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

Windows Server Administrator - Efficiently and Securely

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

Manage Windows Server efficiently and securely. Gain new employment opportunities in the labor market as a system administrator. The training is completed with a Certificate. Only the start of the course is listed in the date; we will inform you about the other dates.

COURSE CONTENT

01

MODULE 1: Windows Server - Installation and System Administration

The Windows Server course represents the necessary minimum for an administrator, server administrator or network administrator. Many practical tasks await you for practice; we will test theoretical principles in practice. Each course participant has their own virtual computer - server available, which they can "take" home after the course and continue exploring its possibilities.

02

Introduction to the Topic, Installation

installation of the Windows Server operating system; licensing options for specific usage models installation of the Windows 10 operating system (demonstration computer of an "employee" that we will add to the domain) installation of the Active Directory Domain Services server role - creation of a company domain together with a DNS server (we will show why it is necessary to set it up for domain purposes) work with Server Manager time settings work with the Active Directory Users and Computers console, gaining an overview of its possibilities and use adding a Windows 10 computer to our domain creating domain users

03

Review of Basic Knowledge from Computer Networks

work with the Network and Sharing Center control panel tools for solving network problems: ping, tracert, ipconfig remote server administration - Remote Desktop and its pitfalls

04

File Systems, Disks

disk management: difference between basic and dynamic disks, overview of partition types (simple, spanned, mirrored, striped and RAID-5)

05

Role-based Sharing Strategies (Shared Resources and RBAC)

setting sharing, setting access rights to a shared resource

06

Overview of Selected Tools for Windows Server Administrators from Many Tools

backup - possible scenarios and best practices Windows Server Backup tool, setting scheduled backup basic overview of tools and settings in Control Panel

07

Other Uses of Windows Server

DHCP server, File server, Print server - setting a shared printer

08

Introduction to Group Policies, Setting a Secure Password in Default Domain Policy

Each course participant uses their own installation of Windows Server and Windows 10 in a virtual environment, has nothing forbidden and has the right to misconfigure their computers :) ?

09

MODULE 2: Windows Server - Active Directory - Daily Tasks of a System Administrator

The Active Directory - Daily Tasks of a System Administrator course is focused on tasks that domain administrators perform daily on servers and client computers. The participant gains knowledge of the Active Directory concept, can independently assess the usefulness of its use in a specific case, can create the first domain controller and configure it securely. The participant is open to the possibilities of centralized administration of a set of computing equipment using tools available in Active Directory and Windows Server, can add a user to the domain and include them in groups according to their job position. Aware of the importance of their profession, they ensure secure configuration of their domain. Each course participant has their own virtual computer - server available, which they can "take" home after the course and continue exploring its possibilities.

10

Connection Systems (Grouping) of a Set of Computers in a Local Network

Review of the Workgroup concept - Windows workgroup Advantages and limitations of a workgroup, possibilities of use

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Domain Concept - Theory

Presentation of the concept as the main point of centralized management of computers, users and settings Domain structure, domain tree and forest LDAP protocol and its use inside and outside the domain Scenarios in which a domain is not suitable, possible alternative domain solutions, e.g. on UNIX Operation Master tasks - what each task provides and how to monitor which server performs it

12

Active Directory - Theory

Understanding the LSA and SAM concept on the Windows platform in connection with a domain, difference of this concept in a workgroup Scenarios of suitable use Terms SID, GUID, OU

13

Working with Active Directory

Creating the first domain controller on an existing Windows Server installation Working with the Active Directory Users and Computers tool Concepts for creating OUs (organizational units) with regard to effective administration and domain scalability, best practices from practice, creating OUs in a test domain with regard to long-term sustainability and simplicity of further management and administration Objects in Active Directory - creating computers, servers, adding users - daily administrator tasks Properties of a domain user, setting the initial password, password reset, limiting logon by time, deactivating a user, determining user membership and permissions, attributes of a user account in the domain Difference between a local and domain user account, local vs domain administrator Setting a domain non-privileged user as a domain administrator Concept of object properties (user) as part of the domain schema, options for extending properties - attributes with new elements and setting them in Active Directory Difference between a Group and an OU

14

Deploying Active Directory in Practice

Adding a computer to the domain Adding a new computer, conditions for adding a new computer to the domain Solving problems with joining the domain on the workstation side adding a server to the domain

15

Controlling Access to Network Resources Using the Active Directory Concept, Role-based Access Control - RBAC

Types of user groups and their permissions, built-in groups Principles of safe use of groups - ALP, AGDLP and AGUDLP strategies Principles of safe use of groups in practice - on a shared network resource Discussion - how to avoid a security risk in this area

16 **Long-term Sustainability of a Managed Set of Computing Resources Using Active Directory Technology**

Logon scripts, writing a simple script

17 **GPO Group Policies as a Powerful Tool for Centralized Configuration of Managed Computers**

Explanation of the term group policy, difference between user and computer policy Security policy of user accounts in the domain using Default Domain Policy Local policy Domain policy Difference between local and domain policy Order of application and inheritance of policies Sites and links

18 **Determining Currently Applied Group Policy Settings**

Determining currently applied settings on a computer / user Determining currently applied settings from a client PC and from the Active Directory environment on Windows Server Refreshing group policy rules Security measures using Group Policy Options for using Group Policy: folder redirection, automatic mapping of network drives, modifying Windows registry Roaming user profile Setting group policy for third-party applications, e.g. internet browser Publishing a printer

19 **Advanced Information About the Domain Database**

Basic overview of the domain database, restoring deleted objects and topics related to this

20 **Delegating Active Directory Administration to Dispatch / Helpdesk**

Case studies, discussion Adding delegation Determining who has permissions for delegation

21 **Discussion and Best Practices from Practice**

Remote administration of Active Directory without the need to work on Windows Server Remote administration of Active Directory from a computer that is not joined to the domain Importing a list of users from other sources Active Directory security Course conclusion - message for practice, final summary and discussion

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MODULE 3: Windows Server - Security of the Server and Active Directory Domain

The course on Windows, Windows Server and Active Directory security connects theoretical foundations from information security principles into practice. You will practice broad possibilities of security measures against specific threats. We will introduce you to internationally recommended system settings that you will independently implement on your virtual servers as part of practical tasks. Last but not least, a lot of joint brainstorming and discussions await us. In a creative and engaging form, we will present important aspects of the work of a security administrator, who performs perhaps the most responsible task in a company network. Each course participant has their own virtual computer - server available, which they can "take" home after the course and continue exploring its possibilities.

23

Terminology of Basic Information Security Terms and Their Connection with Measures in Practice

24

Control and Management of Information Security with Regard to the Windows, Windows Server and Active Directory Environment

25

Security Mechanisms of Windows Server

discussion about Windows services and elements that may represent attack vectors secure installation and configuration of Windows

26

Basic Concepts of Windows Server Security

operating system update updating critical applications antivirus protection physical protection of the server

27

Group Policy as a Tool for a Secure Unified Environment

principles for setting passwords in the domain rules for using and distributing passwords, password policy and account lockout local vs domain group policy independent application of group policy to your own server according to international standards

28

Windows Updates

discussion about risks associated with (non-)updated systems use of the WSUS service (software update service), use of the WSUS server application

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29 **Firewall**

basic concept of a firewall and its implementation in Windows Server software and hardware solutions, their advantages, disadvantages and use principles of correct configuration, placing the server in the DMZ

30 **User Accounts and User Groups**

difference between a domain and local account types of groups and their use access rights assignment strategies RBAC - ALP, AGDLP, AGUDLP type groups

31 **Access Rights to Files**

security principles when sharing files difference between permissions for shared resources and access rights at file system level (NTFS) auditing access, reference monitor concept as a tool for control and auditing according to RBAC principles

32 **Remote Private Network Concept - VPN**

possibilities of implementing a remote network according to security level implementation of PPTP, IPSec, OpenVPN scenarios of use and suitability

33 **Final Summary**

discussion about possible further measures to increase local network security conclusion

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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/windows-server-administrator