

Linux Essentials (§ 7.5 hours of content | 25 hours of practice | Exam

#### 1. Introduction to Linux

- Opening Remarks and Learning Focus
- History of Linux
- Familiarization with Linux Distributions
- Introduction to Virtualization
- Preparation for Virtualization
- Implementing Virtualization with VirtualBox
- Installing Ubuntu Server Environment
- Learning Aids

# 2. Commands and Basic Operations

- Introduction to Linux Shell
- Navigation Commands
- Listing Commands
- Working with Directories
- Working with Files
- Operators
- Search Commands
- Working with grep
- Installing Packages in Linux
- Compression and Archiving Commands
- Wildcard & Globbing

### 3. Linux Filesystem

- Introduction to FHS
- root
- bin
- etc
- sbin
- usr
- var
- dev
- libmnt
- opt
- proc
- Environment Variables
- Hard Links & Soft Links
- Introduction to Bash Scripting

# 4. Services and Logs

- Introduction to Apache2
- Introduction to Nginx
- Nginx & Apache2 Reverse Proxy
- UFW
- FTP
- SSH
- SCP
- Auth Log
- Access Log

### 5. Communication and Troubleshooting Commands

- Network Identification
- Temporary IP Address Change
- Introduction to DHCP
- Setting a Static IP Address
- Introduction to DNS
- Working with Netstat
- Ps & Top
- Kill
- Df & Du
- Working with Tcpdump

# 6. Permissions, Users, and Groups

- Introduction to Permissions, Users, and Groups
- Creating Users and Types of Users
- Introduction and Understanding of the passwd File
- Introduction and Understanding of the shadow File
- Introduction to sudo
- Introduction to Groups
- Creating Groups
- Adding Users to Groups
- Introduction to Permissions
- Chown & Chmod
- Numeric Permissions