key-based authentication

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 15: Managing Software

Objectives

- Find and download software via FTP & HTTP with text & graphical client programs like wget, lftp, links, Konqueror and Mozilla Firefox
- Install binary programs in RPM packages
- List software already installed on the system with RPM
- Compile and install software from source releases
- Compile and install software from a source RPM (SRPM or .src.rpm) package

Training Options

- Instructor-Led Training
  - Oracle Linux System Administration
  - UNIX and Linux Essentials
Topic 16: Printing

Objectives

• Use CUPS to connect to available local and network printers
• Use various commands to process and convert files in preparation for printing
• Send jobs to a printer
• Monitor and remove print jobs

Training Options

• Instructor-Led Training
  – Oracle Linux System Administration
  – UNIX and Linux Essentials
Topic 17: Mounting FileSystems and Managing Removable Media

Objectives

- Use the mount command
- Access NFS and SMB filesystems over the network
- Use autofs for on-demand mounting of filesystems without root privileges

Training Options

- Instructor-Led Training
  - Oracle Linux System Administration
  - UNIX and Linux Essentials
Topic 18: X Window System

Objectives

- Start the graphical environment manually
- Select different desktop environments
- Launch graphical applications
- Use Linux as an X terminal
- Customize the graphical environment and auto-start applications at login and X startup
- Securely tunnel remote graphical applications through SSH

Training Options

- Instructor-Led Training
  - Oracle Linux System Administration
  - UNIX and Linux Essentials
Exam Registration

• How to register for the exam?
  You can register for all Oracle certification exams with Pearson VUE. Before a registration can be submitted, a Pearson VUE profile must be created using your Company ID. Your Company ID can be obtained by contacting your local Oracle Partner Business Center or by signing in to your OPN account. Your Company ID is located in the section on the right under "Company information".

  Please follow these instructions in order to properly set-up your Pearson VUE account for the first time.

• Have you completed an Oracle Certification Exam in the past?
  Due to systems enhancements, each partner who has completed an Oracle Certification Exam will need to update their Pearson VUE profile in order to receive credit and for those records to appear in the OPN Competency Center.

• How to get full recognition as Certified Implementation Specialist?
  To get full recognition as a Certified Implementation Specialist you need to:
  A. Update your Pearson VUE profile with your Company ID
  B. Activate your Certview Account

  Please follow these instructions and your records will be properly recorded.