### Take Control, Shift your career into Tech

## Linux Certified Engineer



### Live and Breathe Linux

CtrlShift +91-9619745933 India info@ctrlshift.careers https://ctrlshift.careers

## Is This Program Right for You?



This program is ideal for current Linux professionals seeking advanced skills in automation, system optimization, and RHCE certification to strengthen their expertise.

# Why Choose CtrlShift's Linux Certified Engineer Program?

#### Comprehensive RHCE Preparation

This program covers all essential topics for the RHCE (EX294) certification, focusing on advanced system administration skills and automation using Ansible.

#### Practical, Hands-On Approach

Real-world labs and projects simulate tasks encountered in professional environments, ensuring you're ready for real IT challenges.

#### **Industry-Relevant Skills**

With a curriculum aligned to Red Hat's certification standards, this course focuses on skills in demand, such as Linux automation, configuration management, and secure network services

#### Career-Oriented Mentorship

Our mentors are industry experts who guide you through complex topics and share insights from real-world experiences.

#### Certification Support and Job Preparation

We offer support for RHCE certification exams, including practice exams, job interview coaching, and resume assistance.



# Enroll in the Linux Certified Engineer Program and start your journey today

100+ Hours of Learning20+ Labs to Practice2+ Real World Projects25+ Assignments to Practice

### Course Description

The Linux Certified Engineer Program at CtrlShift is tailored to transform intermediate Linux users into certified engineers ready to manage complex systems. This course delves into advanced topics, focusing on efficient automation and streamlined operations using Ansible, network service management, and secure system configuration. It's designed to help learners excel in the RHCE (EX294) certification and thrive in dynamic IT roles.

The course is divided into 6 phases.

Here's the \*\*Linux Certified Engineer Program\*\* broken down into phases for a more structured, progressive approach



### Phase I Ansible Basics and Setup

#### **Curriculum Overview**

Module 1: Awaken Ansible Powers

Overview of Ansible: Learn the essentials of Ansible's automation magic and install Red Hat Ansible Engine to get started.

Module 2: Command the Hosts with Ansible

Build Inventory and Configuration Mastery: Set up Ansible to manage hosts, create your inventory, configure settings, and run ad hoc commands for quick control over your systems.

# Phase 2 Playbook Essentials

#### **Curriculum Overview**

Module 3: Forge Powerful Playbooks

Writing and Running Playbooks: Create and run your first playbooks, crafting sequences to automate tasks across multiple systems.

Module 4: Unleash Variables and Gather Facts

Variables and Facts for Dynamic Playbooks: Use variables to simplify playbook management and employ facts to gather crucial information about each managed host.

Module 5: Control the Flow of Tasks

Task Control Sorcery: Manage playbook flow using task control, handlers, and error handling, making your automation resilient and responsive.



# Phase 3 File Management and Scaling Up

#### **Curriculum Overview**

Module 6: Distribute Files like a Pro

File Management and Deployment: Learn to deploy, manage, and modify files on hosts with Ansible, ensuring consistent configurations across your systems.

Module 7: Scale Up for Large Projects

Optimizing Playbooks for Complexity: Scale up your playbooks for larger projects using host patterns, dynamic inventories, parallelism, and modular structure with includes and imports.

### Phase 4

# Advanced Playbook Structuring with Roles

#### **Curriculum Overview**

Module 8: Accelerate with Roles

Role Creation and Deployment: Create reusable roles to speed up playbook development, manage complex tasks, and access content from Ansible Galaxy for efficient automation.



# Phase 5 Troubleshooting and System Administration

#### Curriculum Overview

Module 9: Troubleshoot Like a Pro

Debugging and Error Resolution: Troubleshoot playbooks and managed hosts with advanced debugging techniques, building error-resistant automation.

Module 10: Automate Linux Like a Legend

Linux System Automation: Use Ansible to automate essential Linux system administration tasks, streamlining your workflow and boosting system efficiency.

# Phase 6 Capstone Projects

Project 1: The Mass Deployment Challenge

Automate the installation of Linux across a legion of machines using Kickstart. Prove your automation prowess by deploying systems at lightning speed.

Project 2: Ansible's Grand Playbook

Craft intricate Ansible playbooks to configure and monitor services across your server realm. Show that no task is too complex when you have automation magic at your fingertips.

Each phase builds progressively, starting with Ansible basics, moving into playbook creation, scaling, and advanced structuring with roles. The final phase reinforces troubleshooting and Linux automation skills to fully prepare learners for complex, real-world IT environments and the RHCE exam.



# Bonus Session Operating System Concepts

#### **Course content summary**

Gain a foundational understanding of core Operating System concepts crucial for every IT professional.

Explore how operating systems manage processes, allocate memory, and handle resources, bridging theory with hands-on system administration.

Elevate your Linux knowledge with deeper insights into the mechanics behind OS functions, enhancing your ability to troubleshoot and optimize systems.

#### **Curriculum Overview**

Module 1: Introduction to Operating Systems

Overview of OS fundamentals and the role of the operating system in managing resources. Key components of an operating system and their functions.

Module 2: Process Management Essentials

Learn how operating systems handle multiple processes and prioritize tasks. Dive into process scheduling, context switching, and inter-process communication.

Module 3: Memory Management Techniques

Explore memory allocation strategies, including paging, segmentation, and virtual memory.

### Live and Breathe Linux



CtrlShift +91-9619745933 India info@ctrlshift.careers https://ctrlshift.careers