Macrosoft

Vzdelávanie s trvalým efektom

DOCUMENT

Course syllabus

CATEGORY

Windows Server, Linux courses

TRAINING FORMAT

In Bratislava or online with a lecturer

PRICE EXCL. VAT

800,00 €

PRICE INCL. VAT

984,00 €

including 23 % VAT

PDF SYLLABUS

LINUX System Administrator

Clear overview of course topics, training scope and key information.

The LINUX System Administrator course is intended for all interested participants who are interested in working with operating systems, computer networks, their installation and configuration in the Linux environment and would like to find employment in this area on the labor market. The package consists of the following courses: LINUX Installation and Basics of System Setup, LINUX for Administrators - Advanced Administration Options, LINUX in a Network. After completing the course, participants receive a Certificate. Only the course start is shown in the date; we will inform you about the other dates.

COURSE CONTENT

01

Theoretical Basics and Initial Prerequisites

characteristics of UNIX / Linux system architecture, multitasking support operating system booting login process most used graphical user environments, differences between them

02

Basic Operations in Console

Linux shell use of help, shortened and full version of manual restarting and shutting down the computer displaying logs running programs command arguments, running programs in the background shell command interpreters BASH shell redirecting output to a text file program channels /pipe connecting to the console from the Windows system environment

03

File System

introduction to the file system file system types, file types basic commands for working with files creating, copying, moving, renaming files i-node data structure, displaying information finding a file information about the file system, disk usage working with quota file attributes extended access control, special permissions, not only using the chmod command mapping disk partitions, creating a virtual disk and its subsequent use

04

User and Group Administration

listing all users creating and deleting users, groups difference between the users and shadow database files, their protection and use in practice access rights superuser, security switching between users changing password setting advanced user properties - for example when it expires

05

Process Management

processes and programs - basic differences process list controlling processes, signals used system resources and setting their limits managing, monitoring start and termination of processes, fork-exec mechanism, signals interprocess communication, controlling terminal monitoring process activity, displaying running processes in the system updating programs changing process priority, rescheduling sleeping a process

06

Text Processing Using System Utilities

difference between a text editor and a word processor outputting file content to the console installing and using the basic text editor nano commands for more advanced text operations - grep, cat, sed, awk vi editor and its control

07

System Options and Use of Linux in Practice

backup, recovery and data transfer Clonezilla program discussion - use of Linux in embedded systems, e.g. special devices in industry, transport Linux editions - Kali Linux webserver, database server also in a corporate environment electronic mail, mail server Linux as an underlying system for other applications

08

Principles of Computer Networks

Division and characteristics of a computer network RM OSI, TCP/IP reference model Devices in a network: hub, switch, router, firewall, WiFi AP, ... Types of computer network connection Connecting networks with connection and without connection, packet fragmentation and defragmentation Switching at the first, second and third layer of RM OSI Addressing in a network - basics of IPv4/6 address, terms IP address, MAC address, mask, subnet, broadcast, public and static IP address Principles of NAT technology, when it is used, why it is currently needed.

09

Setting Up a Computer Network in LINUX

Network interfaces, turning the network on and off Configuration files Manual configuration Routing - routing, primarily static routing Configuration of Domain Name System (DNS), local domain translation, names of your PC on the network Netstat tool and its use when checking network resource use Nmap tool and its use for legitimate security checking purposes Netcat tool and sockets for communication between multiple PCs Address Resolution Protocol (ARP) protocol and its use in network diagnostics

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This document serves as an informational overview of the course syllabus. Current dates, venue and availability are listed at Macrosoft.sk.

https://www.macrosoft.sk/en/courses/linux-server-administrator