RHCSA

Lab environment:

- Centos (Red Hat and Cenots are Binary compatibility)

What we'll be covered?

- Understand and use essential tools for handling files, directories, command-line environments, and documentation
- Operate running systems, including booting into different run levels, identifying processes, starting and stopping virtual machines, and controlling services
- Configure local storage using partitions and logical volumes
- Create and configure file systems and file system attributes, such as permissions, encryption, access control lists, and network file systems
- Deploy, configure, and maintain systems, including software installation, update, and core services
- Manage users and groups, including use of a centralized directory for authentication
- Manage security, including basic firewall and SELinux configuration

You can fine more Details about RHCSA course in:

https://www.redhat.com/en/services/training/ex200-red-hat-certified-system-administrator-rhcsa-exam

Course content:

1. Getting Started
    - About Centos
    - System Requirements
    - Finishing Installation
2. Getting Started and Fundamentals
    - Logging in and Starting a Terminal
    - Basic Shell Commands
    - User and Group Files
    - Creating Users
    - Modifying Users
    - Deleting Users
    - Password Policy
    - Changing Passwords
    - Creating Groups
    - Group Membership
    - Switching Users
    - Using Sudo
    - Getting Help

3. Getting Familiar with The Shell
    - Redirection
    - Piping
    - Editing
    - Regular Expressions
    - Using The Stream Editor
    - Using Grep
    - File Management
    - Directories
    - Permissions
    - Using Links
    - Archiving and Compressing
    - Other Utilities
    - Shell History
    - Shell Tricks
    - Locating Files
    - Extending Ext4 Partitions
4. System Management
    - Booting and Rebooting
    - Runlevels and Their Uses
    - Booting into Different Runlevels
    - Single User Mode
    - Log Files
    - Syslog
    - Process Management
    - Network Services
    - Network Service Management
    - Network Service Management with Systemd
    - Network Service Management with Systemctl
    - Package Management
    - Deleting and Listing Packages
    - Package Details - Location and RPM

5. Storage Management
    - Partitions
    - File Systems
    - Volume Management – Physical
    - Volume Management – Logical
    - Mounting Remote Volumes
    - Extending Logical Volumes
    - Using LUKS for Encryption
    - Using SetGID
    - Access Control Lists – ACLs
    - Permissions Problems

- Adding Partitions and Volumes
- Using Swap Space
- Booting A Disk Using UUID

6. Server Management
    - Configuring Networking
    - Configuring DNS Resolution
    - Using Time Services
    - Using Cron to Setup Jobs
    - Installing HTTP
    - Installing FTP
    - Configuring Services
    - Setting Services to Run at Startup
    - Using LDAP Server for User Management
    - Updating Packages
    - Red Hat Repositories
    - Using Kickstart to Deploy Systems
    - Manage and Update Kernel
    - Manage The Boot Loader
    - Manage The Boot Loader with Grub2
    - Connecting to Remote Systems Using SSH
    - Using Keys for Logging into Systems Over SSH
    - Kernel Configuration Using Sysctl
7. Virtual Machines
    - Preparing for Using Virtual Machines
    - Installing RHEL as A Virtual Guest
    - Launch Virtual Machines at Boot
    - Connecting to A Virtual Machine Console
8. Security
    - IPTables
    - Creating Rules Using IPTables
    - Using System-Config-Firewall
    - SELinux
    - Configuring SELinux Mode
    - File Contexts
    - Process Contexts
    - Restoring Default Contexts
    - SELinux Policy Violations
    - Using Boolean for SELinux Settings
    - Using Firewall
9. Wrapping up
    - Review
    - Next Step