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GSR ™ Open Solutions, Unlimited Possibilities
Tailored tech solutions that empowers businesses

Academy
Linux Fundamentals
(2 Days)

Preface

Welcome to the GSR Academy, where we believe in empowering individuals and teams with the skills they need to excel in today's dynamic and ever-evolving tech landscape.

At GSR Academy, we are not just committed to helping people gain new skills; it is our passion! Our workshops are curated and led by industry professionals, including Developers and System Architects, who have extensive experience working on real projects. This ensures that our training offerings are relevant, practical, and in line with the latest industry trends.

We understand that every team is unique, and their learning needs may vary. That's why we take pride in offering customized workshops that cater to your specific requirements. Whether you need to upskill your team in Ansible Development for seamless IT automation, implement a robust Single Sign-On Solution with Keycloak, or fine-tune your Linux systems for optimal performance, we've got you covered.

Introduction

Welcome to the Linux Fundamentals course! In today's tech-driven world, understanding Linux basics is essential. This course offers a solid entry point, covering key concepts like file operations, user management, networking, and security. Whether you're new to Linux or want to reinforce your skills, join us to build a strong foundation and gain confidence in navigating the Linux environment. Let's begin this journey together!

Training Modules

Module 1: Introduction to Linux
- History and evolution of Linux
- Linux distributions and their characteristics
- Basic concepts of open-source software

Module 2: Linux Installation and Getting Started
- Preparing hardware and system requirements
- Installation methods and procedures
- Navigating the Linux file system
- Basic Linux commands and shell navigation

Module 3: User and Group Management
- User account creation, modification, and deletion
- Group management and permissions
- File and directory permissions
- Access control lists (ACLs)

Module 4: File Operations and Text Processing
- Creating, copying, moving, and deleting files and directories
- Working with file content using text editors (e.g., nano, vim)
- Text processing tools (grep, sed, awk)
- Compressing and decompressing files (tar, gzip, zip)

Module 5: Process Management
- Understanding processes and their states
- Managing processes (ps, top, kill)
- Background and foreground processes
- Job control and process scheduling

Module 6: System Administration Basics
- Managing software packages (package managers)
- Disk management and partitioning
- Monitoring system resources (CPU, memory, disk usage)
- System logs and log files

Module 7: Networking Fundamentals
- Network concepts and components
- IP addressing and subnetting
- Configuring network interfaces
- Basic network troubleshooting

Module 8: Shell Scripting Basics
- Introduction to shell scripting (Bash)
- Writing and executing simple scripts
- Using variables, loops, and conditional statements
- Script execution and permissions

Module 9: Essential System Tools
- Working with users and groups (useradd, usermod, groupadd)
- Configuring and managing services (systemd)
- Backing up and restoring data (tar, rsync)
- Automating tasks with cron jobs

Module 10: Security and Permissions
- User authentication and password policies
- Securing SSH access
- Basic firewall setup (iptables, firewalld)
- Understanding security best practices