MERCURY

UNIX Fundamentals Training Course

2 – 6 May 2027
Amman (Jordan)



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Ref: 15172_303273 **Date:** 2 – 6 May 2027 **Location:** Amman (Jordan) **Fees:** 4200 Euro

Introduction:

The UNIX fundamentals and system administration training course will equip you with the skills and knowledge to navigate the UNIX operating system proficiently and excel in system administration tasks. UNIX, renowned for its robustness, scalability, and security, remains a cornerstone in computing, powering critical infrastructures worldwide.

Throughout this UNIX fundamentals and system administration course, you will embark on a journey to unravel the intricacies of UNIX, delving into its fundamental concepts, command-line interface, file system navigation, and user management. With hands-on exercises and practical demonstrations, you will grasp the theoretical underpinnings and develop the sensible expertise necessary to administer UNIX systems effectively.

Whether you are a seasoned IT professional seeking to enhance your skill set or an aspiring system administrator aiming to carve a niche, this course provides a solid foundation to propel your career forward. Participants will delve into the world of UNIX, unlocking its vast potential and empowering them to become proficient in system administration.

Targeted Groups:

- IT professionals seek to enhance their proficiency in UNIX fundamentals and system administration.
- Aspiring system administrators aiming to develop a solid understanding of UNIX architecture and operations.
- Computer science students or recent graduates want to acquire practical skills in UNIX system administration.
- Professionals, such as network administrators or software developers, are transitioning into roles that require UNIX expertise.
- Individuals interested in advancing their careers in fields where UNIX is a prevalent operating system, such as cybersecurity or cloud computing.
- Corporate teams or organizations looking to upskill their employees in UNIX system administration for enhanced operational efficiency and security.

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Targeted Competencies:

At the end of this UNIX fundamentals training course, the participant's competencies will be able to:

- Proficient in navigating and managing the UNIX command-line interface.
- Understand UNIX file system structure, permissions, and file manipulation.
- Know how to perform user and group management tasks in a UNIX environment.
- Familiar with system initialization and shutdown procedures in UNIX.
- Know process management and monitoring in UNIX systems.
- Understand skills in configuring and managing network services and protocols on UNIX platforms.
- Explore Competence in troubleshooting common issues and performing system maintenance tasks in a UNIX environment.
- Understand security concepts and implementation strategies relevant to UNIX systems.
- Utilize system administration tools and utilities specific to UNIX platforms.
- Implement backup and recovery procedures for UNIX systems.

Course Objectives:

By the end of this UNIX fundamentals training course, the participants will be able to:

- Gain a comprehensive understanding of UNIX operating system fundamentals.
- Develop proficiency in navigating and utilizing the UNIX command-line interface.
- Learn essential system administration tasks such as user management and file system operations.
- Acquire skills in configuring and managing UNIX-based network services.
- Understand the principles of system initialization, shutdown, and process management in UNIX.
- Master troubleshooting techniques to resolve common issues encountered in UNIX environments.
- Enhance security knowledge and implement best practices for securing UNIX systems.
- Familiarize oneself with backup and recovery procedures specific to UNIX systems.
- Gain practical experience through hands-on exercises and real-world simulations.
- Prepare for industry certifications in UNIX system administration.

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Course Content:

Unit 1: Introduction to UNIX:

- Overview of UNIX history, evolution, and significance in the computing world.
- Understand UNIX architecture, including kernel, shell, and file system components.
- Explore different UNIX distributions and their unique features.
- Learn basic UNIX commands for file manipulation, directory navigation, and text processing.
- Hands-on exercises to practice using the UNIX command-line interface.

Unit 2: File System Management:

- Understand UNIX file system hierarchy and directory structure.
- Explore file permissions and access control mechanisms in UNIX.
- Perform file operations such as creation, deletion, copying, and moving.
- Utilize file manipulation commands like CP, MV, RM, and Mkdir.
- Learn advanced file system operations, including symbolic links and file attributes.

Unit 3: User and Group Administration:

- Manage user accounts and groups in UNIX systems.
- Create, modify, and delete user accounts using command-line tools.
- Assign permissions and access rights to users and groups.
- Understand user authentication mechanisms such as password management and SSH keys.
- Explore user and group management utilities like Useradd, Usermod, Groupadd, and Chpasswd.

Unit 4: System Administration Tasks:

- Perform system initialization and shutdown procedures.
- Manage system services and daemons in UNIX.
- Monitor system performance and resource utilization.
- Configure network services such as DHCP, DNS, and FTP.
- Understand and troubleshoot common system issues and errors.

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Unit 5: Security and Backup:

- Implement security measures to protect UNIX systems from unauthorized access and attacks.
- Learn about configuring firewalls, access control lists, and security policies.
- Understand encryption techniques and secure data on UNIX systems.
- Develop backup and recovery strategies for critical system files and user data.
- Practice backup procedures using tools like tar, rsync, and cron.