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Red Hat System Administration II – Solution, Skill Labs

Course Specifications

Course Number: ACI76-058SL_rev1.0
Lab Length: Approximately 20 hours

Red Hat 124 - Guided Exercise Sandbox

Introduction
Overview

This sandbox environment has the needed Virtual Machine to perform the Guided Exercises for the Red Hat System Administration I. You will find the Guided Exercises and step by step directions in the e-book for the course.

Red Hat Solution - Ch 02 - Accessing the Command Line

Introduction

Objective

In this lab, you will use the Bash shell to execute commands.

Overview

- Successfully run simple programs using the Bash shell command line.
- Execute commands used to identify file types and display parts of text files.
- Practice using some Bash command history "shortcuts" to more efficiently repeat commands or parts of commands.

Red Hat Solution - Ch 03 - Managing Files from the Command Line

Introduction
Objective

In this lab, you will efficiently create, move, and remove files and directories by using the shell and a variety of file name matching techniques.

Overview

You should be able to:

- Use wildcards to locate and manipulate files.

Red Hat Solution - Ch 04 - Getting Help in Red Hat Enterprise Linux

Introduction
Objective

In this lab, you will look up information to help you complete tasks in man pages and GNU Info documents.

Overview

You should be able to:

- Locate relevant commands by searching man pages and Info nodes.
- Learn new options for commonly used documentation commands.
- Use appropriate tools to view and print documentation and other non-text formatted files.

Red Hat Solution - Ch 05 - Creating, Viewing, and Editing Text Files

Introduction
Objective

In this lab you will edit a text file, using the vim editor.

Overview

You should be able to:

- Use Vim to perform file editing.
- Use visual mode to simplify file editing

Red Hat Solution - Ch 06 - Managing Local Users and Groups

Introduction
Objective

In this lab you will set a default local password policy, create a supplementary group for three users, allow that group to use sudo to run commands as root, and modify the password policy for one user.

Overview

You should be able to:

- Set a default password aging policy of the local user's password.
- Create a group and use the group as a supplementary group for new users.
- Create three new users with the new group as their supplementary group.
- Configure the group members of the supplementary group to run any command as any user using sudo.
- Set a user-specific password aging policy.

Red Hat Solution - Ch 07 - Controlling Access to Files

Introduction
Objective

In this lab, you will configure permissions on files and set up a directory that users in a particular group can use to conveniently share files on the local file system.

Overview

You should be able to:

- Create a directory where users can work collaboratively on files.
- Create files that are automatically assigned group ownership.
- Create files that are not accessible outside of the group.

Red Hat Solution - Ch 08 - Monitoring and Managing Linux Processes

Introduction
Objective

In this lab, you will locate and manage processes that are using the most resources on a system.

Overview

You should be able to manage processes using top as a process management tool.

Red Hat Solution - Ch 09 - Controlling Services and Daemons

Introduction
Objective

In this lab, you will configure several services to be enabled or disabled, running or stopped, based on a specification that is provided to you.

Overview

You should be able to enable, disable, start, and stop services.

Red Hat Solution - Ch 10 - Configuring and Securing SSH

Introduction
Objective

In this lab, you will set up key-based authentication for users, and disable direct login as root and password authentication for all users for the OpenSSH service on one of your servers.

Overview

You should be able to:

- Authenticate using SSH keys.

- Prevent users from directly logging in as root over ssh.
- Prevent users from logging in to the system using SSH password-based authentication.

Red Hat Solution - Ch 11 - Analyzing and Storing Logs

Introduction
Objective

In this lab, you will change the time zone on an existing server and configure a new log file for all events related to authentication failures.

Overview

You should be able to:

- Update the time zone on an existing server.
- Configure a new log file to store all messages related to authentication failures.

Red Hat Solution - Ch 12 - Managing Networking

Introduction
Objective

In this lab, you will configure networking settings on a Red Hat Enterprise Linux server.

Overview

You should be able to configure two static IPv4 addresses for the primary network interface.

Red Hat Solution - Ch 13 - Archiving and Transferring Files

Introduction
Objective

In this lab, you will use tar, rsync, and scp to archive and back up the contents of directories.

Overview

You should be able to:

- Synchronize a remote directory to a local directory.
- Create an archive of the contents of a synchronized directory.
- Securely copy an archive to a remote host.
- Extract an archive.

Red Hat Solution - Ch 14 - Installing and Updating Software Packages

Introduction
Objective

In this lab, you will manage software repositories and module streams, and install and upgrade packages from those repositories and streams.

Overview

You should be able to:

- Manage software repositories and module streams.
- Install and upgrade packages from repositories and streams.
- Install an RPM package.

Red Hat Solution - Ch 15 - Accessing Linux File Systems

Introduction
Objective

In this lab, you will mount a local file system and locate specific files on that file system.

Overview

You should be able to:

- Mount a file system.
- Generate a disk usage report.
- Search files in the local file system.

Red Hat Solution - Managing Files from the Command Line – 2

Introduction
Objective

In this review, you will manage files, redirect a specific set of lines from a text file to another file and edit the text files.

Overview

You should be able to:

- Manage files from the command line.
- Display a certain number of lines from text files and redirect the output to another file.
- Edit text files.

Red Hat Solution - Managing Users and Groups, Permissions and Processes

Introduction
Objective

In this review, you will manage user and group accounts, set permissions on files and directories, and manage processes.

Overview

You should be able to:

- Manage users and groups.
- Set permissions on files and directories.
- Remove processes that are consuming too much CPU.

Red Hat Solution - Configuring and Managing a Server

Introduction
Objective

In this review, you will configure, secure, and use SSH service to access remote machine, configure rsyslog service, archive local files, transfer local files to remote machine, and manage packages using yum.

Overview

You should be able to:

- Create a new SSH key pair.
- Disable SSH logins as root user.
- Disable SSH logins using password.
- Update the time zone of a server.
- Install packages and package modules using yum.
- Archive local files for backup.
- Transfer local files to remote machine.

Red Hat Solution - Managing Networks

Introduction
Objective

In this review, you will configure and test network connectivity.

Overview

You should be able to:

- Configure the network settings.

- Test network connectivity.
- Set a static host name for the system.
- Use locally resolvable canonical host names to connect to systems.

Red Hat Solution - Mounting Filesystems and Finding Files

Introduction
Objective

In this review, you will mount a file system and locate files based on different criteria.

Overview

You should be able to:

- Mount an existing file system.
- Find files on the basis of the file name, permissions and size.