I. Accessing the Command Line:
- Accessing the Command Line Using the Local Console
- Practice: Local Console Access Terms
- Accessing the Command Line Using the Desktop
- Practice: The GNOME 3 Desktop Environment
- Executing Commands Using the Bash Shell
- Practice: Bash Commands and keyboard Shortcuts
- Lab: Accessing the Command Line

II. Managing File from the Command Line:
- The Linux file system Hierarchy
- Practice: Local Console Access Terms
- Accessing the Command Line using the Desktop
- Practice: Locating files and Directories
- Managing Files using Command-Line Tolls
- Practice: Command-Line File Management
- Matching File Name Expansion
- Lab: Managing Files with shell Expansion

III. Getting help in Red Hat Enterprise Linux:
- Reading Documentation using man Command
- Practice: Using the man Command
- Reading Documentation using pinfo command
- Practice: using the pinfo command
- Reading Documentation in /usr/share/doc
- Practice: Viewing Package Documentation
- Get Help from Red Hat
- Practice: Creating and Viewing an SOS Report
- Lab: Viewing and Printing Help Documentation.

IV. Creating, Viewing, and Editing Text Files:
- Redirecting Output to file or program
- Practice: I/O Redirection and Pipelines
- Editing Text files from the shell prompt
- Practice: Editing files with Vim
- Editing Text Files with a Graphical Editor
- Practice: Copying text Between Windows
- Lab: Creating, Viewing and Editing Text Files

V. Managing local Linux Users & Groups:
- User & Groups
- Practice: User and Group Concepts
- Gaining Super user Access
- Practice: Running Commands as root
- Managing Local user Accounts
- Practice: Creating users using Command-line Tools
- Managing Local Group Accounts
- Practice: Managing Groups Using Command-line Tools
- Managing User Passwords
- Practice: Managing User Password Aging
- Lab: Managing Local User and Groups.

VI. Controlling Access to files with Linux File system Permissions:
- Linux File System Permissions
- Practice: Interpreting File and Directory Permission
- Managing File system permissions from the command line
- Practice: Managing File Security from the Command Line
- Managing Default permissions and file Access
- Practice: Controlling New File Permissions and ownership
- Lab: Controlling Access to files with Linux File System Permissions.
-

VII. **Monitoring and Managing Linux Processes:**
- o Processes
- o Practice: Processes
- o Controlling Jobs
- o Practice: Background and Foreground Processes
- o Killing Processes
- o Practice: Killing Processes
- o Monitoring Process Activity
- o Practice: Monitoring Process Activity
- o Lab: Monitoring and Managing Linux processes.

VIII. **Controlling Services and Daemons:**
- o Identifying Automatically Started System Processes
- o Practice: Identify the status of systemd Units
- o Controlling System Service
- o Practice: Using systemct1 to manage service
- o Lab: Controlling Services and Daemons

IX. **Configuring and Securing Open SSH Service:**
- o Accessing the Remote Command Line with SSH
- o Practice: Accessing the Remote Command Line
- o Configuring SSH Key-based Authentication
- o Practice: Using SSH Key-based Authentication
- o Customizing SSH Service Configuration
- o Practice: Restricting SSH Logins
- o Lab: Configuring and Securing Open SSH Service

X. **Analyzing and Storing Logs:**
- o System Log Architecture
- o Practice: System Logging Components
- o Reviewing Syslog Files
- o Practice: Finding Log Entries
- o Reviewing systemd Journal Entries
- o Practice: Finding Events with Journalctl
- o Preserving the systemd Journal
- o Practice: Configure a persistent systemd Journal
- o Maintaining accurate time
- o Practice: Adjusting system Time
- o Lab: Analyzing and Storing Logs.

XI. **Managing Red Hat Enterprise Linux Networking:**
- o Networking Concepts
- o Practice: Networking Concepts
- o Validating Network Configuration
- o Configuring Networking with **nmcli**
- o Practice: Configuring Networking with **nmcli**
- o Editing Network Configuration Files
- o Practice: Editing Network Configuration Files
- o Configuring Host name and Name Resolution
- o Practice: Configuring Host name and Name Resolution
- o Lab: Managing Red Hat Enterprise Linux Networking

XII. **Archiving and Copying Files between Systems:**
- o Managing Compressed tar Archives
- o Practice: Backing Up and Restoring Files From a tar Archive
- o Copying Files between Systems Securely
- o Practice: Copying Files over the Network with **scp**
- o Synchronizing files Between Systems Securely
- o Practice: Synchronizing Two Directories securely with **rsync**
- o Lab: Archiving and Copying Files between Systems

XIII. **Installing and Updating Software Packages:**
- o Attaching Systems to Subscription for Software Updates
- o Practice: Red Hat Subscription Management
- o RPM Software Packages and Yum

2/1, Block A, Lalmatia, Dhaka -1207. Bangladesh.
Please call : +88 02-8100699, +88 01756112211, +88 01730994300, +88 01730994304

We Accept
MasterCard VISA

- o Practice RPM Software Packages
- o Managing Software Update with **yum**
- o Practice: Installing and Updating Software with **Yum**
- o Enabling **Yum** software Repositories
- o Practice: Enabling software Repositories
- o Examining RPM Package files
- o Practice: Working with RPM package Files
- o Lab: Installing and Updating Software Packages

XIV. **Accessing Linux File Systems:**
- o Identifying file systems and Devices
- o Practice: Identifying file systems and Devices
- o Mounting and Unmounting File Systems
- o Making Links between Files
- o Practice: Making Links between Files
- o Locating Files on the System
- o Practice: Locating Files on the System
- o Lab: Accessing Linux File Systems

XV. **Using Virtualized Systems:**
- o Managing a Local Virtualization Host
- o Practice: Managing a Local Virtualization Host
- o Installing a new Virtual Machine
- o Practice: Installing a new Virtual Machine
- o Chapter Test: Using Virtualized Systems

XVI. **Comprehensive Review:**
- o Red Hat System Administration I Comprehensive Review
- o Lab: Comprehensive Review

Red Hat System Administration II

I. **Automating Installation with Kickstart**
- o Defining the Anaconda Kickstart System
- o Practice: Kickstart File Syntax and Modification
- o Deploying a New Virtual System with Kickstart
- o Practice: Installing a System Using Kickstart
- o Chapter Test: Automating Installation with Kickstart

II. **Using Regular Expression with grep**
- o Regular Expressions Fundamentals
- o Practice: Match the Regular Expression
- o Matching Test with grep
- o Practice: Using grep with Logs
- o Lab: Using Regular Expression with grep

III. **Creating and Editing Test Files with vim**
- o The vim Text Editor
- o Practice: vim Modes
- o Basic vim Workflow
- o Practice: Basic vim Workflow
- o Editing with vim
- o Practice: Edit a File with vim
- o Lab: Edit a System File with vim

IV. **Scheduling Future Linux Tasks**
- o Scheduling One-Time Tasks with at
- o Practice: Scheduling One-Time Tasks with at
- o Scheduling Recurring Jobs with cron
- o Practice: Scheduling Recurring Jobs with cron
- o Scheduling System cron jobs
- o Managing Temporary Files
- o Practice: Managing Temporary Files
- o Chapter Test: Scheduling Future Linux Tasks

V. **Managing Priority of Linux Processes**
- Process Priority and "nice" Concepts
- Practice: Process Priority and "nice" Concepts
- Using nice and renice to Influence Process Priority
- Practice: Discovering Process Priorities
- Lab: Managing Priority of Linux Processes

VI. **Controlling Access to Files with Access Control Lists (ACLs)**
- POSIX Access Control Lists (ACLs)
- Practice: Interpret ACLs
- Securing Files with ACLs
- Practice: Using ACLs to Grant and Limit Access
- Lab: Controlling Access to Files with Access Control Lists (ACLs)

VII. **Managing SELinux Security**
- Enabling and Monitoring Security Enhanced Linux (SELinux)
- Practice: SELinux Concepts
- Changing SELinux Modes
- Practice: Changing SELinux Modes
- Changing SELinux Contexts
- Practice: Changing SELinux Contexts
- Changing SELinux Booleans
- Practice: Changing SELinux Booleans
- Troubleshooting SELinux
- Practice: Troubleshooting SELinux
- Lab: Managing SELinux Security

VIII. **Connecting to Networks-defined Users and Groups**
- Using Identity Management Services
- Practice: Connecting to Central LDAP and Kerberos Server
- Lab: Connecting to Network-defined Users and Groups

IX. **Adding Disks, Partitions and Files Systems to a Linux System**
- Adding Disks, Partitions and Persistent Mounts
- Practice: Adding Disks, Partitions and Persistent Mounts
- Managing Swap Space
- Practice: Adding and Enabling Swap Space
- Lab: Adding Disks, Partitions and Files Systems to a Linux System

X. **Managing Logical Volume Management (LVM) Storage**
- Logical Volume Management Concept
- Practice: Logical Volume Management Concept
- Managing Logical Volume
- Practice: Adding a Logical Volume
- Extending a Logical Volume
- Practice: Extending a Logical Volume
- Lab: Managing Logical Volume Management (LVM) Storage

XI. **Accessing Network Storage with Network File System (NFS)**
- Mounting Network Storage with NFS
- Practice: Mounting and Un-mounting NFS
- Auto mounting Network Storage with NFS
- Practice: Auto mounting NFS
- Lab: Accessing Network Storage with Network File System (NFS)

XII. **Accessing Network Storage with SMB**
- Accessing Network Storage with SMB
- Practice: Mounting a SMB File Sstem
- Lab: Accessing Network Storage with SMB

XIII. **Controlling and Troubleshooting the Red Ta Enterprise Linux Boot Process**
- The Red Hat Enterprise Linux Boot Process
- Practice: Selecting a Boot Target
- Repairing Common Boot Issues
- Practice: Resetting a Lost root Password
- File System Issues at Boot
- Practice: Repairing Boot Problems
- Repairing Boot Loader Issues

- o Practice: Repairing a Boot Loader Problems
- o Lab: Controlling and Troubleshooting the Red Hat Enterprise Linux Boot Process

XIV. Limiting Network Communication with firewalled
- o Limiting Network Communication
- o Practice: Limiting Network Communication
- o Lab: Limiting Network Communication

XV. Comprehensive Review of System Administration 2
- o Red Hat System Administration 2 Comprehensive Review
- o Lab: Comprehensive Review of System Administration 2

Red Hat System Administration III

I. Controlling Services and Daemons
- o Controlling Services with system ctl
- o Practice: Using Systemctl to Manage Services
- o Controlling: the Boot Process
- o Practice: Selecting a Boot Target
- o Lab: Controlling Services and Daemons

II. Managing IPv6 Networking
- o Review of IPv4 Networking Configuration
- o Practice: Configuration IPv4 Networking
- o IPv6 Networking Concepts
- o Practice: Interpreting IPv6 Addresses
- o IPv6 Networking Configuration
- o Practice: Configuring IPv6 Networking
- o Lab: Managing IPv6 Networking

III. Configuring Link Aggregation and Bridging
- o Configuring Network Teaming
- o Practice: Configuring Network Teaming
- o Managing Network Teaming
- o Practice: Managing Network Teaming
- o Configuring Software Bridges
- o Practice: Configuring Software Bridges
- o Lab: Configuring Link Aggregation and Bridging

IV. Network Port Security
- o Managing Firewalled
- o Practice: Configuring a Firewall
- o Managing Rich Rules
- o Practice: Writing Custom Rules
- o Masquerading and Port Forwarding
- o Practice: Forwarding a Port
- o Managing SELinux Port Labeling
- o Lab: Network Port Security

V. Managing DNS for Servers
- o DNS Concepts
- o Practice: DNS Resource Record
- o Configuring a Caching Nameserver
- o Practice: Configuring unbound as Caching Nameserver
- o DNS Troubleshooting
- o Practice: Troubleshooting
- o Lab: Managing DNS Servers

VI. Configuring Email Transmission
- o Configuring Send-only Email Service
- o Practice: Configuring Send-only Email Service
- o Lab: Configuring Email Transmission

VII. Providing Remote Block Storage
- o iSCSL Concepts
- o Practice: iSCSL Concepts
- o Providing iSCSL Targets
- o Practice: Providing iSCSL Targets
- o Accessing iSCSL Storage
- o Practice: Accessing iSCSL Storage
- o Lab: Providing Block-based Storage

VIII. Providing File-based Storage
- o Exporting NFS File Systems
- o Practice: Exporting NFS File Systems
- o Protecting NFS Exports
- o Practice: Protecting NFS Exports
- o Providing SMB File Shares
- o Practice: Providing SMB File Shares
- o Performing a Multiuser SMB Mount
- o Practice: Performing a Multiuser SMB Mount
- o Lab: Providing File-based Storage

IX. Configuring MariaDB Databases
- o Installing MariaDB
- o Practice: Installing MariaDB
- o Working with MariaDB Databases
- o Practice: MariaDB Commands
- o Managing Database Users and Access Rights
- o Practice: Managing Users
- o Creating and Restoring MariaDB Backups
- o Practice: Restoring a MariaDB Database from Backup
- o Lab: Configuring MariaDB Databases

X. Providing Apache HTTPD Web Service
- o Configuring Apache HTTPD
- o Practice: Configuring Web Server
- o Configuring and Troubleshooting Virtual Hosts
- o Practice: Configuring Virtual Hosts
- o Configuring HTTPS
- o Practice: Configuring a TLS-enabled Virtual Host
- o Interpreting Dynamic Web Content
- o Practice: Configuring a Web Application
- o Lab: Providing Apache HTTPD Web Service

XI. Writing Bash Scripts
- o Bash Shell Scripting Basics
- o Practice: Writing Bash Scripts
- o Lab: Writing Bash Scripts

XII. Bash Conditionals and Control Structures
- o Enhancing Bash Shell Scripts with Conditional and Control Structures
- o Practice: Enhancing Bash Shell Scripts with Conditional and Control Structures
- o Lab: Bash Conditionals and Control Structures

XIII. Configuring the Shell Environment
- o Changing the Shell Environment
- o Practice: Working with Login and Non-Login Shells
- o Lab: Configuring the Shell Environment

XIV. Linux Containers and Docker
- o Introduction to Linux Containers
- o Using Docker

XV. Comprehensive Review
- o Red Hat System Administration 3 Comprehensive Review
- o Lab: Comprehensive Review of System Administration 3