Linux Fundamentals & Troubleshooting
Red Hat Enterprise Linux 7 / CentOS 7
(NI309)

40 Hours

Outline

Linux powers 94% of the world's supercomputers, most of the servers powering the Internet, the majority of financial trades worldwide and a billion Android devices. In short, Linux is everywhere. It appears in many different architectures, from mainframes to server to desktop to mobile and on a staggeringly wide variety of hardware. This free self-paced course will teach you how to develop a good working knowledge of Linux using both the graphical interface and command line.

Target audience

This class is designed for people who have little or no prior experience with Linux or UNIX. System administrators, developers, architects, decision makers or new Linux users can all benefit from the content covered in this class, especially if they are looking to work with more involved topics such as Linux system administration, network management and enterprise system architecture.

Requirements

This Course includes hands on labs training. Users should have access to physical or virtual environment with RHEL 7.x / CentOS 7.x installation or Internet access to Tracston labs.

Prerequisites

This is a modularity course, therefore, there is different prerequisites depend on the following section:

- The first day are basic - students required to have basic knowledge in networking and SYSTEM concepts.
- The second and the third days are advanced and troubleshooting - students required to have basic knowledge in Linux and networking.
- The last day are developing scripts with BASH – there is no further knowledge required.

Objectives

This Course covers the basics of cloud computing and the advantages and limitations of deploying your Infrastructure in the Cloud. The course will cover advanced Cloud technologies such as Fog & Edge Computing and give you knowledge and information to design and implement these technologies in your applications such as Mobile, IOT, and Web and design large-scale cloud infrastructure.

Contents

Day 1

Module 1:
- What is Linux?
  - Overview
  - History of Linux
  - Popular Linux Operating Systems
- Hardware Requirements
- Linux Installation
- RHEL / CentOS Linux System Structure

- Graphical Interface
- System Configuration From The Graphical Interface
- System Configuration From Command Line
- Network Operations
  - Configuring Network
  - Configuring Hostname
  - Configuring DNS
- Configuring Firewall
- Finding Linux Documentation
- Command Line Operators
- Adding Software (Yum)

Day 2

Module 2:
- File Systems
- Managing Packages
- File Operations
- User Environment
- Local Security Principles
- Troubleshooting
  - Installation
  - Boot issues
  - Networking
  - Storage
  - System Performance
  - Security
- Bash Shell Scripting
- Manipulating Text
- Monitoring

Day 3

Module 3:

- Advanced Troubleshooting
  - Installation
  - Boot issues
  - Networking
  - Storage
  - System Performance
  - Security
  - Resolving Dependency Issues
- Monitoring System Performance
  - Security
  - Management
  - Performance & Scalability

Day 4

Module 4:

- Advanced Troubleshooting
  - Troubleshooting techniques
  - Troubleshooting hardware
  - Troubleshooting applications
  - Troubleshooting disks
  - Advanced Network Troubleshooting
- Advanced Bash Scripting
- Processes
- Common Applications
  - Apache
  - Postfix
  - Samba
- Development Tools
  - SDK
  - IDE tools
  - CLI

- Summary