Red Hat Certification Course.

RHCSA & RHCE

Welcome,

Thanks for showing interest in RSTForum for pursuing Red Hat Linux Certification Track. We are pioneers in ICT and Software professional Trainings and offer value added courses for Cisco, Microsoft, Red Hat, EC-Council, ISACA, Oracle, AWS, and many other Vendors. All our professional courses are conducted by Industry acclaimed certified professionals.

This course is designed for anyone seeking RHCSA and RHCSE (RH124, RH134, RH255) certification and gives candidates a broad range of fundamental knowledge for all IT careers. This course provides in-depth knowledge for professionals involved in deploying, implementing, operating, and optimizing Linux Server including advanced feature like automation and programmability using Ansible. The Red Hat Linux covers a breadth of topics like Linux Server deployment, Server hardening, Server networking, Automation and programmability. Red Hat Linux is a lab-intensive course and objectives are accomplished mainly through hands on learning. This is a lab-intensive course and objectives are accomplished through hands on learning.

This customized course will provide candidates with extensive knowledge to accomplish their day-to-day jobs. The key to success is based on the program's objectives as follows:

- Course contents are based on course outlines defined by Red Hat.
- Dedicated Monitoring to evaluate and report candidate's progress.
- Extensive hands-on lab exercises
- Industry acclaimed, experienced and certified instructors.

Pricing for Red Hat Linux course:

- RHCSA & RHCE: Rs. 18,000/- per candidate at RSTForum Premises or online.

Please contact us for any further query and looking forward for your enrollment to this course.

Regards,
RSTForum
www.rstforum.net
Contact: Mumbai: 9167224466.
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Proposal

03 Introduction, Highlights and Schedules.

04 Course Outline and Course Objective.

05 Course Content and LAB Topics.

15 General Terms & Conditions.

16 Costing.

Introduction:

This 80hrs (Lectures + hands-on Lab) Red Hat Linux training is designed for anyone seeking RHCSA and RHCSE (RH124, RH134, RH255) certification and gives you a broad range of fundamental knowledge for all IT careers. This course provides in-depth knowledge for professionals involved in deploying, implementing, operating, and optimizing Linux Server including advanced feature like automation and programmability using Ansible. The Red Hat Linux covers a breadth of topics like Linux Server deployment, Server hardening, Server networking, Automation and programmability. Red Hat Linux is a lab-intensive course and objectives are accomplished mainly through hands on learning.

The key to a high success rate is based on the program's objectives as follows:

- Course contents are based on Red Hat course outlines.
- Dedicated Monitoring to evaluate and report candidate's progress.
- Extensive hands-on lab exercises.
- Industry acclaimed, experienced and certified instructors.

Highlights:

- Project manager can be assigned to track candidate's performance.
- Curriculum based on course outlines defined by Red Hat.
- This Instructor-led classroom course is designed with an aim to build theoretical knowledge supplemented by ample hands-on lab exercises.
- Facility of Lab on cloud available.
- Courseware includes reference material to maximize learning.
- Assignments and tests to ensure concept absorption.
- Courseware includes reference material to maximize learning.
- Repeating of lectures allowed (On approval basis)
- Candidates can attend lectures online.

Schedules:

- Daily Morning: 1) 8-10:30am; 2) 10-12:30am
- Daily Afternoon: 1-6pm
- Daily Evening: 7:30-10pm
- Weekend Saturday only: 11-4pm
- Weekend Sunday only: 10-3:30pm
- Online (as per candidates' requirement)

Course Objectives:

- Install Red hat Linux servers with license activation.
- Perform day-to-day Linux management with basic commands.
- Manage user accounts and groups on a large-scale deployment.
- Manage data security.
- Create shell scripts for automating administrative tasks.
- Handle background and foreground processes.
- Manage targets on server.
- Deploy infrastructure services like DNS, WEB, FTP.
- Configure Linux using cli remote access and WebUI.
- Administer Linux using ansible ad-hoc commands.
- Create and deploy ansible playbooks.
- Automate Linux tasks using ansible roles.
- Troubleshoot server errors using ansible.
- Secure server access using firewall.
- Schedule tasks on Linux server.
- Create virtual machines and containers on Linux.
- Configure local and network storage.
- Configure server automation using Ansible Playbooks.

Course Content:

This course is aimed at imparting knowledge and skills related to Linux fundamentals, server hardening, data security, server networking, automation and programmability. This course will help candidates prepare for the RHCSA and RHCE exam. The following topics are general guidelines to better reflect the contents of the course and for clarity purposes, the guidelines below may change at any time without notice.

RHCSA: Linux Administration

Introduction to Linux:

- Introduction to Operating System.
- Introduction Kernel.
- What is Linux?
- History of Linux.

- Basic concepts of Linux.

File Management:

- Understand Linux file system in-depth.
- Manage files and directories.
    - Create and delete files and directories.
    - Copy, Move and delete files and directories.
    - Read files using cat, less, grep, head, tail, sort and cut command.
    - Perform I/O redirection.
    - Edit files using vi, nano and sed.
- Configure Symlinks and Hardlinks.
- Perform data backup using Tar and compression tools.

User Management:

- Understand AAA process.
- Manage user accounts.
    - Create user accounts.
    - Delete user accounts.
    - Modify user accounts.
- Manage Password
    - Set password for users.
    - Disable password for users.
    - Understand password aging policies.
    - Understand password complexity rules.
- Manage groups
    - Understand group management.
    - Understand group and user association.
    - Understand default groups.
- Understand user profile management.

Data Security:

- Understand directory permissions.

- Understand user category management.
- Understand umask and default permissions.
- Understand special permissions.
- Understand File ACL..

Shell Scripting:

- Creating and executing scripts
    - Understand use of variables.
    - Create hybrid scripts.
    - Understand conditional loops.
        - If Then Else.
        - Nested If.
        - Case.
        - For Loops.

Process Management:

- Understanding Linux processes.
- Threads.
- Process types.
- Running foreground processes.
- Running background processes.
- Monitoring processes using ps utility.
- Monitoring processes using top utility.
- Understanding process termination and sig terms.
- Managing process prioritization.

Service Management:

- Understanding services.
- Types of services.
- Managing services in run-time.
- Managing startup services.
- Understanding Linux targets.

- Managing targets.
- Configuring default target.
- Root password reset.

Miscellaneous Topics:

- Managing Device drivers and Kernel modules.
- User Delegation.
- Task scheduling using crontabs.
- Software management.
    - RPM.
    - YUM/DNF.

Networking:

- Networking basics.
- Managing IPv4 / IPv6 Networking.
- Configuring SSH server for remote access.
- Configuring cockpit service.
- Accessing and managing Linux via WebUI.
- Configuring DNS server.
- Deploying a web server.
- Configuring system logs.
- Configuring remote logs using rsyslog.
- Control network security using firewalld.

Storage Management:

- Disk partition management.
    - Understanding MBR and GPT partition table.
    - Adding disk to virtual machines
    - Managing disks using parted.
    - Formatting partitions with Linux file systems.
    - Persistent mounting via fstab.
    - Disk quota management.

- Swap management.

- Advanced disk management.
    - Understanding LVM.
    - Configuring LVM.
    - Provisioning LVM.
    - Understanding the fundamentals of STRATIS.
    - Creating STRATIS pools.
    - Creating STRATIS file systems.
    - Mounting and accessing STRATIS file systems.
    - Snapshot management.
    - Data recovery using snapshots.
- Network Storage.
    - Understanding NAS and SAN storage.
    - Configuring NAS storage using NFS.
    - Configuring SAN storage using iSCSI.
- Troubleshooting using emergency mode and rescue mode.
- Understanding virtualization.
- Understanding containerization.
- Understanding public and private cloud.

RHCE: Ansible Automation

- Introduction to Ansible.
- What is Ansible?
- Why Ansible?
- Installing Python 3.6 and Ansible.
- Getting familiar with ansible commands.
- Understanding and controlling the ansible config file.
- Understanding and managing ansible inventory.
- Understanding and performing project management.
- Getting familiar with ansible modules.
- Performing ansible ad-hoc commands.

- Creating an ansible playbook.
- Scripting a play.
- Running a play.
- Running a play using inventory.
- Defining tasks in a play.
- Understanding variables in ansible.
- Creating conditional loops.
- Understanding and performing facts gathering.
- Understanding and managing parallelism.
- Hybrid playbook.
- Understanding the concept of roles.
- Creating an Ansible role.
- Deploying and configuring servers using Ansible roles.
- Understanding and performing error handling.
- Encrypting playbooks using a password vault.
- Troubleshooting playbooks.

RHCSA & RHCE LABS:

Followings labs will be performed by candidates during lab practice sessions:

Lab 1. Linux Basics Commands

Task 1: Managing the terminal.

Task 2: Managing System Name.

Task 3: Managing System Date.

Task 4: Exploring System Information.

Task 5: Using Calendar.

Task 6: Using Calculator**.**

Task 7: Exploring User Login Information.

Task 8: History of commands.

Task 9: Powering System On and Off.

Lab 2. File Management

Task 1: Explore pwd Command.

Task 2: List Content of Directory.

Task 3: Create Directory.

Task 4: Explore Filetype.

Task 5: Create Empty File.

Task 6: Explore Command to Copy Files.

Task 7: Explore Command to Copy Directories.

Task 8: Explore Command to Move Files & Directories.

Task 9: Explore Command to Remove Files.

Task 10: Explore Command to Remove Directories.

Task 11: Explore Command to Read a File.

Task 12: Explore Command to Cut a Filed Form a File.

Task 13: Piping 2 Or More Commands.

Task 14: Explore Command to Find File or Directories.

Task 15: Input Output Redirection.

Lab 3. Using Text Editor

Task 1: Explore vi Text Editor.

Lab 4. Data Backup and Compression

Task 1: Compression using tar archive manager and gzip compression tool.

Task 2: Compression using tar archive manager and bzip2 compression tool.

Task 3: Compression using tar archive manager and xzip compression tool.

Lab 5. User Management:

Task 1Manage user accounts.

Task 2: Configure Aging Policy.

Task 3: Managing Group.

Lab 6. File and Directory Permissions

Task 1: Configuring file/directory permissions using numerical method.

Task 2: Configuring file/directory permissions using alphabetical method.

Task 3: Configuring Sticky-bit.

Task 4: Configuring File Access Lists.

Task 5: understand umask, read, write, execute permissions and recursive permissions.

Lab 7. Shell Scripting

Task 1: Create a script with basic commands and echo.

Task 2: Create an interactive script with use of read variable, i/o redirection, sleep.

Task 3: Generate server audit report with a script.

Task 4: Create a hybrid script.

Task 5: Create an alternate program for 'finger' program.

Task 6: Comparing value with 'if then' logic.

Task 7: Comparing integer with 'if then' logic.

Task 8: Managing files with 'if then' logic.

Task 9: Repeat task 6 with 'case' logic.

Task10: Create a script with 'case' logic.

Task 11: Create a for-loop script.

Task 12: Bulk user creation using for-loop.

Lab 8. Task Scheduling

Task 1: Manage Crontab.

Task 2: Manage AT.

Lab 9. Filtering Features

Task 1: Configure IPv4 ACL.

Task 2: Configuring Numbered and Named IPv4 ACL.

Lab 10. Process Management

Task 1: Managing Processes.

Task 2: Monitoring Processes.

Lab 11. Service Management

Task 1: Managing Services.

Task 2: Troubleshooting using emergency mode.

Task 3: Troubleshooting using rescue mode.

Task 4: Password breaking of root user.

Lab 12. Inodes, Symlinks and Hardlinks

Task 1: Understanding relation of copy and move commands with inode number.

Task 2: Creating a symlink.

Task 3: Creating a hardlink.

Lab 13. Configuring GRUB Security

Task 1: Securing GRUB2 BootLoader with a password.

Task 2: Testing GRUB Security.

Lab 14. Accessing CD-ROM

Task 1: Accessing Optical drive on Linux Command-line.

Task 2: Create ISO image of a CD-ROM.

Task 3: Mount ISO image on a directory.

Lab 15. Software Management

Task 1: Using RPM method to install packages.

Task 2: YUM configuration (DNF configuration).

Lab 16 Configuring Network Card

Task 1: Force Linux to use kernel assigned drivers for network cards.

Task 2: Configure IP address with nmcli.

Task 3: Configure IP address persistently.

Task 4: Configure Link Aggregation with 'nmcli' utility.

Task 5: Test connectivity.

Lab 17. Configure SSH

Task 1: Configuring SSH on server.

Task 2: Configuring key pair authentication.

Task 3: Use SCP for remote file transfer.

Lab 18. Configure Apache web server

Task 1: Hosting Web Server.

Task 2: Hosting Virtual Web Server.

Task 3: Configuring DNS server.

Lab 19. Configuring Firewall

Task 1: Allow Service & Port Number in firewall.

Task 2: Configuring Rich Rule in firewall.

Task 3: Managing zone in firewall.

Lab 20. Configure NFS

Task 1: Configuring NFS on Server.

Task 2: Access Shared Directory from Client.

Task 3: Make access persistent.

Lab 21. Configure Storage

Task 1: Manage local hard drives.

Task 2: Configure quota limits.

Task 3: Create a swap partition.

Task 4: Configure LVM.

Task 5: Configure Stratis Pool.

Task 6: Configure AutoFS.

Task 7: Create VDO.

Lab 22. Configure Network Storage

Task 1: Configure NAS storage using NFS.

Task 2: Configure SAN storage using iSCSI.

Task 3: Connect storage to other servers.

Lab 23. Configure SELINUX

Task 1: Manage SELINUX status.

Task 2: Manage SELINUX policies.

Task 3: Create a custom SELINUX rule.

Lab 24. Build and Operate containers.

Task 1: Create Web hosting application for containerization.

Task 2: Build container image using Docker.

Task 3: Run and Manage container and allocate resources.

Lab 25. Deploy Ansible

Task 1: Install Ansible.

Task 2: Configure Inventory file.

Task 3: Confirm Ansible installation.

Lab 26. Using Ad hoc commands

Task 1: Write an ad hoc command to ping other servers.

Task 2: Write an ad hoc command to list directories.

Task 3: Write an ad hoc command to install software on other servers.

Lab 27. Managing Playbooks

Task 1: Create a playbook.

Task 2: Use variables.

Task 3: Use Loop.

Task 4: Use When condition.

Task 5: Use variable slicing.

Task6: Use import and include.

Lab 28. Perform error handling

Task 1: Use ignore_errors.

Task 2: Perform playbook dry run.

Task 3: Perform YAML syntax check.

Task 4: Run selected tasks.

Lab 29. Additional parameters in a Playbook

Task 1: Use handlers.

Task 2: Gather facts.

Task 3: Print output using debug module.

Lab 30. Playbook Security

Task 1: Create an encrypted playbook.

Task 2: View an encrypted playbook.

Task 3: Edit an encrypted playbook.

Task 4: Run an encrypted playbook.

Task 5: Reset key of an encrypted playbook.

Task 6: Decrypt an encrypted playbook.

Task 7: Encrypt and existing playbook.

Lab 31. Roles

Task 1: Create a role.

Task 2: create a project in the role.

Task 3: Run the role.

Lab 32. Ansible Projects

Task 1: Create an ansible project for user management on Linux servers.

Task 2: Create an ansible project for file management on Linux servers.

Task 3: Create an ansible project for hosting website on Linux servers.

Task 4: Create an ansible project for scheduling tasks on Linux servers.

Task 5: Create an ansible project for storage management on Linux servers.

GENERAL TERMS & CONDITIONS:

Cancellation/Refund Policy:

- Full refund for written notice of 20 calendar days or more before training program commencement.

- 50% penalty charge on total program fee will be levied for written notice of less than 20 calendar days before training program commencement. And no refund after training program commencement.
- Routing Switching Tigers Pvt. Ltd. reserves the right to amend/postpone and cancel courses without notice.
- Routing Switching Tigers Pvt. Ltd. Is authorized to refuse admission to the student(s) if payment is not made as per the mentioned payment schedule.
- Candidates can repeat a maximum of 2 times based on the training slots available.

Miscellaneous:

- The minimum batch size required for this course is 10 participants.
- Routing Switching Tigers Pvt. Ltd. reserves the right to cancel/postpone the class.
- The course schedule will be provided before commencement of the course.
- Certificate of participation will be awarded to participants with a minimum 90% attendance.
- All attendees are to observe the Copyright Law on intellectual properties such as software and courseware from respective vendors.
- Routing Switching Tigers Pvt. Ltd. reserves the right to include external participants in the program either for the entire course or individual courses.
- Routing Switching Tigers Pvt. Ltd. reserves the right to change/alter the sequence or content of the course.
- Routing Switching Tigers Pvt. Ltd. published books are available for purchase at extra cost.

Examinations:

- Examination cost is not included in the course fees.

Costing:

Costing for Course:

- RHCSA & RHCE: Rs. 18,000/- per candidate at RSTFORUM
- Cheque should be in favor of “Routing Switching Tigers Private Limited.”

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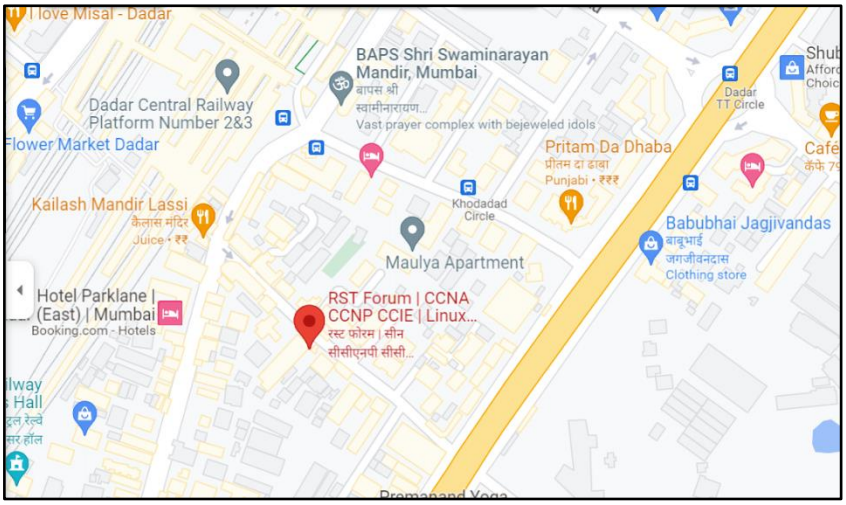

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